Status and Role of AYUSH and Local Health Traditions

Under the National Rural Health Mission

Report of a Study

NHSRC

NATIONAL RURAL HEALTH MISSION
राष्ट्रीय ग्रामीण स्वास्थ्य मिशन

STATUS AND ROLE OF AYUSH AND LOCAL HEALTH TRADITIONS

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Ritu Priya and Shweta A.S.

National Health Systems Resource Centre

National Rural Health Mission
Ministry of Health & Family Welfare
Government of India
New Delhi

ISBN 978-81-908725-4-6

Published by the National Health Systems Resource Centre. NHSRC has been set up as an autonomous registered society under the National Rural Health Mission to provide technical support and capacity building for strengthening the public health system in India.

Designed and Produced by Matrix Publishers
T 3, Akarshan Bhawan, 4754/23 Ansari Road, New Delhi 110002
www.matrixpublishers.org

Acknowledgements

The National Health Systems Resource Centre (NHSRC) gratefully acknowledges the constant support and guidance provided by Smt. S. Jalaja (ex-Secretary, Dept. of AYUSH), Shri Shiv Basant (ex-Jt. Secy., Dept. of AYUSH), Shri Verghese Samuel (ex-Jt. Secy., Dept. of AYUSH), Shri Amarjeet Sinha (ex-Jt. Secy., NRHM), Dr. G.S. Lavekar (Retd. Director CCRAS[*]) and Dr. A. Raghu (Assistant / Deputy Advisor, Dept. of AYUSH), Dr. Rama Jayasundar (Associate Professor, AIIMS).

We thank the current Secretary AYUSH Shri Anil Kumar and the senior officers of his department for organising a detailed presentation and discussion on this report in their office and the valuable comments received, as also for their efforts to use this report for taking their programme forward.

We are also grateful to Dr. Arun Srivastava and Dr. V. Suhasini of the Society for Economic Development and Environmental Management (SEDEM) for collaborative preparation of tools for data collection.

We are indebted to members of the Programme Advisory Committee for their guidance and support.

The specific inputs in various phases of the study and the consistent support by members of the Public Health Planning team as well as Health Financing and HMIS divisions of NHSRC made the study possible.

We are thankful for:

Field Data Collection: Dr. S.N. Pandey, SOM-TGOU[f] and 10 State Investigator Teams

Data Entry Team: Tapan Banerjee and team (Data Solutions)

Validation Team: Dr. N. Srikanth, Dr. K. Prameela Devi, Dr. Shruti, Dr. B. Venkateshwara

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[*] CCRAS – Central Council for Research in Ayurveda & Siddha

[f] SOM-TGOU – School of Oriental Medicine -The Global Open University

Dr. Gurucharan Bhuyan and Dr. S. Selvaraju, Dr. Anil Khurana and Dr. Divya Taneja, Research Officers from CCRAS, CCRH[s], CCRUM[p], and Dr. H.S. Dwivedi.

Report Writing: For writing the individual state reports, we thank Dr. Ramamani Sundar for inputs in the Tamil Nadu report, Ms. Kriti Singh for as many as 9 states, Ms. Kamalini Mukherjee and Ms. Swati Das for some states. Support from Dr. Kumar Atanu and Mr. Ranvir Singh along with the AYUSH interns at NHSRC, Dr. Vinod Mishra and Dr. Bushra Naz is also acknowledged.

Finally we are grateful to Ms. Daya Lalvani for editorial support..

Conceptualisation, Coordination and Analysis:

Dr. Ritu Priya, Advisor - Public Health Planning (NHSRC), conceptualised the study from a health systems perspective, led the NHSRC team in development of tools and framework of analysis, as well as in report writing.

Dr. Shweta A.S., Consultant – AYUSH, Public Health Planning (NHSRC), coordinated with the collaborating partners and contributed in analysis and writing of the report. She led the validation exercise for knowledge and practice of providers and the community from the AYUSH perspective and developing related recommendations.

Ms Ashi Karke for secretarial assistance and support and Shri Padam Khanna for coordinating the publication of this study.

T. Sundararaman
Executive Director, NHSRC

[s] CCRH – Central Council for Research in Homeopathy
[p] CCRUM – Central Council for Research in Unani Medicine

PROGRAMME ADVISORY COMMITTEE MEMBERS

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Epidemiologist	21. Dr. Atul Kotwal	Epidemiologist and Specialist in Community Health, Armed Forces Medical College (Pune)

MEMBERS OF INVESTIGATOR TEAMS

Investigator Teams	Name & Qualifications of Team Leader	Team Associates
Central Team at Delhi, SOM	Dr. S.N. Pandey Prof. and Head School of Oriental Medicine The Global Open University (Nagaland) (Retd. Sr. Research Officer, CCRYN)	Mrs. Dhannya Pramod, M.Sc. (IT) Mrs. Richa Pandey, M.A. (Eco.) Mrs. Bindu, B.A., Computer Mr. Ashish Rawat Dr. Manish Sharma, BAMS Dr. M.P. Gandhi, MBBS
State Teams		
1. Andhra Pradesh	Dr. Jitendra Prasad	Dr. P.N. Shivaraj
2. Assam	Dr. Raj Kumar, N.D.	Mrs. Renu Devi, M.A.
3. Bihar	Dr. Awadhesh Kumar Mishra, BNYS	Mr. Siddharth Saran, BA., PGDM Dr. Chandra Sekhar Dwivedi, BAMS
4. Delhi	Brig. Subhas Chander Manocha	Dr. Manish Sharma Ms. Sharmishth Mallic
5. Haryana	Mrs. Hemlata Sharma, N.D., M.A. (Yoga), M.Phil.	Mr. Vikas Dahiya, M.A. Mr. Subhas Ghosh
6. Jammu & Kashmir	Dr. H.N. Patwari, BAMS	–
7. Jharkhand	Dr. Awadhesh Kumar Mishra, BNYS	Mr. Doob Raj Mehto, Dip. Acu. Mr. Shiv Kar Purti (Retd. US, GOI)
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11. Nagaland	Dr. Raj Kumar, N.D.	Ms. Kevilhuninuo Nagi, Anthropologist
12. Orissa	Dr. S.K. Raut Ray, BSAM	Dr. Kamal Mahapatra, BSAM
13. Punjab	Mrs. Hemlata Sharma, N.D., M.A. (Yoga), M.Phil.	Mr. Rajesh Kumar Ms. Shilpa Gupta
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17. Uttarakhand	Dr. K.K. Thakral/ Dr. Awadhesh Kumar Mishra	Dr. Sheel Shaurabh, BHMS Dr. Padamen Singh Rawat, BNYS
18. West Bengal	Dr. Debasis Bakshi, MBBS	(Advisory support by Dr. Krishna Soman, Ph.D.)

P.K. PRADHAN, I.A.S.
Special Secretary &
Mission Director (NRHM)
Tele : 23061451 Fax : 23061975
E-mail : md-nrhm@nic.in

सत्यमेव जयते

भारत सरकार
स्वास्थ्य एवं परिवार कल्याण मंत्रालय
निर्माण भवन, नई दिल्ली - 110108
Government of India
Ministry of Health & Family Welfare
Nirman Bhavan, New Delhi - 110108

MESSAGE

The National Rural Health Mission adopted a strategy of Mainstreaming of AYUSH and Revitalizing Local Health Traditions. The objective was to co-locate AYUSH doctors at PHC and CHC and utilize their services to expand the basket of choices for the patients to choose from.

Under NRHM most of the States are recruiting AYUSH doctors on contractual basis and placing them at CHC and PHC. It has been observed that the use of local health traditions has shown an increase and an enabling environment has been created wherein convergence with AYUSH has improved.

The study undertaken by NHSRC in 18 States on "Status and Role of AYUSH and Local Health Traditions under NRHM", provide valuable information and highlights various aspects that need to be considered from health system perspective. The study comprehensively deals with the issues of coverage, quality and utilization of AYUSH services in public health system.

I am sure that the study will serve as a valuable guide for the planners both at State and national level to further strengthen the initiative for Mainstreaming of AYUSH and Revitalizing Local Health Traditions.

(P.K. Pradhan)

सत्यमेव जयते

डॉ. डी. डी. शर्मा
Dr. D. D. SHARMA
संयुक्त सचिव
JOINT SECRETARY
Tel. : 011-23327187
Fax : 011-23731846
Email: jsismh@nic.in

भारत सरकार
GOVERNMENT OF INDIA
स्वास्थ्य एवं परिवार कल्याण मंत्रालय
MINISTRY OF HEALTH & FAMILY WELFARE
आयुर्वेद, योग व प्राकृतिक चिकित्सा
यूनानी सिद्ध एवं होम्योपैथी (आयुष) विभाग
DEPTT. OF AYURVEDA, YOGA & NATUROPATHY
UNANI, SIDDHA AND HOMOEOPATHY (AYUSH)
रेड क्रास भवन, नई दिल्ली - 110001
RED CROSS BUILDING, NEW DELHI-110001

MESSAGE

The mainstreaming of Ayurveda, Yoga & Naturopathy, Unani, Siddha and Homoeopathy (AYUSH) systems and revitalizing local health traditions are some of core strategies under National Rural Health Mission (NRHM). Under the NRHM, a large number of AYUSH facilities have been set up in PHCs, CHCs and District hospital with financial support from the Central Government. In addition, the scope of this strategy is widened by introducing new components viz. upgradation of AYUSH hospitals and dispensaries in the existing Central Sponsored Scheme for Development of AYUSH Hospitals and Dispensaries.

The National Health Systems Resource Centre (NHSRC) has been supporting the mainstreaming of AYUSH through publication and organizing workshops for capacity building. I place on record my appreciation for the efforts put in by the NHSRC in bringing out the publication regarding Status and Role of AYUSH and Local Health Traditions under the National Rural Health Mission.

(D. D. Sharma)

Contents

Foreword

The National Rural Health Mission (NRHM) has renewed the emphasis on strengthening Indian Public Health Systems in order to achieve the national goal of health for all. Ayurveda, Yoga & Naturopathy, Unani, Siddha and Homeopathy (AYUSH) systems have been part of the Indian health care system much before they were integrated with NRHM. However, under NRHM's strategy of "Mainstreaming AYUSH and Revitalising Local Health Traditions", these systems have now been given greater attention.

There have been several contractual appointments of AYUSH doctors across the country under the co-location strategy of NRHM. However, many questions have arisen about the coverage, quality, and demand for AYUSH services; about the role of co-location in improving coverage, and about the objectives of AYUSH providers and LHT in strengthening the health systems.

This study was undertaken by the National Health Systems Resource Centre (NHSRC) in order to assess the "Status and Role of AYUSH and LHT" and to analyse NRHM's strategy of "Mainstreaming AYUSH" in terms of coverage and quality of services.

The study, which covered 18 states in India, examined the status of stand-alone AYUSH services in the public system and the co-located services under NRHM. A comparative analysis across the states revealed a wide variation of coverage, in quality of services, and factors that influenced the development of AYUSH services. AYUSH and Allopathic services have been compared with reference to some of the parameters. The study also assessed (a) the utilisation of services, (b) the perceptions of the providers based on exit interviews, and (c) perceptions of community through household interviews.

A comprehensive exercise using the principles and texts of AYUSH systems was undertaken to verify the conformance of community knowledge of LHT and AYUSH providers' prescriptions with reference to available standard protocols.

This study is a pioneering effort to project the considerable public investment in AYUSH services. Further, it provides recommendations on how to strengthen it as part of an integrated approach to administering comprehensive primary health care services.

A number of questions for additional research have emerged; we hope this survey report will spur further work on AYUSH services as part of Public Health Systems.

Dr. T. Sundararaman
Executive Director
NHSRC, New Delhi

LIST OF ABBREVIATIONS AND ACRONYMS

AFI	-	Ayurvedic Formulary of India
ANC	-	Antenatal Care
ANM	-	Auxiliary Nurse Midwife
AOP/f/d	-	Average Outdoor Patients/facility/day
API	-	Ayurvedic Pharmacopoeia of India
ASHA	-	Accredited Social Health Activist
AYUSH	-	Ayurveda, Yoga & Naturopathy, Unani, Siddha and Homeopathy
BEmOC	-	Basic Emergency Obstetric Care
BHW	-	Basic Health Worker
BPL	-	Below Poverty Line
CAM	-	Complementary and Alternative Medicine
CCRAS	-	Central Council for Research in Ayurveda & Siddha
CCRH	-	Central Council for Research in Homeopathy
CCRUM	-	Central Council for Research in Unani Medicine
CCRYN	-	Central Council for Research in Yoga & Naturopathy
CHC	-	Community Health Centre
CSS	-	Centrally Sponsored Schemes
DH	-	District Hospital
DHS	-	District Health Society
FH	-	Faith Healer
FoH	-	Folk Healer
GDMO	-	General Duty Medical Officer
GH	-	Government Hospital
HMIS	-	Health Management Information System
IMNCI	-	Integrated Management of Neonatal and Childhood Illness
IPHS	-	Indian Public Health Standards
ISM&H	-	Indian Systems of Medicine & Homeopathy
JPHN	-	Junior Public Health Nurse
LHT	-	Local Health Traditions
MAAS	-	Maharashtra Association of Anthropological Studies
MCD	-	Municipal Corporation of Delhi
MCH	-	Maternal & Child Health
MO	-	Medical Officer
MPHA	-	Multi-Purpose Health Assistant
NA	-	Not Available

NCAER	-	National Council of Applied Economic Research
NCDs	-	Non-Communicable Diseases
NFHS	-	National Family Health Survey
NGO	-	Non Government Organisation
NHP	-	National Health Programmes
NHSRC	-	National Health Systems Resource Centre
NRHM	-	National Rural Health Mission
NSSO	-	National Sample Survey Organisation
OPD	-	Out Patient Department
ORS	-	Oral Rehydration Solution
PHC	-	Primary Health Centre
PNC	-	Post-natal Care
RCH	-	Reproductive & Child Health
RH	-	Rural Hospital
SBA	-	Skilled Birth Attendant
SC	-	Sub-Centre
SEDEM	-	Society for Economic Development and Environmental Management
SFI	-	Siddha Formulary of India
SGDP	-	State Gross Domestic Product
SHRC	-	State Health Resource Centre
SHS	-	State Health Society
SHSRC	-	State Health System Resource Centre
SIHFW	-	State Institute of Health & Family Welfare
SMPB	-	State Medicinal Plants Board
SPI	-	Siddha Pharmacopoeia of India
ST	-	Scheduled Tribes
TBA	-	Traditional Birth Attendants
TCAM	-	Traditional Complementary and Alternative Medicine
THP	-	Traditional Health Practitioners
TM	-	Traditional Medicine
UFI	-	Unani Formulary of India
UPI	-	Unani Pharmacopoeia of India
VHN	-	Village Health Nurse
VHSC	-	Village Health & Sanitation Committee
WHO	-	World Health Organization

EXECUTIVE SUMMARY

AYUSH* services have been viewed as one way of ensuring access to some form of health care to the rural and poor population groups who are underserved by the dominant system. However, with the dominance of modern medicine over the past century, there has been a drastic decline in the legitimacy and services of the other systems. Now, with the enhanced recognition of their complementary strengths, there is resurgence of utilisation of Traditional, Complementary and Alternative Medicine (TCAM), by the well-off of developed as well as the better-off of the developing countries. With concerns of equity and access in health care, a serious question arises about the availability and access of quality AYUSH services and Local Health Traditions (LHT)† for all.

India is one of the few countries that have developed services of traditional medicine through the official planning process of the health service system. In 2005, the launch of the National Rural Health Mission (NRHM) included the strategy of 'mainstreaming of AYUSH and revitalisation of LHT'. The NRHM is mandated to strengthen the public system of health services with "architectural correction" so as to ensure access of all to quality care, with special focus on the marginalised sections. The strategy of mainstreaming AYUSH provides for co-location of AYUSH doctors and paramedics at the Primary Health Centres (PHCs), Community Health Centres (CHCs) and District Hospitals (DHs). There are diverse views regarding the primary objectives of this strategy even within the NRHM, where it is viewed either as a way of obtaining health care providers for the rural areas where Allopathic doctors are unwilling to be posted, or as a way of increasing access to and strengthening the services of the AYUSH systems, i.e., *'mainstreaming of the AYUSH providers or mainstreaming of the AYUSH systems'.* Keeping both objectives in mind, it was considered important to assess the quality and extent of roll-out of the strategy, so that mid-course corrections can be undertaken. There is little literature available on the AYUSH services in the

* The acronym AYUSH (Ayurveda, Yoga & Naturopathy, Unani, Siddha & Homeopathy) represents the tradition of systematised, textual health knowledge systems other than the modern.

† Local Health Traditions (LHT) represent the practices and knowledge of the common people and folk practitioners who follow an oral tradition of learning and passing on of the knowledge through practice.

public system prior to NRHM, and almost none after its implementation has begun. Hence, NHSRC undertook this study.

Objectives of the Study

To delineate the implications of the NRHM strategy of 'mainstreaming AYUSH' in terms of coverage and quality of services as assessed by public health management criteria, by AYUSH criteria, and by the demand for services.

Research Questions

- What is the coverage and quality of AYUSH services?
- How do people perceive these systems and LHT?
- What is the demand for services of AYUSH and the felt need for LHT?
- Is it being met/taken into consideration?
- Is co-location improving coverage? Is co-location providing quality services?
- What is the provider's perception of the value of AYUSH systems?
- What is the provider's potential role in stand-alone and co-located services and what needs to be done to ensure they fulfil that potential?
- What is the potential role of LHT and what is the role it is playing at present? What needs to be done to achieve that potential?

METHODOLOGY

The study covers 18 states of India[‡], with data collected in 2008 and 2009. In each state it focused on the coverage and quality of stand-alone AYUSH services existing prior to NRHM and the co-located services largely initiated under the NRHM in the public system (except in Tamil Nadu and West Bengal where it was significant even earlier). Comparative analysis across the states has allowed an examination of the factors that influence the development of AYUSH services in the public system. Some parameters, such as of institutional coverage, number of doctors in the public system and the rationality of their prescriptions as well as practice of cross-referral, have also been compared between the AYUSH and Allopathic services.

‡ High Focus states – Jammu & Kashmir, Uttarakhand, Orissa, Bihar and Jharkhand.
High Focus North East states – Assam, Manipur, Nagaland, Sikkim and Tripura.
Non-High Focus states – Andhra Pradesh, Haryana, Punjab, West Bengal, Karnataka, Tamil Nadu, Kerala and Delhi.

The demand for AYUSH services has been assessed by triangulation of the perceptions of patients through exit interviews, community through household interviews, and interviews of Allopathic and AYUSH providers at the stand-alone and co-located institutions. Data on utilisation of AYUSH services as well as the LHT provides concrete representation of the demand. Respondents of the exit and household interviews included different socio-economic groups, both sexes and the young, middle-aged and elderly age groups.

Knowledge of the LHT and rationality of AYUSH providers' prescriptions was validated against the principles and texts of the four systems – AUSH. Issues of integration and interaction across the systems, as perceived and practiced by the health care providers and the community, have been explored as well.

MAJOR FINDINGS

Level of Utilisation of AYUSH Services

State and institutional level OPD (Out Patient Department) attendance data shows that the stand-alone services were better utilised than the co-located in most states.

OPD Attendance at Stand-alone Services

1. There is a highly variable utilisation across the states, from an average of 8 patients per facility per day (AOP/f/d) to 78 patients.
2. Nagaland, Jammu & Kashmir, Jharkhand, Haryana and Karnataka had an average of less than 20 patients AOP/f/d. However, data collected from the facilities themselves was 20 patients or more, in these states as well.
3. Uttarakhand, Manipur and West Bengal got 20-40 AOP/f/d.
4. Orissa, Andhra Pradesh and Kerala showed a state level average between 40 and 60 AOP/f/d.
5. Tamil Nadu received the highest number of AOP/f/d, 78 was the state level figure and 43 the district level.
6. At the facility level in the study districts, AYUSH dispensaries reported providing services from 20-127 AOP/f/d. The relative ranking of states, however, remained similar to the aggregate data, with minor variations, e.g., Kerala moved up over Tamil Nadu.

OPD Attendance at Co-located Services

1. OPD attendance ranged from 1-4 AOP/f/d in 8 states, 5-9 in 2, 10-14 in 1, over 45 in 1 and over 75 in the exceptional case of Tamil Nadu.
2. The co-located services in Tamil Nadu and Andhra Pradesh had an OPD attendance similar to that of the stand-alone. West Bengal had an even higher attendance at the co-located than the stand-alone facilities.
3. The attendance at Allopathic facilities ranges from similar figures as the AYUSH stand-alone facility in Orissa, Manipur and Andhra Pradesh, to about 5 times that of AYUSH (as in West Bengal).
4. It is important to note that Tamil Nadu and West Bengal had initiated co-location of services well before the others in the pre-NRHM phase. It can, therefore, be hoped that the attendance will pick up in the other states as the co-location stabilises.

Thus, while there were some poorly and some well utilised facilities in each state, the official records of the AYUSH institutions and the state directorate's data on OPD attendance showed a fairly good level of average facility utilisation for AYUSH stand-alone services in most states. The OPD attendance data from the facilities included in this study, as also observed by the investigators, showed an even higher utilisation than the state and district aggregated data, thereby giving confidence that the aggregated state data was reflecting the lower end of the reality and not over-stating it. Indoor services were also in use where they were made available, e.g., in the states of Uttarakhand, Tamil Nadu and Kerala.

The co-located services were well utilised where they have been in place and well functioning for several years. In most states, however, they were still to find wide usage, though marked variations were found, as expected, across facilities and districts even within a state.

Utilisation Reported by Households

Household reporting of use of AYUSH services in the last three months also corroborated the high utilisation in most states, ranging from 20% to over 90%. One-third states had up to 30% reporting utilisation, another one-third had 30-60%, and the rest one-third states, 60-98% reported utilisation in the last three months.

This figure of utilisation of AYUSH OPD services may be higher than in other parts of the state, since the design criterion was selection of a good AYUSH services district

and the households were from villages where an AYUSH public service facility was situated. In most states, the household responses included both public and private service utilisation. However, it does reflect the widespread popularity of AYUSH.

Level of Utilisation of LHT

In 14 of the 18 states, 80-100% of the households reported use of LHT. They are most commonly used in the poorest regions which also have the poorest services in the public and private sectors. In the Non-High Focus states with relatively good health services, i.e., Tamil Nadu, Kerala, Haryana and Karnataka (those with higher average state per capita income and better-developed general health services in the public and private sectors) too, the use of LHT was still in the range of 50-75%. *In the exit interviews 2-73% of patients reported use of home remedies for their presenting illness, and 18-80% were continuing them together with AYUSH and Allopathic treatment, respectively.* This corroborates the household reporting of high use of home remedies.

The high utilisation of AYUSH services and LHT in states such as Tamil Nadu and Kerala refutes the argument frequently made, that people resort to them because of inaccessible or unaffordable general modern health services. These are the states with the best functioning public systems of free health care and high utilisation of Allopathic public and private services. It indicates the community 'felt need' for services other than that of the modern system. The pluralistic health seeking behaviour reflects the inherent strengths and limitations of the various systems, thereby indicating a demand for AYUSH services that remains unfulfilled in the other states due to poor quality of services and/or poor coverage.

Pattern of Usage of AYUSH and LHT

There is a clear distinction made by the community members between the conditions for which LHT, AYUSH or Allopathy is considered more useful. An important finding is that AYUSH and LHT are in use for both acute and chronic conditions. Broadly, only the serious emergency conditions are excluded for resorting to AYUSH services.

LHT were being used for the early stages of any disease, and in chronic conditions. They were largely also continued when taking Allopathic treatment.

For Treating Chronic Conditions

More cases of chronic illness were found among the patients taking AYUSH treatment, as compared to those taking Allopathic treatment. Joint pain, skin problems and respiratory disorders are amongst the most commonly mentioned health problems for which AYUSH is sought for, as mentioned both by the users (exit interviews) and the community (household interviews). High blood pressure, heart disease and diabetes, are also among the top five mentioned by community members in several states.

For Treating Acute Illness

However, it is important to note that among the users of AYUSH services, the largest number was for acute everyday problems such as cold & cough, fever, diarrhoea and difficulty in breathing for all age groups. Jaundice and Chikungunya have also been among the top five mentioned in some states.

For Promotive and Preventive Functions

Specific usage of the Siddha facility for increasing children's immunity is a special finding in Tamil Nadu. However, their use for promoting health of the mother during pregnancy as well as for the baby's health is extremely widespread. They are popular for recuperation in conditions such as malnutrition and convalescence.

Community's Perceived Reasons for Utilisation of AYUSH and LHT

Reasons of valuing AYUSH are those that are commonly accepted in health literature: previous experience of getting cured, belief in the traditional system, side effects of the allopathic medicine, perceived effectiveness in chronic diseases, easy to use (community can well relate to) and no other option of health facility available.

'Effective', 'cheap', 'easily available', 'easy to use' and 'no side effects' were the commonly cited reasons why the LHT were found useful.

Level of Awareness in the Community regarding AYUSH and LHT

Across the states, awareness regarding medicinal plants was found to exist in 47-100% households, and about food items having medicinal properties was found to exist in

54-100% households. Kerala and Karnataka had the lowest responses, while in all other states responses were about 90% or more.

Validity of Community Knowledge and Practice

The community's knowledge of medicinal plants and medicinal value of foods was validated in all 18 states.

More than 75% of home remedies used for diarrhoeal disease, anaemia and diabetes, as well as in convalescence and maternal and child health (MCH) conditions, were validated across the states.

This is generally indicative of the strength of people's knowledge and its links with the indigenous systems suggesting that it should be the base to build upon as a positive resource rather than being neglected or even denigraded, as often implied in the general Information, Education and Communication (IEC) messages and health providers' communications. This also implies that the people's knowledge can further be strengthened and updated as per AYUSH scientific episteme for larger prophylactic and therapeutic use. It can also contribute to the strengthening of content of the AYUSH systems.

Perceptions and Practices among Health Care Providers Related to AYUSH and LHT

70% of the Allopathic doctors were of the view that AYUSH systems are not redundant and suggested ways of strengthening their services. They also mentioned home remedies as useful. 55% of them advised home remedies in combination with Allopathic treatment to their patients.

The AYUSH as well as the Allopathic doctors expressed the need for research and documentation of some common health practices and illustratively quoted a few.

The ASHAs across the states [and Village Health Nurses (VHNs) in Tamil Nadu] had good knowledge about local medicinal plants and advised herbal remedies to people in the community. However, their level of responses was lower than from the household interviews in the community. This was relatively low in Kerala, Punjab and Haryana.

Practice of Combination Treatment and Cross-Referral between Different Systems

Both the Allopathic and AYUSH doctors have listed several conditions for which treatment of different systems is combined. They also list conditions where AYUSH providers refer to Allopaths, and others where Allopaths refer to AYUSH. However, the cross-referral was done verbally and in an informal way, thereby not being documented or formally recognised.

The conditions for which combination or referrals were listed by the doctors tend to tally very well with the people's perceptions and use. This triangulation is a strong basis for further examination and inclusion of those found cost-effective, safe and easily accessible into "multi-pathy" Standard Guidelines for Treatment.

POPULATION COVERAGE OF AYUSH SERVICES

Number and Type of Facilities – Stand-alone and Co-located

There is a wide network of stand-alone AYUSH facilities in the public system in most states, ranging from 1 institution per 17 thousand persons in Uttarakhand to a low of 1 for over 1 lakh in Jharkhand and Bihar. With co-location, the ratio of service institutions to population improved to 1:12 thousand in Uttarakhand (from 1:17 thousand), and 1:14 thousand in Orissa (from 1:33 thousand) to 1:60 thousand in Andhra Pradesh (from 1:76 thousand).

In the states of West Bengal and Tamil Nadu, where large-scale co-location existed even before NRHM, the result of the NRHM strategy has been addition of co-location facilities at the Primary Health Centre and Community Health Centre levels. Earlier, the focus was on District and Sub-district Hospitals.

Relative to Allopathic facilities [excluding Sub-Centres (SCs) which are not meant to have doctors providing services], the total AYUSH services still remained low in most states even after co-location. The exceptions were Kerala, Tripura and West Bengal, where the AYUSH service institutions were more in number than the Allopathic even prior to NRHM. In Orissa, the number of AYUSH service institutions became more than that of Allopathy after co-location under NRHM, as has the ratio of doctors in the same proportion.

Among the High Focus states, the hill states, i.e., the North East (NE) states (except Tripura and Assam), Jammu & Kashmir and Uttarakhand had the best coverage by Allopathic institutions, the Government of India having set lower population norms in these areas with difficult terrain. However, they have very varied coverage by AYUSH services; Uttarakhand, Tripura and Jammu & Kashmir, having good coverage, and Manipur, Assam, Nagaland and Sikkim having poor coverage. Bihar and Jharkhand have poor coverage of both Allopathic and AYUSH services. Orissa is the exception with good coverage of both.

Among the Non-High Focus states, Punjab and Tamil Nadu have good coverage of Allopathic services, but Tamil Nadu lags in coverage of AYUSH services. All others have low institutional coverage of Allopathy, and even lower of AYUSH services. Kerala is the exception with the highest coverage of Allopathy and AYUSH services.

QUALITY OF AYUSH SERVICES

The quality of AYUSH services was assessed based on a set of parameters covering infrastructure, human resources, supplies, record-keeping and other inputs. While the quality varied across states, in almost all, the quality of infrastructure, presence of human resources, supply of medicines, and records were found to be unsatisfactory. Combining indicators for all these parameters a qualitative grade was composed for the quality of facilities in each state.

Among the stand-alone facilities, in 8 states they were graded 'fair', in 2 'good' and in 3 'very good'. Among the co-located, 7 were graded 'poor', 6 'fair' and 2 'good'. Thus, the quality of services was found to be better in the stand-alone than the co-located, the gradient across states being similar.

Infrastructure and Logistics

Among the stand-alone institutions, the hospitals generally had good buildings with reasonable maintenance; however, the dispensaries were in comparatively poorer shape in all states, some still running from semi-pucca or kaccha buildings even in the Non-High Focus states. Cleanliness was generally found to be lacking in most institutions, especially in the toilets and the vacant space in the compound. Water supply and electricity were generally erratic, with no back-up of tanks or generators. Vacant space around the compound was generally found in the facilities covered

across states, except Delhi, though it lay unutilised for herbal gardens or quarters for the staff.

Among the co-located facilities, the District Hospitals had separate space for the AYUSH OPD in all states, the CHCs had separate space only in Orissa, Manipur and Sikkim, and in no state in the PHCs. Signages were generally not adequate. While water supply and electricity were generally erratic, there was back-up of tanks and generators for the whole institution that benefited the AYUSH services as well. Most had some vacant compound but no herbal gardens.

Thus, on an average, all the states could just qualify marginally for marks on the parameter of infrastructure.

Drug Supply

The supply of AYUSH medicines was stated to be inadequate by the providers and users, and the packaging and drug dispensing has been reported as inconvenient to the patients.

Supplies were generally better at the stand-alone than the co-located services. The PHCs in particular had poor supply; a large number of those studied not yet having begun to get AYUSH medicines.

Diagnostics

Diagnostic facilities are available at the co-located institutions, but only at very few stand-alone AYUSH hospitals, and none at the stand-alone dispensaries.

Human Resources

The ratio of number of AYUSH doctors to AYUSH institutions reveals the position of vacant posts and lack of doctors and paramedics in the public system in atleast 5 states – Bihar, Jharkhand, Manipur, Tripura and Punjab. With co-location, under NRHM, the doctor : population ratio has improved considerably. Jammu & Kashmir and Orissa have among the best AYUSH doctors in the public system: population ratio after co-location, at approximately 1:15 thousand. Bihar, with no co-location, has the worst at over 1:4 lakh.

However, across states, despite co-location, the AYUSH doctors continue to be 2 to 15 times less than the Allopaths. Orissa is an exception since it now has more AYUSH doctors than Allopaths in the public system.

Salary Structure

There is parity in salary structure between the AYUSH and Allopathic doctors in only a few states; among the doctors in regular service in Kerala, Tamil Nadu and Jammu & Kashmir, and among the contractual doctors in co-located facilities of Jammu & Kashmir, Bihar, Manipur and Tripura. In all others, it is much lower than that of the Allopaths.

Designation

In Haryana and Tamil Nadu, the AYUSH doctors are designated as Assistant MOs (Medical Officers) irrespective of their level of seniority. They do not become in charge of facilities if an Allopath is also posted at the same facility.

In all other states, the designation is MO, but the charge remains with the Allopaths.

Roles and Responsibilities of AYUSH Doctors

Primarily OPD services seem to be the major activity of AYUSH doctors. Where there is no other doctor, they practice both Allopathy and AYUSH. This is specially marked at the PHC level in most states. In CHCs and District Hospitals, they practice their own system of medicine most of the time. In some states, such as Manipur and Orissa, they also conduct deliveries at PHCs where there is no Allopathic MO. There is no outreach activity and no clear role definition in implementing the National Health Programmes (NHPs). In some states there are a few mobile clinics and health melas where the AYUSH doctors participate. They may also be involved in some training activity for Reproductive and Child Health (RCH) care and AYUSH component of the Auxiliary Nurse Midwives (ANMs) and Accredited Social Health Activists (ASHAs).

Validation of the Prescriptions of AYUSH Doctors

Over 75% of the AYUSH doctors' prescriptions were validated by AYUSH text references and principles in all the states where prescriptions were recorded, i.e.,

11 of 18 states surveyed. About 25% were outside the texts, Kerala findings showing only 5% outside. Jammu & Kashmir showed a 100% outside because all AYUSH doctors practiced Allopathy since no AYUSH medicines were being supplied, and the expectation in the service was that they practice only Allopathy.

Record-Keeping of AYUSH Services

The facilities profiled in the study had records of OPD attendance, but did not have well maintained utilisation data by age, sex as well as the profile of presenting complaints. There was also a mix of terminologies of diseases quoted from both the AYUSH system as well as modern medicine diagnostic terms, e.g., arthritis is also mentioned as "vata vyadhi". Information about referral of patients was not covered anywhere, whether of cross-referral within a co-located institution or to other institutions. The services provided by these institutions in National Health Programmes (NHPs), especially National Vector Borne Disease Control Programme (NVBDCP) (e.g., Chikungunya), are not properly recorded. Where recorded, the reporting mechanism still needs to be put in place.

However, a comparison of the facility level OPD utilisation data with the state level aggregated data showed that the state records had lower figures and, therefore, were definitely not inflated, though there was likelihood of under-reporting due to incomplete/irregular reporting by facilities and districts.

The web-based Health Management Information System (HMIS) of the general health services, provides data on the co-located services only. There, too, data is available for state and district levels, providing only the OPD attendance. In many states, it was obvious that the aggregated data was based on incomplete reports with only some districts and facilities sending in their data.

IMPLICATIONS OF THE FINDINGS FOR HEALTH SERVICES DEVELOPMENT POLICY

Recommendations to Strengthen and Mainstream the AYUSH Services and Revitalise LHT

Financial Allocation

1. Given the appreciation and high utilisation of AYUSH services in most states, the unmet felt need must be recognised and catered to.
2. A higher financial allocation needs to be made for the AYUSH services. A mere 3% of the total budget is grossly inadequate and, with the large number of institutions, can only ensure poor quality of services in them. China gives over 40% of its health budget to Traditional Medicine (TM) services, research and production of pharmaceuticals and equipment.

Improving Coverage

3. More facilities are required in districts and blocks where they are lacking, and more personnel including doctors may be sanctioned at facilities where the load is high. Setting guidelines for norms by population coverage and accessibility would be useful. This is clearly required in Bihar, Jharkhand, all the North East states except Tripura and Manipur, and in all the Non-High Focus states except Kerala, Punjab and West Bengal.
4. Even in states such as Tamil Nadu and Kerala where the functioning of existing services is high, the coverage requires to be increased if wider access is to be ensured. At present, a larger segment of the population has to resort to the private sector to fulfil its demand for AYUSH services.
5. As state comparisons show, administrative and technical supervision are both necessary for better coverage and quality of services. The cultural and political will behind the development health services in general and the TM services in particular, are equally crucial ingredients. Thereby, all four must be strengthened if better AYUSH services are to be made available in any state.

Improving Quality

From an equity perspective, it is clear that there is unequal access to quality AYUSH services between the states and across socio-economic sections. The

populations in states with low average state per capita income tend to have access to poorer quality AYUSH services in the public system, even when institutional coverage is higher.

Co-located Services

6. The co-location of AYUSH services (pre and post NRHM) within the Allopathic institutions is proving useful since it is providing a wider coverage of AYUSH services. However, at the time of this study, in all states the co-located services were found to be of poorer quality than the stand-alone. Their utilisation was also lower, except in Tamil Nadu, West Bengal and Delhi, where the co-location had been in operation for some years, initiated well before NRHM. As the more recent co-located services stabilise, it can be expected that their quality will also improve. How far it improves is likely to depend on a policy environment favouring the potential of people's knowledge and the AYUSH systems, as well as the quality of the health services as a whole.
7. An even wider coverage at the primary level of health care would be useful, given the pattern of conditions for which AYUSH services are most commonly used, i.e., at the PHCs and SCs (Sub-Centres). Their role in MCH care, treatment of acute conditions such as diarrhoea and Acute Respiratory Infections (ARI), as well as non-communicable diseases (NCDs) is well documented and validated. The outreach services of the ANMs and ASHAs must make full use of the potential of AYUSH and LHT in primary care for the above.
8. Utilisation of AYUSH in certain epidemic diseases, e.g., Chikungunya, was reported in some states. Thus, their role in treating, especially including the NCDs and chronic diseases, must also be utilised in specific public health interventions, with its process and outcomes to be documented for analysis of usefulness and wider application.
9. The AYUSH systems and LHT must be viewed as complementary and supportive to each other, and thereby dealt with as a composite whole. The LHT were still very much a part of people's knowledge and practice. People's knowledge of medicinal plants and foods was largely validated by the science of AYUSH.

Strengthening Management

10. Supervision, monitoring and planning should be integrated for the stand-alone and co-located services at the district level. The District AYUSH/Ayurveda/ Homeopathy Officers should have active charge of the technical dimensions of

co-located services as well. They should receive support from the state level in terms of adequate funds, staff, transport and training.

11. There also needs to be better coordination with the NRHM administratively and of the support structures. An AYUSH unit at the State Health Resource Centre (SHRC/SIHFW) could greatly facilitate this process of strengthening and change.
12. A Rogi Kalyan Samiti should be constituted at each stand-alone institution and untied funds made available to them.
13. The AYUSH wings of co-located institutions should also get the benefit of untied funds.

Infrastructure

14. While creating the separate space for AYUSH services should be the responsibility of the NRHM and/or the state, i.e., the source for construction and extension of the rest of the building of the PHC, CHC or DH.
15. Clear signages should be placed outside the institution to announce the availability of AYUSH services at the co-located institution along with visible and easy access to the services inside the building.

Trainings

16. The AYUSH doctors need in-service training on their systems for re-orientation in the changing environment for building greater accountability and confidence. Training in Basic Obstetric Care and in National Health Programmes are needed for AYUSH doctors performing the tasks of conducting normal deliveries and implementing the NHPs, respectively as required at the co-located institutions.
17. AYUSH colleges must be involved in the planning where they have faculty capacity and strengthened where they do not. Educational curriculum must be strengthened in both, public health and administrative dimensions as well as the principles-based practice of the system.
18. The Allopathic doctors, nurses and para-medics should be given in-service orientation to the value and uses of the AYUSH systems and LHT. Those among them who are interested may be given further training. Those practicing cross-referral should be involved in the institutional level planning for AYUSH services and LHT.

19. Local Non Government Organisations (NGOs) and AYUSH colleges doing good work on LHT and AYUSH should be involved in the SHRC for providing innovative practices and support for training of various in-service cadres.

Drug Supply

20. The drug supply needs to be augmented beyond what is already being made available. Systems must be developed to ensure transparency in procurement of AYUSH medicines. They must be supplied as per need of the institution based on its patient load and the morbidity profile. The packaging also needs to be more user friendly.

Health Management Information System

21. Record-keeping, as well as flow of information of the services provided at AYUSH institutions, needs immediate refining. For instance, the OPD attendance for AYUSH services must record and report the diagnosis/presenting complaints. To mainstream the system, it is very important to record what the system is catering to.
22. The merging of HMIS, at least for the co-located facilities, requires that some common terminologies be developed for the diagnosis of conditions, and their categorisation. However, this must keep intact the epistemological bases of the systems.
23. Moreover, there is a need to record the referral data at these institutions. Indicators for the initiatives of mainstreaming AYUSH and revitalising LHT should be developed and incorporated in the monitoring tools for NRHM and the health services as a whole.

Building Blocks of a Decentralised, Locally Rooted, Affordable and Ecologically Sustainable Health Care System: Enabling a Bottom-up Health Services Development.

24. Referral linkages of LHT (particularly home remedies) to AYUSH services at the stand-alone and co-located AYUSH facilities at the primary and secondary levels, need to be established for catering to scientific use of AYUSH by the community. The strengths and limitations of LHT and AYUSH at every level need to be analysed and strengthened in terms of both resources and services offered (medicinal herbs and plants, drugs, specialised equipment, human resources, etc.).

25. The Indian Public Health Standards (IPHS) prescription of cultivating local medicinal plants and herbs in the compound of the PHCs and SCs needs to be implemented. While being useful in strengthening the LHT in the community, this could also be useful in strengthening linkages between the AYUSH practitioners at the co-located facilities and LHT. This is a prerequisite to revitalise the traditional medical knowledge and also nurture the mainstreaming. This activity should be coordinated with the State Medicinal Plants Board (SMPB) on one hand, and the local community organisations, Village Health & Sanitation Committees (VHSCs), Traditional Healers' Associations, etc., on the other.
26. Massive documentation and validation of the local heath practices by the AYUSH context specific epistemology and the linkage between the two to be undertaken by the district and state level bodies for promotion and use.
27. There is a need to create an enabling environment within the formal system for interaction between the co-located doctors of different systems and promotion of cross-referral between them. There is clearly an appreciation of the complementarity of the other systems of medicine among both Allopathic doctors and AYUSH doctors in the public services. They are also advising patients at an informal level, to use them. However, at the formal level there is no cross-referral, as was seen from the prescriptions at the facilities.
28. One mechanism could be to develop Standard Guidelines for Treatment that combine measures from home remedies to primary care of the AYUSH and Allopathic systems, and further on to their specialised services when required at secondary and tertiary levels.

AYUSH in National Surveys on Health Care Utilisation & Futuristic Bridging Research

29. The existing National health surveys, such as the National Family Health Survey (NFHS) and the National Sample Survey Organisation (NSSO) rounds that focus on health, reveal a decided inability or methodological limitation for collecting and analysing data related to AYUSH or home remedies. It is strongly recommended that in the future rounds their data collection tools and analytical frame must be designed to capture the role being played by these systems in terms of people's use of them in different social strata.

30. AYUSH research should be streamlined so as to get quality output of scientific evidence based on principles of AYUSH for each district so that local ecology, cultural and social context are given due consideration. Practice-based evidence generation is more valid than laboratory-based evidence of biomedicine for a logical framing of interventions for facilitating 'mainstreaming AYUSH' and working on the above recommendations. Epistemologically sensitive epidemiological methods should be evolved such that the complementarity of all forms of research may be worked out and the community and laboratory research brought together into an integral whole.
31. NRHM should initiate institutionalisation of such creative futuristic research in collaboration with the Department of AYUSH. This is where the future of health care development lies if it is to be affordable and ecologically sustainable.
32. A paradigm shift is required for planning of health care development if all the above recommendations are to be operational. A possible framework is presented in the box below. Its implementation requires a readiness to reform the governance paradigm and give people the centre-stage for health care planning.

The Planning Paradigm for Health Care Development

If decentralised planning and implementation with community involvement is to be achieved in accordance with the spirit of NRHM, community needs in terms of AYUSH and LHT are required to be incorporated in planning. In fact, if the bottom-up paradigm of planning is to be adopted, then these have to be the starting point for consideration of people's health care, and 'architectural correction' of the health care system as a whole should be designed with this perspective. A framework for such an approach is outlined below:

i. Each district must plan beginning from its epidemiological data on morbidity and mortality, and from information about the prevailing health seeking behaviours of all sections of the local people, including use of LHT, AYUSH and Allopathy. Documentation and validation of these should be an ongoing task at the district and state levels.
ii. The documentation of health seeking behaviours should be an activity required of the AYUSH doctor at the PHC and CHC. The local traditional practitioners, the panchayat and the VHSC should be associated with the activity.

iii. The documentation could be collated at *district level as community knowledge*, the traditional *practitioners' practices* being certified by the panchayat as locally beneficial knowledge.

iv. The documentation should be followed by validation, based on the locally prevalent systematised traditional medicine by the AYUSH doctors at district level and then promoted for use by the community as well as put to use at the health centres. This would not only revitalise the LHT but also contribute to strengthening the knowledge base of AYUSH and promote its non-commercial practice using local herbs.

v. The IPHS requirement of a herbal garden in each SC and PHC provides the opportunity to facilitate linkage between the cultivation of medicinal herbs and plants and their local use, involving the local traditional practitioners for this activity and linking it with the AYUSH doctor of the co-located facility. This is recommended as one of the community-linked processes that the NRHM must operationalise. The panchayat and the VHSC should be associated with this activity as well.

vi. Use of the LHT and AYUSH for MCH, NCDs and any other conditions found suitable must be identified and promoted for self-care, home-based care and institutional care, as appropriate. Each state should generate 'multi-pathy' Standard Guidelines for Treatment for all health care providers (including the doctors of Allopathy and AYUSH, ANMs and ASHAs), stating the role of AYUSH and LHT in primary care and the points of cross-referral. This requires assessment of cost-effectiveness of optional regimens from home remedies to AYUSH to Allopathy at primary, secondary and tertiary levels.

vii. Campaigns initiated by the Department of AYUSH, such as for MCH in Homeopathy, Geriatric services and the *Kshaar Sutra* for ano-rectal disorders currently being undertaken by selected stand-alone Ayurveda institutions, should be taken up at the co-located services as well.

viii. The AYUSH graduates who receive clinical training in conducting normal deliveries could provide MCH services (including deliveries) in the stand-alone institutions. They could involve the local dais as support in the deliveries, as well as for ANC and PNC.

ix. The use of AYUSH and LHT in epidemic situations (as already undertaken for Chikungunya and dengue in some states) needs to be studied and incorporated into public health practice in other states.

x. These steps would give the 'mainstreaming of AYUSH' strategy its content so that it does not merely become the 'mainstreaming of AYUSH providers'.

xi. Use of the HMIS for regular monitoring of implementation of plans and quality of services, identifying gaps and thereby strengthening inputs would then improve quality as well.

Factoring in the health care needs that can thus be provided by LHT and AYUSH would reduce the load on Allopathic services as well. As it becomes effective, this would also decrease the need for secondary and tertiary care, thereby creating the possibility of sustainable and comprehensive health care services. Further planning of services should then optimise the workload and role of the HR of both Allopathy and AYUSH, and thereby plan for increase in coverage by institutions as well as the HR recruitments in the institutions. This would be the most cost-effective and accessible primary level care.

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Introduction and Research Methodology

INTRODUCTION

The acronym AYUSH (Ayurveda, Yoga & Naturopathy, Unani, Siddha & Homeopathy) represents the tradition of codified, textual health knowledge systems other than the modern, while Local Health Traditions (LHT) represent the practices and knowledge of the common people and folk practitioners who follow an oral tradition of learning and passing on of the knowledge. Planned development of health services in the public system began in India after Independence, based primarily on modern medical science (Bhore Committee Report, 1946). However, services of systems of health knowledge, other than the modern 'Allopathic', have been part of the public system of health care in the country. The number of service delivery institutions has grown to being close to those of Allopathy. Yet, they have been a blind spot for mainstream public health; almost non-existent in public health literature, health systems research or teachings. Pluralistic health culture and the role of 'other systems of medicine' has been recognised and the inclusion of their 'large manpower in rural areas' in public health programmes has been recommended repeatedly, but with no attention to the services existing within the public system. Officially labelled Indian Systems of Medicine & Homeopathy (ISM&H), the impressionistic view of these services among health bureaucrats/administrators has been that of decrepit, poorly functioning and poorly utilised institutions that are inconsequential and useless, existing only because of political compulsions.

On the other hand, there is a growing recognition, nationally and internationally, of the need for incorporating the contributions of these systems of health knowledge into the dominant one to meet the limitations of modern medicine. The relevance of traditional medicine is seen in the context of promoting ecologically sensitive life patterns and technologies conducive to local natural conditions, and because people's preferences and use of TM show the impact its various forms have on their well-being. The Planning Commission expert groups have responded since the 9th Five Year Plan by recommending strengthening of the ISM&H services (now called AYUSH since 2003). Attention of planners has been drawn with even more urgency due to the increasing demand and market potential for herbal medicines and pharmaceutical formulations of these systems. The research that has rapidly increased in ISM&H in the past decade has been almost entirely on the medicinal products of these systems with an eye on their value to economic growth of the country.

The NRHM, initiated in 2005, adopted 'Mainstreaming of AYUSH and Revitalisation of LHT' as one of its strategies to strengthen the public services. The National Health Policy on ISM&H (2002) had emphasised the need for strengthening them for playing a major role in the public health care system and also integrating them with the Allopathic services. The 11th year Plan (2007-12) Task Force suggested the co-location of AYUSH doctors and paramedics in the PHCs, CHCs and DHs. Human resources being a major constraint in reaching the service delivery goals, the public health system has been introducing Community Health Workers (CHWs), ASHAs and now the 3-year rural doctors without paying much attention to the already existing human resources of AYUSH, both formal and informal, including community-based folk and traditional health practitioners. The role they can play is to cater to health needs of the community with their own knowledge base, and not only by acting as a substitute human resource. Thus, the NRHM strategy for AYUSH and LHT is meant to cater to both needs, for trained health human resources and for promoting the use of systems other than Allopathy. The NRHM budget provides for salaries of contractual AYUSH doctors as per IPHS norms for PHCs, CHs and DHs. The infrastructure and drugs are to be provided by the Department of AYUSH under the CSS.

Most states have some AYUSH services in the public system; many of them fairly elaborate networks providing wide coverage through stand-alone AYUSH institutions (except a few states where there were co-located AYUSH services at the Allopathic centres and hospitals even prior to NRHM). However, no serious efforts have been made to survey the ground realities with regard to acceptance and usage of the existing services by the public, status of integration of these systems in health care delivery at different levels; their quality of functioning; practical difficulties faced by institutions and health care personnel in health care delivery; and those faced by the general public in availing the services. The status of co-located services under NRHM that started after its initiation in 2005 needs to be studied in this context.

The limited international literature on traditional medicine and public health also reveals the need for studying strengths and limitations of the services in India. We are one of the 25 countries that has given official support to traditional medicine and developed services in the public system. Analysts of the available information while preparing the global atlas of traditional medicine, observed that "what is lacking is a detailed understanding of the differing patterns of use according to disease, income, gender, age, geography and culture." Other research questions include: "What are the

emerging trends of Traditional, Complementary and Alternative Medicine (TCAM) use? What is the quality of services being offered to the public? What models exist for partnering the best of TCAM along with the best of conventional medicine to provide effective and affordable health care?" (Bodeker and Burford, 2007, reprint 2009).

One of the NRHM's overall mandates is to "carry out necessary architectural correction in the basic health care delivery system" (Mission Document, 2005). The role of the systems of traditional medicine and folk practices has historically been an unresolved issue among policy makers (Priya, 2005). If the NRHM can bring them into the system through mechanisms that allow them to fulfil their potential role, it will have dealt with one of the major dimensions that need architectural correction in the health service system of the country.

GAPS IN INFORMATION

There is no study available on public services of ISM&H/AYUSH from a health systems perspective, bringing the institutional, provider and user's data together into a logical whole. Since health is largely a state subject, the centre's support for state health systems needs to be based on each state's own articulation of what it needs and what its vision of development is. The rollout of NRHM strategies will also depend on the existing level of development of AYUSH services in the state. Hence, with decentralised planning, implementation of the strategy varies greatly across states but there is little analysis of these variations. Neither is there a study of LHT in India from a systems perspective. The operationalisation of NRHM strategies too has been each state's responsibility so that the extent of co-location of AYUSH service providers and the duties assigned to them differ across the states. Such information, analysed from a holistic systems perspective, could provide evidence on which to base policies and is also required to plan inputs to optimise the NRHM strategy.

AYUSH Health Services Data

There is little documentation of the services of the AYUSH systems in the public sector, i.e., the quality, access, availability of infrastructure, human resources, records, MIS, etc., of services already existing in the AYUSH services of the public sector. In 2006, the Department of AYUSH had commissioned A.F. Ferguson & Co., to do an evaluation of Centrally Sponsored Schemes (CSS) of the Department of AYUSH.

Focussed on the gaps in implementation and impact of CSS, its report provides some interesting insights into the functioning of the State AYUSH Departments (Ferguson, 2007). However, its objective was not to study the services per se, and so we get only partial glimpses. Status of the additional initiatives under NRHM also need to be examined for the extent of implementation and the nature and quality of services being provided by the AYUSH practitioners co-located in the primary health care services.

The emphasis of the National Policy on ISM&H (2002) on integration of ISM&H with the Allopathic services also requires that the progress in this direction be studied, so as to identify the positive initiatives that can provide lessons for others. Simultaneously, identification of the limitations of the efforts would help in taking corrective steps for implementation as well as strengthening the conceptualisation of the objectives and activities.

The strategies of co-location and integration raise several issues that need to be addressed for optimal effectiveness of the initiative. These include role of doctors of different systems and other functionaries in providing health care, administrative issues arising in absence of doctors of one stream where the other is to perform duty specially in providing essential or emergency services to patients for which one may not be professionally competent, or legally one is not authorised. The legalities of integrated practice, which differ from state to state, need serious consideration from the viewpoint of health systems development.

National Health Surveys & Data on Utilisation of AYUSH and LHT

The Department of AYUSH does not report utilisation data. The NSSO and National Council of Applied Economic Research (NCAER) health surveys provide some of the national level data on utilisation of health services. However, the recent rounds of NSSO do not consider AYUSH services separately at all, and home remedies are clubbed with 'no treatment' (NSSO). The NFHS too does not take into consideration the utilisation of AYUSH services, since in its categorisation of "treatment was sought from a health facility or provider" it "excludes pharmacy, shop, and traditional practitioner" (NFHS). The NFHS does have some data on home and herbal remedies in relation to diarrhoeal disease in children and on general sources of health care in households, but its findings are at marked variance with the large body of literature on

health seeking behaviours from research in medical anthropology and international health systems research, since the NFHS-3 finds that only 8% of children with diarrhoeal disease received such remedies.

The data on general sources of health care does not have a category of public sector AYUSH services, though it does have traditional systems in the private sector and there it finds utilisation for 0.2-0.5% ailments. Thus, while clearly there is an exclusion of traditional systems and folk forms of treatment in the national surveys, it needs to be examined whether there is actually no or very limited demand for AYUSH services, home and herbal remedies, or is this a methodological limitation of these surveys?

SCOPE OF THE STUDY

In order to fill these gaps in information about AYUSH services and the utilisation of AYUSH and LHT, NHSRC undertook to conduct this study on the activities undertaken by the states under 'mainstreaming of AYUSH and revitalising of LHT'. The analysis was done in the context of existing AYUSH services in the public system, the role(s) being played by the co-located AYUSH providers, and the unmet demand for TM.

Objectives of the Study

The study was aimed at providing an overview of the status of initiatives at 'mainstreaming AYUSH and revitalisation of LHT' under NRHM as well as of the other services of the AYUSH systems in the public sector across all states. This would help identify the areas were NRHM should intervene so as to effectively use AYUSH resources to improve the quality of care and lead to more fully functional public health facilities. It should lead to better community level care. It should also be catering to the community's felt needs and, therefore, identifying the utilisation practices and perceptions about AYUSH services and LHT would be useful. Given the extensive scope of the study geographically as well as the number of inter-connected dimensions it was required to examine, it was decided to limit the ground level investigation to one district in each state. While this would mean that the study findings would not be able to claim representativeness, they would provide a broad overview of the pattern of AYUSH services across states and present the diversity among them. Some general issues for health services development and for strengthening of AYUSH services in

particular were expected to emerge from this investigation, with special significance for implementation of the NRHM strategy.

In order to fulfil the main objectives, the specific objectives included:

i. Documenting the status of functionality of the existing facilities of AYUSH in the public sector, whether supported by the state or the centrally sponsored schemes.
ii. Documenting the status of co-location of practitioners of the AYUSH systems in the primary health care facilities, as well as any other initiatives taken in any state.
iii. Recording the number of facilities in the district providing AYUSH services at all levels, along with their financing and utilisation data.
iv. Recording the quality of infrastructure, human resource position, supply of medicines and equipment, management structures, monitoring mechanisms, record-keeping and information system for a selected sample of facilities. Their utilisation in terms of the number of outpatients and indoor patients availing of the services, along with the nature of their ailment/diagnosis and the prescribing pattern, is also to be obtained.
v. The co-located AYUSH services were studied for the same features as in (iv) above.
vi. Examining at community level the use of AYUSH and LHT as well as related perceptions and knowledge among the community members.
vii. Finally, undertaking an analysis of the strengths and weaknesses of the AYUSH services, the opportunities they present in improving health services and the threats to their optimal utilisation so as to identify points of priority intervention.

STUDY DESIGN & METHODOLOGY

Initially, it was decided to cover all states in the country, but upon finding that the Department of AYUSH had already commissioned studies of the public AYUSH services in 5 states by two other organisations, it was decided to collaborate with them for a minimum common methodology and not duplicate studies in those states, so that finally we would together have covered the whole country. We were finally able to take 21 states, leaving out only 3 of the North East states. While the public services were the main focus, a few private facilities were also to be included to reflect their situation and utilisation pattern.

In each state, one district was selected for the study. The district with the best services in the state, other than the district in which the state capital is situated, was selected. The 'best' was identified based on the number and level of existing facilities, as well as in consultation with the state department for its rough evaluation of their quality of functioning.

Within the district, 2 blocks were selected – one a well developed block and the other a backward block. All stand-alone AYUSH facilities in the block and one CHC, 2 PHCs with co-location and 4 SCs were studied per block. Community perceptions were sought from the SC villages and through exit interviews at the selected facilities.

For exit interviews, 8-10 patients were to be included per institution, identified serially as they came out after consultation, etc., was completed. If the institution had less than 5 patients/day, all were interviewed.

Any major private or NGO facility reported in the area was also included. At least 2 such facilities were to be studied per district. Any folk healer who had good popularity, as reported by the institutional providers or by the households, was also to be interviewed.

For the Household interviews, 10 households were selected in each SC village. Identifying the major social groups (by caste, tribe, and religion) and clusters in the village, an appropriate number of households in each was selected. For instance, if 5 clusters were identified, 2 households could be selected per cluster by a process of random selection.

However, this design could not be strictly followed in all states due to state and district variations. For instance:

- Kerala has no co-located facilities as a policy decision.
- Bihar and Jharkhand had not started co-location at the time of survey.
- Sikkim had co-location only at the District Hospital level.
- Tamil Nadu and West Bengal did not have ASHAs.
- Institutions were not as per the Rural Health Service Structure in some states, such as West Bengal, Tamil Nadu and Kerala.

Thus, the number of institutions covered, interviews and group discussions conducted in each state were as shown in Table 1.

The Study Design

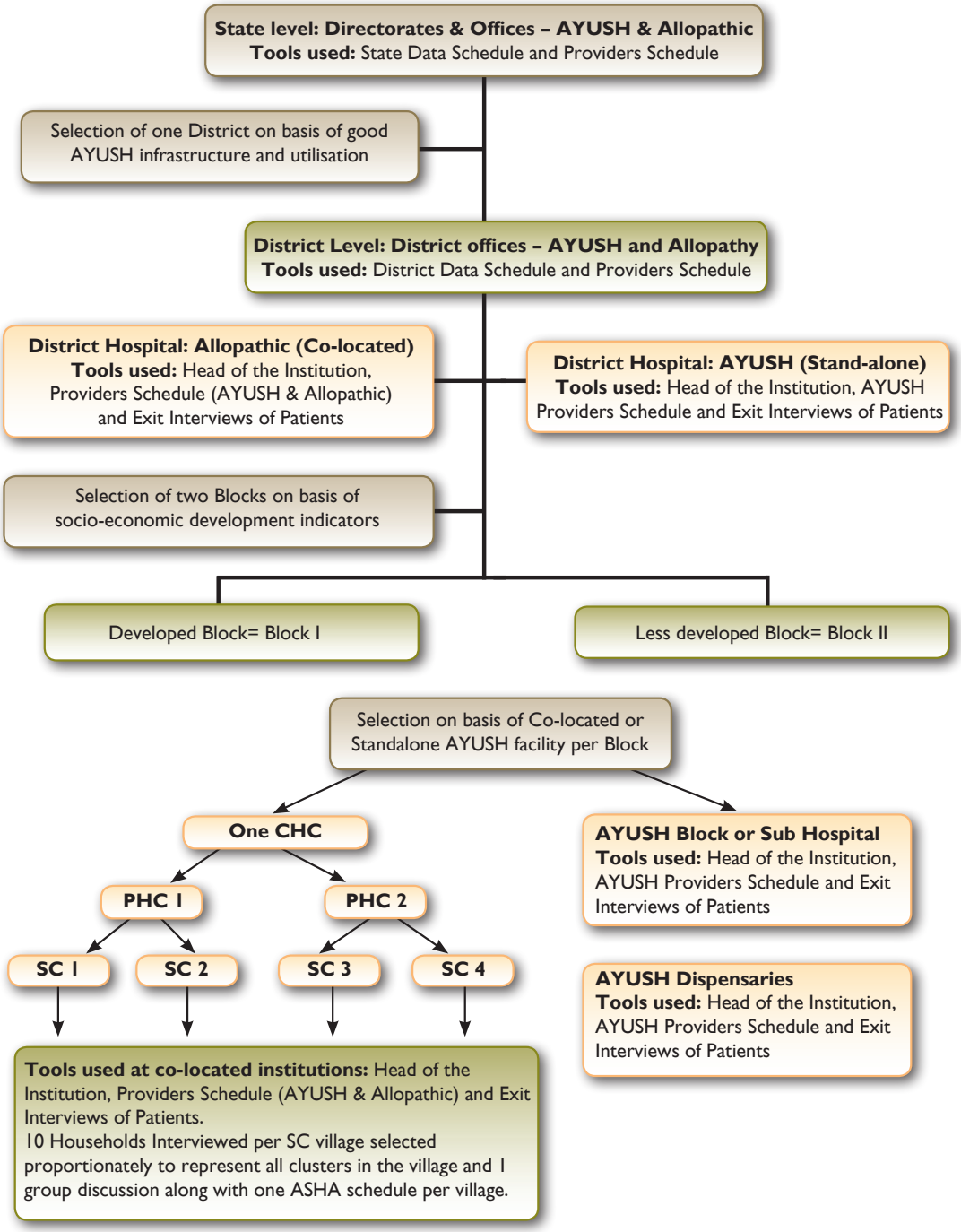


TABLE 1: Details of the Study Sample: Institutions and Respondents

State	Total No. of Institutions surveyed Total (Including Pvt.)	No. of Public Institutions surveyed			No. of Patients interviewed		No. of Doctors interviewed		No. of Paramedics interviewed		No. of ASHAs interviewed	No. of Pvt. Institutions surveyed	No. of Households covered	Group Discussions
		AYUSH (Standalone)	Allopathic	Co-located	AYUSH	Allopathic	AYUSH	Allopathic	AYUSH	Allopathic		AYUSH		
High Focus States														
1. Jammu & Kashmir	7	1 DH	1 CHC	1 CHC, 4 PHCs	1	39	5	6	0	0	5	0	50	5
2. Uttarakhand	17	1 AH, 1 Disp.	8 SC, 1 PHC	1 DH, 2 PHCs, 1 SAD	44	30	10	5	1 Pharmacist	5 ANMs, 2 BHW, 6 Pharmacists	9	2 Hospitals	86	6
3. Orissa	16	1 GH, 1 GAD	2 PHCs, 8 SC	2 CHCs, 2 PHCs	42	38	8	7	0	0	10	0	50	8
4. Bihar	18	1 DH	4 PHCs, 8 SC	1 General hospital	22	52	1	6	1 Dai	9 ANM, 4 Pharmacists, 1 Mamta	8	4 AYUSH College Hospitals	87	8
5. Jharkhand	24	1 RH, 2 GH, 3 Disp.	1 DH, 6 PHCs, 10 SC	0	6	57	6	8	0	3 Pharmacists, 1 BHW and 7 ANMs	8	1	82	8
High Focus North East States														
6. Assam	2	0	0	2 CHCs	28	22	1	3	0	0	8	0	80	10
7. Manipur	7	0	0	1 DH, 2 CHCs, 4 PHCs	34	7	8	6	0	0	18	0	70	7
8. Nagaland	3	1 DH	0	2 CHCs	6	2	4	4	0	0	16	0	159	0
9. Sikkim	12	0	2 PHCs, 8 SC	1 DH	10	0	1	3	0	0	26	0	50	3
10. Tripura	18	7 Disp.	1 SDH/ CHC, 1 PHC, 3 SC	1 DH, 4 PHCs	62	76	9	6	3 Pharmacists	4 MPWs	20	0	133	17
Non--High Focus States														
11. Andhra Pradesh	16	1 Disp.	1 PHC, 8 SC	1 DH, 3 PHCs	27	33	6	5	1 LHT (Folk healer)	1 ANM 1 MPHA	6	2	80	0
12. Haryana	24	10 Disp.	2 CHCs, 11 SC	1 DH	102	25	18	2	12 Dispensers, 2 Compounders, 4 Dais	4 Pharmacists, 1 Staff Nurse	12	4	48	0

13. Punjab	32	2 DH, 1 College Hospital, 1 GH, 12 Disp.	12 SC	1 Civil Hospital, 3 PHCs	51	0	20	5	1 Up-Vaidya	10 ANMs, 6 Pharmacists, 4 MPHWs	8	0	68	3
14. West Bengal	9	1 Disp.	2 PHCs, 1 SC	1 DH, 2 RH/ CHC/ SDH, 2 PHCs	39	57	7	8	2 Compounders	1 Pharmacist	0	0	68	4
15. Karnataka	17	1 DH, 1 Disp.	1 DH, 2 CHCs, 2 PHCs, 6 SC	2 PHCs	41	28	15	8	1 THP	3 ANMs	9	1 DH (primarily Allopathic)	55	6
16. Tamil Nadu	13	1 DH 1 Disp.	1 DH 4 SC	2 CHCs 4 PHCs	80	69	8	7	4 LHT	8 VHNs	0	4 Hospitals	50	5
17. Kerala	16	2 DH, 2 BH, 4 Disp.	8 SC	0	100	0	13	0	2 Folk Healers	7 JPHNs	8	2 Hospitals	79	8
18. Delhi	9	4 Disp. (MCD)	0	4 Disp. (NDMC) 1 DH	49	12	19	5	0	0	11	0	80	8
Total	**260**	**64**	**125**	**58**	**744**	**547**	**159**	**94**	**38**	**83**	**182**	**20**	**1,375**	**106**

AH = Ayurvedic Hospital
ANM = Auxiliary Nurse Midwife
ASHA = Accredited Social Health Activist
AYUSH = Ayurveda, Yoga & Naturopathy, Unani, Siddha and Homeopathy
BH = Block Hospital
BHW = Basic Health Worker
CHC = Community Health Centre
DH = District Hospital
Disp = Dispensary
GAD = Government Ayurvedic Dispensary
GD = Group Discussions
GH = Government Hospital
JPHN = Junior Public Health Nurse
LHT = Local Health Traditions
MPHA = Multi-Purpose Health Assistant
MPHW = Multi-Purpose Health Worker
MPW = Multi-Purpose Worker
NRHM = National Rural Health Mission
PHC = Primary Health Centre
Pvt = Private
RH = Rural Hospital
SAD = State Ayurvedic Dispensary
SC = Sub-Centre
SDH = Sub-District Hospital
THP = Traditional Health Practitioner
VHN = Village Health Nurse

Summary

The study across 18 states covered :

- 260 service institutions (out of which 20 were private facilities as per the sampling methodology). Of these 260 facilities - 64 were stand-alone AYUSH, 57 were co-located facilities, i.e., 121 in all, and 125 Allopathic (including 44 Sub-Centres).
- A total of 1,291 patients were interviewed in the above institutions, of which 744 patients were seeking AYUSH treatment and 547 were taking Allopathy.
- 159 AYUSH doctors and 38 AYUSH paramedics (including a few folk healers and THPs) were interviewed.
- 94 Allopathic doctors and 83 paramedics were also interviewed.
- 182 ASHAs across 18 states have also been profiled.
- 1,375 households were covered both from the town mohalla nearby the above institutions and also from the Sub-Centre villages
- 106 group discussions with village residents.

The list of selected study states and districts	
High Focus States	**High Focus North East States**
1. Jammu & Kashmir (Kathua)	6. Assam (Nalbari)
2. Uttarakhand (Paudi Garhwal)	7. Manipur (Thoubal)
3. Orissa (Puri)	8. Nagaland (Dimapur)
4. Bihar (Gaya)	9. Sikkim (South Sikkim)
5. Jharkhand (West Singhbhum)	10. Tripura (South Tripura)
Non-High Focus States	
11. Andhra Pradesh (Chittoor)	15. Karnataka (Hassan)
12. Haryana (Bhiwani)	16. Tamil Nadu (Salem)
13. Punjab (Jalandhar)	17. Kerala (Kozhikode)
14. West Bengal (South 24 Parganas)	18. Delhi (South West)

Programme Advisory Committee & Collaboration for Preparation of Tools

NHSRC constituted a Programme Advisory Committee composed of senior experts from the six systems of AYUSH, and persons with experience of working with local traditional health care providers as well as public health experts, an epidemiologist, a political scientist and a sociologist. This Committee advised on the parameters to be studied, monitoring and interpretation of the results.

As stated earlier, NHSRC had initially planned to cover all states. However, Department of AYUSH had just then commissioned the Maharashtra Association of Anthropological Sciences (MAAS), Pune, to undertake a similar study of AYUSH services in four states – Maharashtra, Madhya Pradesh, Chhattisgarh, Himachal Pradesh – and the Society for Economic Development and Environmental Management (SEDEM), Delhi, for a study in Rajasthan. In the discussion with the Jt. Secy. (SB), Department of AYUSH, it was decided to coordinate the studies so as not to duplicate efforts and still provide an all-India picture. Tools were developed jointly by the NHSRC and SEDEM teams with constant communication by email of drafts of the various schedules at each stage to MAAS. However, no comments or suggestions were received from MAAS and there was no response from them whether they would use these tools. SEDEM and NHSRC decided to use the common tools without any inputs from MAAS, with each one free to add questions required as per their objectives. The schedules are attached as Annexure 1.

Development of Tools

Schedules were developed separately for interviews of personnel at the state and district headquarters, of the service providers at the facilities and of the community members as exit and household interviews. A checklist was prepared for group discussions in the community as well as for observation of conditions at the facilities (Tools given in Annexure 1).

List of Tools Used

- State Data Schedule
- District Data Schedule
- Head of the Institution Schedule
- Allopathic doctor's Schedule/AYUSH service provider Schedule/ASHA Schedule
- Exit Interview Schedule
- Household Interview Schedule
- Observation Checklist for Institutions
- Checklist for Group Discussions

For the interviews of community members, it was considered important to devise the schedule in such a way that they are at ease to talk about practices other than those related to modern medicine. This was viewed as methodologically important since it has been observed in studies of health seeking behaviours that when asked about source of treatment, respondents tend to speak about the modern medical treatment and under-report the use of traditional medicine, home remedies, etc. This is for two reasons, one that they think that there is a negative value position that the educated people like the investigators will have, and second that the first thing that comes to mind when asked about 'treatment' is the doctor's medicine and not practices that are learnt at home and in the community since childhood. Therefore, the schedule began by asking about the medicinal plants they knew in their area and the medicinal value of foods. Care was taken that no leading questions were asked.

Instruction sheets for the investigators with clear definitions of the terms in use were prepared to facilitate and standardise the operationalisation of data collection. A pilot to test the tools was undertaken and modifications made accordingly.

Collaboration for Data Collection

It was decided to operationalise the study in collaboration with a team of researchers having experience in the area and familiar with AYUSH services in the public sector, but not themselves currently a party in implementation of the services. It was decided that the School of Oriental Medicine (SOM) recently started by Global the Open University, Nagaland, and headed by a Senior Researcher recently retired from the Central Council for Research in Yoga and Naturopathy (CCRYN) be the collaborating organisation. The head of SOM also participated in the consultations for preparation of tools.

A Central Monitoring Unit was set up by the collaborating institution to manage the data collection. It set up 10 teams in different parts of the country to undertake the data collection. Good quality of data was to be ensured by the unit, with a quality check mechanism in place.

The sampling design, tools for data collection and training of the investigator teams was done under constant guidance of the NHSRC team and at all stages work was done in consultation with NHSRC. NHSRC developed the framework for analysis and undertook the report writing.

The team at NHSRC was led by the Advisor-Public Health Planning along with the Consultant-AYUSH.

Fieldwork

Each investigator team was led by a senior AYUSH doctor and was to include 1 or 2 younger persons with experience in social research.

It was estimated that the fieldwork per state would take about 6 weeks. A period of 1 year was envisaged for producing a report. However, it took longer than anticipated due to field exigencies such as floods in some districts, and illness of team members in others. The names of the members of the Investigator Teams (by state) are listed on page viii.

Data Processing & Analysis

The data was entered using MS-ACCESS and base tables in Excel.

Team of Investigators with the staff members of an Ayurvedic Dispensary in Tripura

Data collection in process : West Bengal Team of Investigators

Group discussion in progress

Respondents of Exit Interviews outside a Govt AYUSH Facility in Delhi (SW District)

For each state, analysis was done by triangulating the different data sets, i.e.,

- Exit interviews, group discussions and household interviews for community perspectives and practices.
- Interviews of various providers for their perspective.
- Institutional data from the state, district and facility levels.

Inter-state Analysis

The different dimensions and parameters were linked for each state to identify patterns of services, background context and utilisation of services. These were then analysed for policy implications and planning of the mainstreaming strategy under NRHM, with the categorisation of states used by NRHM, i.e., High Focus States, High Focus North East States and Non-High Focus States.

Grading Methodology for Quality of AYUSH Facilities

The quality for AYUSH services was assessed based on a set of parameters covering infrastructure, human resources, medicine supplies, record-keeping and other inputs. For combining indicators of all these parameters, a qualitative grade was composed. A common grading pattern was used for the stand-alone and co-located facilities, but a separate set of variables was evolved for the two. Generally, the IPHS for co-located AYUSH institution was taken as a background reference. Table 2 consolidates the chosen parameters and the grading methodology.

Methodology of Validation of Knowledge Content of AYUSH Practice and LHT

The AYUSH codified knowledge was used to validate the prescriptions of AYUSH providers, and the knowledge and practices of the community members related to AYUSH and LHT. The detailed methodology for this is given in a separate note below.

Meaning of Validation

Here validation was taken as verifying the content of formal providers' prescriptions and people's knowledge of medicinal plants and foods, as well as home remedies in the light of AYUSH epistemology and documented knowledge.

The following data sets across the states were validated:

TABLE 2: Parameters and Grading Pattern for Quality of AYUSH Services

Stand-alone Facilities			
Parameters		**Qualifying Score**	**Grading**
1.	**Infrastructure** • Maintenance of the building • Vacant space in the compound • Presence of a staff quarter	2 among the3qualifyingfor 1 mark +, an extra mark for presence of an additional variable.	**All scores totalled to get the overall grading.** **Overall grades** **1 = Very poor** **2 = Poor** **3 = Average** **4 = Good** **5 and above = Very good**
2.	**Human Resource** • Doctors • Paramedics	1 mark for presence of an AYUSH doctor +1mark for presence of an AYUSH paramedic	
3.	**Drugs** • Supply of AYUSH medicines • Adequate supply of AYUSH medicines	1mark for any supply of AYUSH medicines+1 mark if the supply is also reported by the providers and users to be adequate	
4.	**Records** Availability of OP data	1 mark if records were present	
5.	**Additional** • Indoor Services/Speciality clinic • Diagnostics • Vehicle • Herbal Garden in the compound	At least 2 among the 4 for qualifying 1 mark+ an extra mark for any additional variable.	
Co-located Facilities			
Parameters		**Qualifying Score**	**Grading**
1.	**Infrastructure** • Separate room for OPD • Signboards • Vacant space in the compound	2 among the 3 for qualifying 1 mark, + an extra mark for additional variables.	**All scores totalled to get the overall grading.** **Overall grades** **1 = Very poor** **2 = Poor** **3 = Average** **4 = Good** **5 and above = Very good**
2.	**Human Resource** • Doctors • Paramedics	1 mark for presence of an AYUSH doctor +1mark for presence of an AYUSH paramedic	
3.	**Medicines** • Supply of AYUSH medicines • Adequate supply of AYUSH medicines	1mark for any supply of AYUSH medicines+1 mark if the supply is also reported by the providers and users to be adequate	
4.	**Records** Availability of OPD data for AYUSH services	1 mark if records were present	
5.	**Additional** • Indoor Services • Specialty clinic • Herbal garden in the compound	At least 2 among the 3 qualify for 1 mark+ an extra mark for the additional variables	

Prescriptions given by the AYUSH Doctors in the Health Facilities

This was a partial audit of the AYUSH doctors' prescriptions obtained from patients exiting the institutions, where the drugs prescribed by them were validated against the given diagnosis or presenting symptoms as per the protocol and principles laid down in the relevant AYUSH texts and references.

Local Community Knowledge and Practices

Also validated was each item in the state-wise lists generated from responses of the households regarding their awareness and use of:

- Common medicinal plants and herbs verified by their botanical names and mention of the medicinal plants in the classical and contemporary AYUSH references.
- Food items and their special medicinal properties – Validation of these food items and their mentioned medicinal properties by AYUSH principles and classical as well as contemporary references.
- Home remedies by type of ailment, sex and age group – Validation of the home remedies mentioned by the households for specific ailment by AYUSH principles and classical as well as contemporary references.

The Validation Process

A strategy was devised through a consultative process involving experts of the respective AYUSH councils (Central Council for Research in Ayurveda & Siddha, Central Council for Research in Homeopathy, and Central Council for Research in Unani Medicine) and National Health Systems Resource Centre. This was done by identifying them for the specific use in selected standard reference texts. For Ayurveda, Siddha and Unani validation, a broad categorisation of references was devised, with three major types:

1. Classical literature and recent compilations from classical texts of AYUSH
2. Published literature from the AYUSH Research Councils on home remedies
3. Outside the above AYUSH literature.

Under the above categories, further division into V1 to V6 was made in descending order of degree of validation. V1 category pertains to a greater degree of validity owing to its direct mention in the universally accepted AYUSH classical texts (Authoritative

Testimony), followed by V2 pertaining to validation as per AYUSH principles, followed by V3, i.e., contemporary compilations based on the classical texts. Then follows V4 & V5 for publications by the Research Councils on home remedies. The category V6 pertains to items not in the domain of the above categories, but includes formulations of Allopathy, modern supplements and non-classical proprietary medicines. (For details of each of the systems, refer to the respective tables - Tables 3, 4 and 5).

A team of research officers and consultants from the Councils and NHSRC then validated each item in each of the lists mentioned above. They used the texts of the specific system from AYUSH for the corresponding provider prescriptions. For the popular knowledge and practices, the locally used most common system was taken as the reference system (e.g., Siddha texts were used to validate home remedies in Tamil Nadu, while Ayurveda texts were used for Kerala). Each item was verified, starting from V1 and moving to V2 if it was not found in the former, then to V3, and so on. Each item was then marked with the validation category number (V1 to V6) as superscript, as can be seen in the sample tables in Annexure 3 and in each state report. The total of each validation category indicates their correspondence to the current practices and awareness, as found in this study.

TABLE 3: Validation Methodology: Ayurveda

S. No.	Categories of References	Reference Materials	Validation Category
I.	Classical literature and recent compilations from classical texts	1. API*, AFI* * 2. Ayurveda principles 3. Dravyaguna Vijnana by P.V. Sharma	V1 V2 V3
II.	Published literature listing home remedies	4. Handbook of Domestic Remedies 5. Tribal Folk Remedies published by CCRAS (documented but not yet verified)	V4 V5
III.	Outside the above literature and non-classical proprietary medicines	6. Other than the above references/ Ayurveda line	V6

**API = The Ayurvedic Pharmacopoeia of India Part I-V is a collection of plant origin single monographs (standards for identity, purity and strength) used in Ayurvedic formulations. API Part II Volume I + II is a collection of pharmacopoeial standards for formulations used in Ayurveda.*

***AFI = Ayurvedic Formulary of India Part I & II is a collection of 644 classical Ayurvedic compound and single drug formulae covering plant, mineral and animal origin drugs.*

The above monographs are prepared by Ayurvedic Pharmacopoeial Committee in accordance with the Drugs and Cosmetics Act, 1940 subsequently amended in 1964 and 1982, and published by Department of AYUSH, Ministry of Health and Family Welfare, Government of India. The above two books are indexed for quick references of AYUSH.

System-wise Detail of Validation Process namely for Ayurveda, Siddha, Unani and Homeopathy. Since the data had a very small presence of Yoga and Naturopathy, it was not formally validated. The process of validation adopted by Homeopathy was somewhat different from the validation of Indian systems of medicine, as it does not have ancient classical texts as references, but its own set of references. The ones used are mentioned in Table 6.

TABLE 4: Validation Methodology: Siddha

S. No.	Categories of References	Reference Materials	Validation Category
I.	Classical literature and recent compilations from classical texts	1. SPI*, SFI** 2. Siddha principles 3. Guna Padam Part I (Dr. Murugesa Mudaliar) & Guna Padam Part II & III (Dr. R. Thiagrajan)	V1 V2 V3
II.	Outside the above literature and non-classical proprietary medicines	4. Other than the above references	V6

**SPI = The Siddha Pharmacopoeia of India Part I-V is a collection of plant origin single monographs (standards for identity, purity and strength) used i Siddha formulations. SPI Part II Volume I + II is a collection of pharmacopoeial standards for formulations used in Siddha.*

***SFI = Siddha Formulary of India Part I & II is a collection of classical Siddha compound and single drug formulae covering plant, mineral and anima origin drugs.*

The above monographs are prepared by Siddha Pharmacopoeial Committee in accordance with the Drugs and Cosmetics Act, 1940, subsequently amended in 1964 and 1982, and published by Department of AYUSH, Ministry of Health and Family Welfare, Government of India.

TABLE 5: Validation Methodology: Unani

S. No.	Categories of References	Reference Materials	Validation Category
I.	Classical literature and recent compilations from classical texts	1. UPI* 2. Unani principles 3. Handbook of Common Remedies in Unani System of Medicine	V1 V2 V3
II.	Outside the above literature/ and non-classical proprietary medicines	4. Other than the above references	V6

**UPI = Unani Pharmacopoeia of India*

TABLE 6: Validation Methodology: Homeopathy

S. No.	Data Sets for Validation	Categories of References	Reference Materials
I.	Prescription given by Homeopathy doctors	The symptoms for which the drugs have been prescribed have been verified from two established Materia Medicas.	Allen's Keynotes by Dr. A.H.C. Allen (B. Jain Publishers Pvt. Ltd.) Homoeopathic Materia Medica by William Boericke

LIMITATIONS OF THE STUDY

- The design of the study required a certain process of selection of institutions. However, this could not be strictly followed in all states due to state and district variations. For instance, Kerala has no co-located facilities as a policy decision. Bihar and Jharkhand had not started co-location at the time of the survey. Sikkim had co-location only at the District Hospital Level. Tamil Nadu did not have ASHAs; institutions were not as per the Rural Health Care Service structure in some states such as West Bengal and Orissa, where the nomenclature of the facilities as well as their coverage differed from the standard CHC, and PHC rural health service structure model.
- Data collection was delayed due to unavoidable contingencies such as floods in Orissa and Bihar, conflict zones in Nagaland, Manipur and Jammu & Kashmir. In Jammu & Kashmir, data collection was undertaken only in Jammu Division.
- Each investigator team was led by a senior AYUSH doctor with experience of working with the state but not practicising in the public system at the time of the survey. The team was also to include a younger person well versed in social surveys and researches. This was a conscious decision while formulating the design, the rationale being to give the AYUSH doctors an important role rather than keeping it with the public health persons of Allopathic background. They were given intensive training for understanding of the design as well as data collection procedures. While several teams made very good efforts for data collection; some revealed weakness in understanding of the health systems research, or in the tools such as group discussions. Not all teams were able to include a social researcher for the duration of the survey. Therefore, the quality of data was keenly assessed and whatever was found to be of doubtful quality was either cross-checked by triangulation with other data or not used for analysis. Three states where the data was found to be incomplete or unreliable, i.e., Uttar Pradesh, Gujarat and Goa, the data was discarded and has not been used in the consolidated analysis, nor have the state reports been prepared.
- The data entry was undertaken by a team with experience in processing medical data. Hence, they were able to work on the health care system data with ease, but the AYUSH terminologies (drugs, diagnoses, etc.) along with medicinal plants and home remedies in the local language took time to decipher and process.

- We have not included the financial allocations and expenditure in our state analyses since it was difficult to access the figures separately for the plan proposal, approved allocation, released and spent for AYUSH for any year with any reasonable degree of certainty.
- With respect to the prescriptions by the AYUSH doctors, the methodology adopted has a limited scope. It only verifies the packaged medicines prescribed against the diagnostic terms used by the practitioners. The diagnosis, use and non-use of principles behind the treatment were not verifiable.

II

Profile of AYUSH Health Services in the States

STAND-ALONE AND CO-LOCATED AYUSH SERVICES

Constitutionally, the general health services are a state subject, allowing for major variations in the policy thrust for development of Allopathic and AYUSH services across states. This can be seen in the differences in the extent of health services development and the nature of this development. Therefore, the present AYUSH services in India have to be examined for each state separately, and understood in relation to health services development in the state as well as in relation to the national policy framework.

Historical Context

Each state has a distinct history of practice of traditional medicine related to the overall culture and the systems supported by the earlier rulers. For instance, Siddha is the Tamilian indigenous system of health knowledge. In Kerala, Ayurveda has developed as a distinct form of practice. In the northern region from Jammu & Kashmir and Punjab to Uttar Pradesh, Bihar and West Bengal, Ayurveda and Unani have both been in extensive use. The modern Homeopathy that evolved as a dissenting system to the dominant Allopathic medicine developed a strong base in West Bengal as well as the neighbouring Eastern and North Eastern states. Folk practices using herbal and animal products, that have been the mainstay of LHT of tribal and peasant communities, are varied depending on the local ecology and the textual tradition(s) in the area. In developing the services of ISM&H, the state governments have been influenced by these local traditional preferences.

As Allopathic services grew widely in the public as well as private sectors, they influenced the demand for services of the traditional systems. It has to be remembered that the traditional systems were already widely pervasive in India, being practiced by private providers before the public system started their services. On the other hand, Allopathic services first reached the masses largely through the public system, the private sector services spreading out much later.

Growth and Development of Service Delivery Institutions

In relation to health policy, it is also important to see whether the states developed the AYUSH services as a substitute for non-available Allopathic services, or as systems valued for their own worth. At the all-India level, in the 1980s there appears to have

been a general rapid growth of the AYUSH services in the public system along with those of Allopathic medicine. During the 1990s, the pace of growth declined so that the hospital and dispensary ratio to population decreased from the position in 1980. Since 2000, the number of hospitals has actually decreased, with some increase in dispensaries. The total institutions by population have decreased even further during this period. The average number of AYUSH hospitals in the public system per crore population was 67 in 1980, increased to 249 in 1990, and 385 in 2000, but has declined to 297 by 2007. Dispensary to population ratio was 2,197 for one crore persons in 1980, it increased to 2,430 in 1990, but decreased to 2,053 in 2000, and further to 1,925 in 2007 (Department of AYUSH, 2008). This trend is similar to the trend in growth of the Allopathic services, with rapid expansion of institutions in the decade of the 1980s and the decline in support to public systems under health sector reforms of the Allopathic services in the 1990s (DGHS, 2000). In both instances, there is a revival of policy approaches for strengthening public services since 2005-06.

Comparing across the 18 states, our analysis shows that the coverage and quality of functioning of AYUSH services tends to reflect the same characteristics as of Allopathic services. States with well-developed Allopathic services, such as Tamil Nadu and Kerala, also have the best functioning AYUSH services. Bihar and Jharkhand, with the poorest Allopathic public services, also have the weakest AYUSH services. However, our findings in the following pages show that it is not a simple linear relationship, with many variations in between. We explore reasons for these at the end of the chapter.

SECTION I
SERVICE DELIVERY INSTITUTIONS ACROSS STATES

Even prior to the NRHM, all states had a widespread network of AYUSH service delivery institutions in the public system (except Nagaland, Sikkim and Manipur in the North East among the 18 states included in this study). The stand-alone institutions (mainly hospitals and dispensaries) almost entirely preceded the NRHM, most being in place for decades along with more dispensaries being added on since the 1990s. They can, therefore, be analysed for the pre-NRHM development of AYUSH services in the states. (A few states may be exceptions, such as in Nagaland, where new stand-alone institutions have been planned after 2006).

Co-location of AYUSH services in the Allopathic hospitals and health care centres has largely happened under the NRHM, but it was operational for several years prior to this in some states, prominently West Bengal and Tamil Nadu. The co-located services can, therefore, largely be taken as markers of the 'mainstreaming of AYUSH' strategy of the NRHM, other than in Tamil Nadu and West Bengal. Therefore, we analysed the stand-alone and co-located separately, and then as a total for the presently existing AYUSH services.

STAND-ALONE INSTITUTIONS

Analysing by the institution: population ratio, we find that the stand-alone institutions ranged from a low of 1:2,97,000 in Sikkim and 1,41,087 in Bihar to the high of 1:10,773 in Nagaland and 1:17,330 in Uttarakhand (Figure 1 and Table 7). Among these institutions, the relative strength of various systems under AYUSH shows a predominance of Ayurveda (54%) and Homeopathy (28%), with Yoga and Naturopathy as well as Unani being only 4 and 8% respectively. Siddha and Amchi (Sowa-Rigpa or Tibetan medicine) are localised in one or two states only and yet constitute 29% of all AYUSH institutions in the states included in the study, because of the large number of institutions in Tamil Nadu. Among the hospitals, Ayurveda is the dominant one (39%), except in West Bengal and Assam, where Homeopathy hospitals are more than the Ayurvedic, while in Andhra Pradesh and Manipur it is Yoga/Naturopathy hospitals that are the highest number and in Tamil Nadu it is Siddha (Table 8). Among the dispensaries too, Ayurveda is numerically dominant,

An Ayurvedic Dispensary in Bhiwani District, Haryana

Bagma Homoeopathic Dispensary, Tripura

A Government Ayurvedic Dispensary in Kozhikode District of Kerala showing good road connectivity and patients queue

A government Unani Dispensary in Chittoor District, Andhra Pradesh

with Homeopathy being the second largest in number. The study districts show a similar pattern (Table 9).

Among the High Focus states for the NRHM, Uttarakhand has an institution to population ratio below 20 thousand, Jammu & Kashmir below 30 thousand, Orissa has 30 thousand plus, and Bihar and Jharkhand have had the poorest coverage, with one institution for over one lakh persons (Table 7 and Figure 2). Of the AYUSH systems, Ayurveda institutions are the predominant in all states, with an appreciable number of Unani institutions in Jammu & Kashmir, Bihar and Uttarakhand. Homeopathy institutions are high in all, except Jammu & Kashmir where they are absent. In Bihar and Jharkhand, the Homeopathy hospitals exceed the Ayurvedic, while of the AYUSH dispensaries almost half are Ayurvedic, and among the other half, Homeopathy and Unani are almost evenly distributed. In Jammu & Kashmir, the Ayurvedic and Unani dispensaries are numerically of the same order, Ayurveda being predominant in Jammu division, while Unani is widespread in the Kashmir division. In Orissa, Ayurvedic and Homeopathy hospitals and dispensaries are in a similar range of coverage ratio. In Uttarakhand, Ayurveda hospitals and dispensaries are predominant, including a few of the other systems as well as Amchi.

In the North East states, Tripura is in the 20 thousand plus range, Assam in the 60 thousand plus and Nagaland, Sikkim and Manipur in lakhs (Table 7 and Figure 3). Nagaland had only 3 institutions prior to the NRHM period with a ratio in lakhs, and has planned for 200 dispensaries to be added, through funds under the Centrally Sponsored Schemes of the Department of AYUSH of the central government, which would give best coverage of AYUSH institutions among all the states at one institution for just over 10 thousand population, but this was not found to have been operationalised at the time of the study in 2008.

In Nagaland, the earlier three institutions consisted of two Ayurvedic hospitals with co-location of Naturopathy in one and Homeopathy in the other, plus a stand-alone Homeopathy hospital. Tripura too has Ayurveda and Homeopathy as the AYUSH systems in the public services. Assam has more of Homeopathy at the hospital level and a predominance of Ayurveda at the dispensary level. Manipur and Sikkim lag behind in growth of AYUSH services. Manipur has a predominance of Yoga/Naturopathy hospitals (10) along with two dispensaries, and one Homeopathy hospital with nine dispensaries. Sikkim has two dispensaries, one located within the Regional Research Institute for Ayurveda and the Central Research Unit for Homeopathy, the state government not having created any AYUSH services at all.

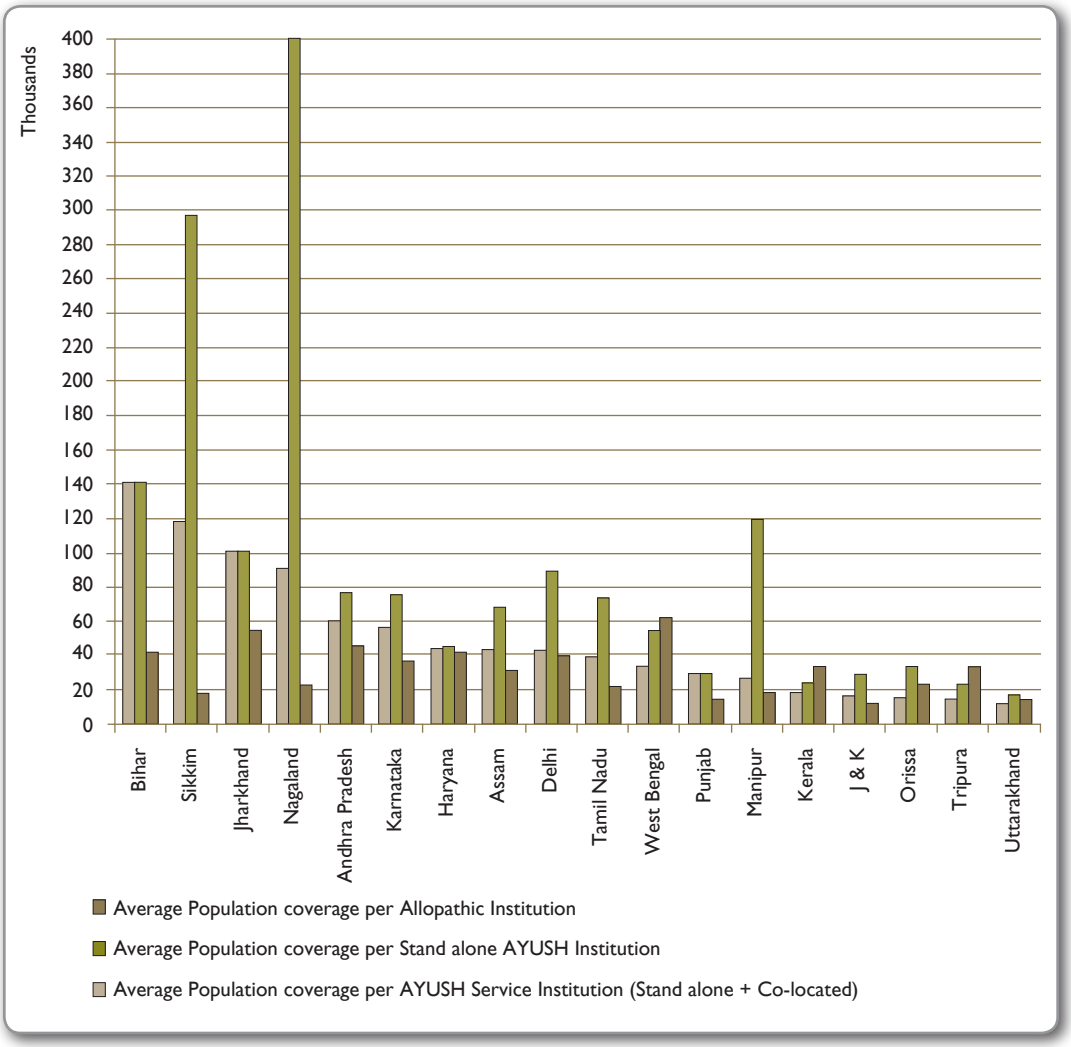


FIGURE 1: Average Population Coverage per Allopathic & AYUSH Institution across States*

* States placed in ascending order of total AYUSH services in the Public system

Sources of data:

1. State Directorates/Departments of Health for Allopathic Services (Stand-alone and co-located)
2. State AYUSH Directorates /AYUSH Officials under State Directorates/Departments of Health/State Health Societies for AYUSH service data (Standalone and co-located)
3. AYUSH in India 2007, Dept. of AYUSH, MoHFW, Government of India
4. RHS Bulletin 2009 (Statistics division, MoHFW, Government of India)
5. Projected Population for the year 2009 by Registrar General of India

Among the Non-High Focus states, Kerala and Punjab had developed AYUSH stand-alone institutions in the range of 20-30 thousand, with Haryana in the 40 thousand

TABLE 7: Comparative Structures of Allopathic and AYUSH Health Service Delivery Institutions

State	Allopathic Service Delivery Institutions[1] (Total No.)	AYUSH Service Delivery Institutions (Total No.)			Allopathic Institutions by Population	Stand-alone AYUSH Institutions by Population[2]	All AYUSH Service Institutions by Population[2]	Co-located by Total Institutions		
		Stand-alone	Co-located	Total				DH/SDH	CHC	PHCs and Dispensaries
High Focus States										
1. Jammu & Kashmir	986	422	340	762	1:12,541	1:29,303	1:16,228	0/14	2/80	338/374
2. Uttarakhand	637	548	243	791	1:14,909	1:17,330	1:12,006	13/13	23/55	116/240
3. Orissa	1,690	1,197	1,476	2,673	1:23,609	1:33,332	1:14,927	0/32	200/231	1,276/1,278
4. Bihar	2,192	665	0	665	1:42,802	1:1,41,087	1:1,41,087	0/26	0/70	0/1,648
5. Jharkhand	551	296	0	296	1:54,464	1:1,01,385	1:1,01,385	0/22	0/194	0/330
High Focus North East States										
6. Assam	971	437	250	687	1:30,822	1:68,487	1:43,565	0/20	8/103	242/844
7. Manipur	141	22	89	111	1:18,631	1:1,19,409	1:27,082	1/7	16/16	72/72
8. Nagaland	116	3	21	24	1:22,647	1:7,29,000	1:91,125	0/11	21/21	0/84
9. Sikkim	33	2	3	5	1:18,000	1:2,97,000	1:1,18,800	3/5	0/4	0/24
10. Tripura	105	149	87	236	1:33,428	1:23,557	1:14,873	14/15	6/11	67/79

Non-High Focus States										
11. Andhra Pradesh	1,785	1,072	292	1,364	1:46,039	1:76,660	1:60,249	0/20	39/167	253/1,570
12. Haryana	557	522	6	528	1:42,679	1:45,540	1:45,022	2/21	3/86	1/411
13. Punjab	1,823	891	251[3]	1,142	1:14,586	1:29,843	1:29,844	15/27	0/126	211/484
14. West Bengal	1,406	1,610	1,016[4]	2,626	1:62,496	1:54,577	1:33,461	69/136	207/346	417/924
15. Karnataka	1,563	759	253	1,012	1:36,724	1:75,625	1:56,718	0/24	0/325	253/1,170
16. Tamil Nadu	3,031	897	828[4]	1,725	1:21,906	1:74,020	1:38,828	32/32	236/236	479/1,219 (PHCs), 73/1,421 (Disp.)
17. Kerala	1,030	1,418	0	1,418[5]	1:33,235	1:24,141	1:18,454	0/14	0/107	0/909
18. Delhi	432	191	203	394	1:39,528	1:89,403	1:43,340	24/56	0	179/371

Notes:

[1]. The Allopathic Service Delivery Institutions include PHCs, CHCs, Sub-district and District Hospitals, and do not include the Sub-Centres.

[2]. Source for Population: Census 2001, Registrar General of India (See below the detailed source of population for the year 2009)

[3]. The co-located institutions are for the year 2009-10.

[4]. This figure includes co-located institutions prior to NRHM also.

[5]. Also includes 437 temporary dispensaries established under NRHM.

Sources:

1. State Directorates/Departments of Health for Allopathic Services (Stand-alone and co-located)

2. State AYUSH Directorates /AYUSH Officials under State Directorates/Departments of Health/State Health Societies for AYUSH service data (Standalone and co-located

3. AYUSH in India 2007, Dept. of AYUSH, MoHFW, Government of India

4. RHS Bulletin 2009 (Statistics division, MoHFW, Government of India)

5. Projected Population for the year 2009 by Registrar General of India

TABLE 8: AYUSH Service Delivery Institutions in the Study District

State	District	Population	Stand-alone Institutions (Total No.)			No. of Co-located Institutions by Total Allopathic Institutions					Total AYUSH Institutions in the District (Stand-alone + Co-located)	
			Hospitals	Dispensaries	Total	Hospitals (District +Sub-District)	CHC	PHC	Other (Dispen-saries)	Total Co-located/ Allopathic		
High Focus States												
1. Jammu & Kashmir	Kathua	6,68,278	0	45	45	1:14,851	0/1	1/4	24/24	0/11	25/40	70	1:9,547
2. Uttara-khand	Paudi Garhwal	8,00,471	2	59	61	1:13,567	1/4	3/5	12/28	10/67	26/104	87	1:9,201
3. Orissa	Puri	16,85,619	1 (A)	34 (A=20, H=14)	35	1:48,161	0/1	11/11	48/48	-	59/60	94	1:17,932
4. Bihar	Gaya	42,26,529	1 (A)	2 (A=1,H=1)	3	1:14,08,843	0/3	0/3	0/22	0/25	0/53	3	1:14,08,843
5. Jhar-khand	West Singhbhum	24,54,238	2 (A=1, 1 Jt. Hosp.)	22	24	1:1,02,260	0/1	0/15	0/15	-	0/31	24	1:1,02,260
High Focus North East States												
6. Assam	Nalbari	13,18,573	0	22 (A=17, H=5)	22	1:59,935	0/1	2/9	17/72	-	19/82	41	1:32,160
7. Manipur	Thoubal	5,00,576	0	0	0	-	1/1	5/5	12/12	-	18/18	18	1:27,810
8. Nagal-and	Dimapur	4,55,296	1	0	1	1: 4,55,296	0/1	2/2	0/8	-	2/11	3	1:1,51,765
9. Sikkim	South Sikkim	1,64,560	0	0	0	-	1/1	0/0	0/6	-	1/7	1	1:1,64,560
10. Tripura	South Tripura	8,60,103	0	36 (H=24, A=12)	36	1:23,891	1/1	-/3	-/22	-	-	36	NA

Non-High Focus States													
11. Andhra Pradesh	Chittoor	41,25,283	3 (A=1, U=2)	53 (H=21, A=18, U=14)	56	1:77,836	1/6	NA/9	NA/90	NA/7	-	NA	-
12. Haryana	Bhiwani	17,26,507	0	51 (A)	51	1:33,853	1/1	4/7	0/46	-	5/54	56	1:30,830
13. Punjab	Jalandhar	22,57,902	1 (A)	56 (A=50, H=6)	57	1:39,612	0/1	0/10	0/26	0/12	0/49	57	1:39,612
14. West Bengal	South 24 Parganas	78,71,603	4 (A)	85 (H=70, A=14, AC=1)	89	1:88,445	1/(H+AC)/1	2/21	7/12	-	10/34	99	1:79,511
15. Karnataka	**Hassan**	19,48,380	5 (A=4, H=1)	62 (A=56, U=5,H=1)	67	1:29,080	0/1	0/21	30/124	-	30 (A=29, H=1)/ 146	97	1:20,086
16. Tamil Nadu	Salem	32,67,785	7 (H=5, S=2)	75 (S=70, H=5)	82	1:39,851	0/5	0/9	28/70	-	28 (S,H,A)/84	110	1:29,707
17. Kerala	**Kozhikode**	30,91,270	10 (A=7, H=3)	98 (A=53, H=45)	108	1:31,544	0/1	0/15	0/55	0/6	0/77	108	1:31,544
18. Delhi	South West	-	-	26 (A=14, H=9, U=3)	26	1/4	-	-	9/34	10/38	36	-	-

A = Ayurveda; AC = Acupuncture/Acupressure; H = Homeopathy; Jt.Hosp = Jt. Hospital; S = Siddha; U = Unani

Sources of Data:

1. State Directorates/Departments of Health for Allopathic Institutions (Stand-alone and co-located),

2. State AYUSH Directorates /AYUSH Officials under State Directorates/Departments of Health/State Health Societies for AYUSH service data (Standalone and co-located)

3. District Officials of AYUSH and District Health Societies under NRHM in the surveyed Districts

4. RHS Bulletin 2009 (Statistics division, MoHFW, GOI)

5. HMIS Division, National Health Systems Resource Centre, District Population Projection based on Census 2001[1]

[1] **Population Projections**: Methodology – The Geometric growth rate (or, the compound growth rate) of population is calculated using the following formulae:- **r =** $[\sqrt[t]{P_t / P_0} - 1] * 100$
Where = The annual percentage rate of change,P0 = Population at the base year - Census 2001, Pt = Population at the 't'th year ,t =Number of years between P0 and Pt
The annual percentage rate of change thus calculated is then applied on Population projection of 2008 to get Population projection for 2009.

TABLE 9: System-wise Services of AYUSH in the States: Stand-alone and Co-located

State	Stand-alone Institutions										Co-located Institutions
	Hospitals					Dispensaries				Total	
	A	Y/N	U	H	Others	A	Y/N	U	H	Others	
High Focus States											
1. Jammu & Kashmir	2	1	2	-	-	240	-	177	-	(Amchi Data NA)	422	340 (A & U)
2. Uttarakhand	7	2	2	1	-	467	3	3	60	3	548	243 (A & H)
3. Orissa	5	-	-	4	-	619	-	9	560	-	1,197	1,476 (A & H)
4. Bihar	11	3	4	16	-	311	-	144	179	-	665	NA
5. Jharkhand	29	-	-	-	-	163	-	32	72	-	296	NA
High Focus North East States											
6. Assam	1	-	-	3	-	358	-	1	75	-	437	250 (A)
7. Manipur	-	10	-	1	-	-	2	-	9	-	22	89 (H, A, Y/N, U)
8. Nagaland	2 (Jt. Hosp. with N & H)	-	-	1	-	107 proposed	-	-	93 proposed	-	3 (200 proposed)	21 (H, A)
9. Sikkim	-	-	-	-	-	1	-	-	1	-	2	3
10. Tripura	1	-	-	1	-	47	-	-	100	-	149	87 (H, A)

Non-High Focus States												
11. Andhra Pradesh	7	14	6	6	-	557	286	196	-	-	1,072	292 (A, U, H)
12. Haryana	8	7	1	1	-	472	-	20	19	-	530	6 (A)
13. Punjab	10	-	-	5	-	507	6	35	82	-	640	251*
14. West Bengal	4	3	1	16	3 (AC)	295	5	3	1,280	-	1,610	1,016 (A, H, AC)
15. Karnataka	76	3	11	10	-	561	5	50	43	-	759	253 (A, U, H)
16. Tamil Nadu	7	25	1	9	270 (S)	35	27	21	46	456 (S)	897	828 (S, H)
17. Kerala	115	1	-	-	-	736	-	1	525	V=1, S=6	1,418	437** GP Disp. (A)
18. Delhi	12	1	2	2	-	108	34	32	-	-	191	203 (A, H, U)
TOTAL	297 (39%)	70 (9%)	30 (4%)	76 (10%)	270+3 (36.6%)	5,584 (55%)	368 (3.6%)	824 (8%)	3,044 (29%)	462 (S) + 3 (Amchi) + 1(Visha) (4.6%)	11,058	5,795

A = Ayurveda; AC = Acupressure/Acupuncture; H = Homeopathy ; S = Siddha; U = Unani; V = Visha; Y/N = Yoga/Naturopathy

** Punjab: Includes co-location figures for the year 2009-10.*

*** Kerala: Under NRHM, 437 Gram Panchayat temporary dispensaries have been set up (2009-10). State has not undertaken any co-location under NRHM.*

Sources of Data :

1. State Directorates/Departments of Health for co-located Allopathic Services

2. State AYUSH Directorates /AYUSH Officials under State Directorates/Departments of Health/State Health Societies for AYUSH service data (Standalone and co-located)

3. AYUSH in India 2007, Dept. of AYUSH, MoHFW, Government of India

4. RHS Bulletin 2009(Statistics division, MoHFW, Government of India

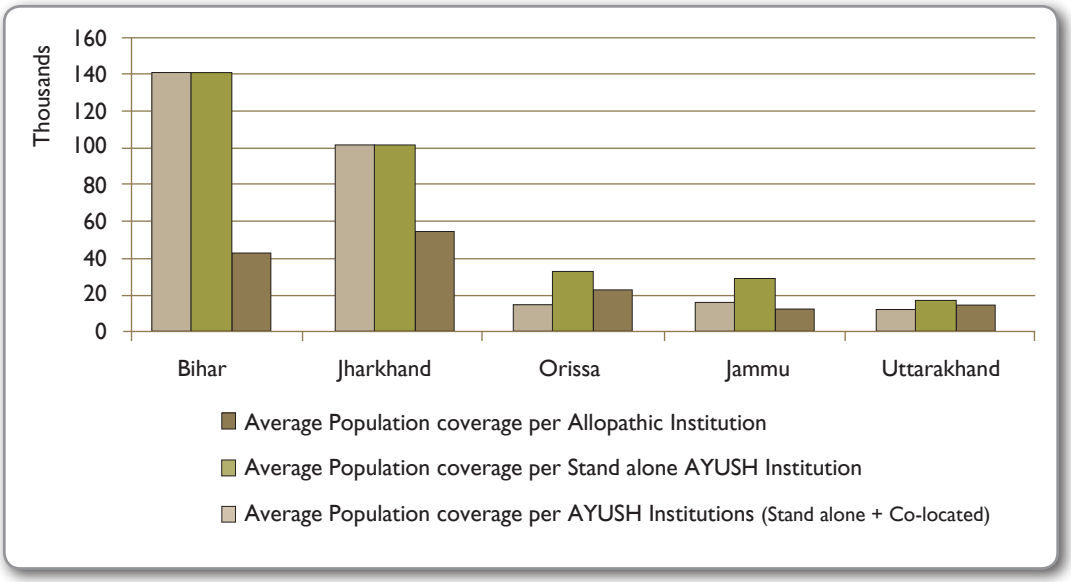


FIGURE 2: Average Population Coverage per AYUSH & Allopathic Institution: High Focus States (Non NE)*

* States placed in ascending order of total AYUSH services in the Public system

Sources of data:

1. State Directorates/Departments of Health for Allopathic Services (Stand-alone and co-located)
2. State AYUSH Directorates /AYUSH Officials under State Directorates/Departments of Health/State Health Societies for AYUSH service data (Standalone and co-located
3. AYUSH in India 2007, Dept. of AYUSH, MoHFW, Government of India
4. RHS Bulletin 2009 (Statistics division, MoHFW, Government of India)
5. Projected Population for the year 2009 Registrar General of India

plus. West Bengal and Tamil Nadu appear to have a low development of stand-alone AYUSH services, but the co-location has been operational for several years prior to NRHM in these states hence the service coverage was better than what the figure of stand-alone depicts. Andhra Pradesh, Karnataka and Delhi have low coverage by population ratio, one institution for over 70 thousand population (Table 7 and Figure 4).

Andhra Pradesh has the largest number of Yoga/Naturopathy and Unani hospitals, West Bengal has predominance of Homeopathy at both hospital and dispensary levels. Tamil Nadu, similarly, has Siddha as the predominant among the AYUSH hospitals and dispensaries. In Kerala, Karnataka, Punjab, Haryana and Delhi, Ayurvedic hospitals are the highest in number. Unani hospitals are in substantial number in Andhra Pradesh and are present in all other states as well. Kerala is the only one with

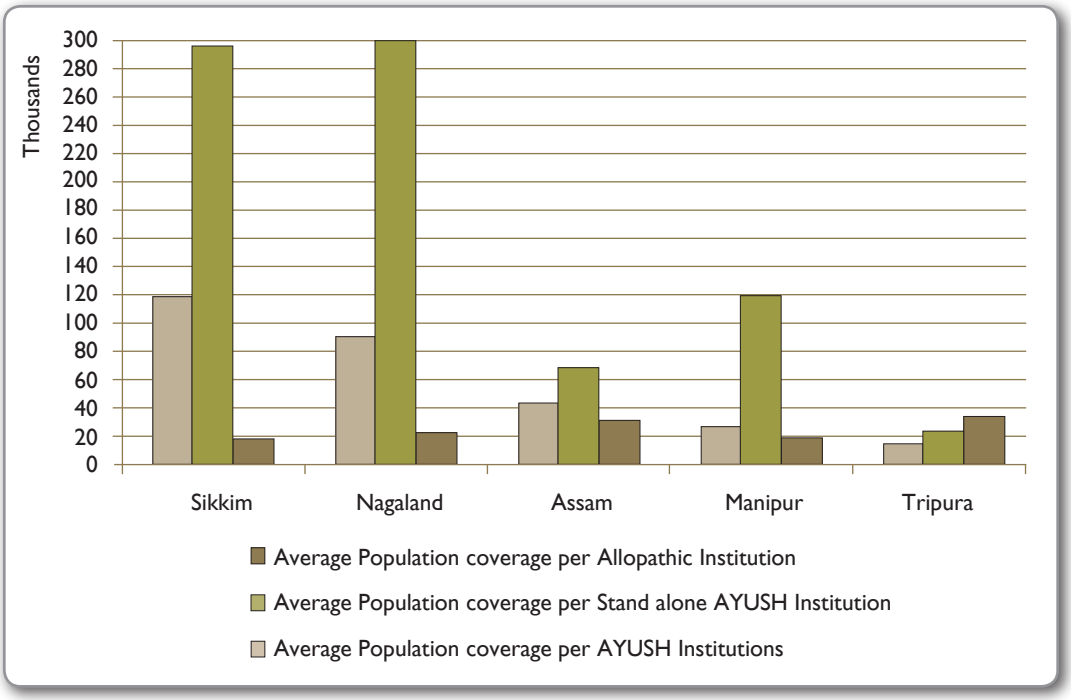


FIGURE 3: Average Population coverage per (AYUSH & Allopathic) Institution
High Focus NE states

* States placed in ascending order of total AYUSH services in the Public system

Sources of data:

1. State Directorates/Departments of Health for Allopathic Services (Stand-alone and co-located)
2. State AYUSH Directorates /AYUSH Officials under State Directorates/Departments of Health/State Health Societies for AYUSH service data (Standalone and co-located
3. AYUSH in India 2007, Dept. of AYUSH, MoHFW, Government of India
4. RHS Bulletin 2009 (Statistics division, MoHFW, Government of India)
5. Projected Population for the year 2009 by Registrar General of India

specialised Visha (Ayurvedic toxicology) hospitals and dispensaries. West Bengal is the only state that has Acupuncture hospitals. Among the dispensaries, Ayurveda is predominant in all the states except West Bengal and Tamil Nadu.

Number of Stand-alone AYUSH Facilities Relative to Allopathic Institutions

Of the 18 states, 3 have more stand-alone AYUSH institutions compared to Allopathic institutions, indicating that the state policy favoured development of AYUSH services. It is interesting to note that these states are Kerala, West Bengal

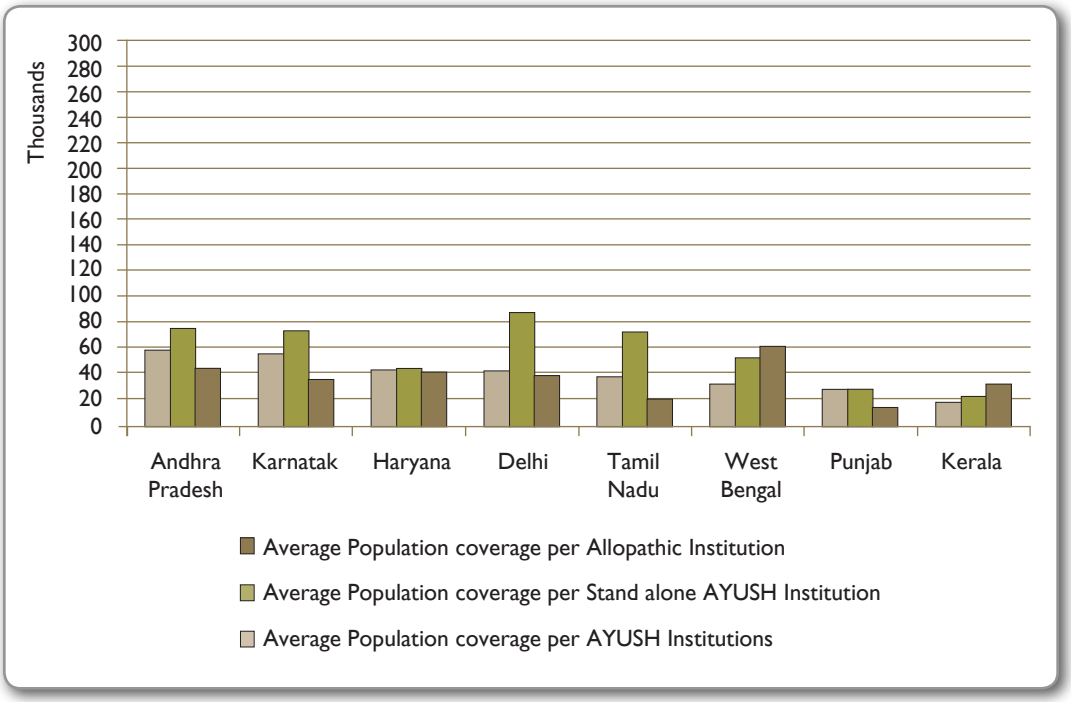


FIGURE 4: Average Population coverage per (AYUSH and Allopathic) Institution Non High Focus States

* States placed in ascending order of total AYUSH services in the Public system

Sources of data:

1. State Directorates/Departments of Health for Allopathic Services (Stand-alone and co-located)
2. State AYUSH Directorates /AYUSH Officials under State Directorates/Departments of Health/State Health Societies for AYUSH service data (Standalone and co-located
3. AYUSH in India 2007, Dept. of AYUSH, MoHFW, Government of India
4. RHS Bulletin 2009 (Statistics division, MoHFW, Government of India)
5. Projected Population for the year 2009 by Registrar General of India

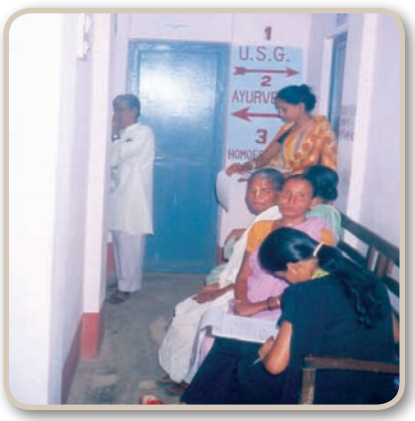
and Tripura, all of them governed for decades by the political left. Among these states, the doctor: population ratio shows that it is only in Kerala and West Bengal that the number of institutions is also indicative of some meaningful services, since they have a reasonable figure for AYUSH doctors relative to the ratio for Allopathic doctors. In both, the panchayats are involved in running of the dispensaries. The North East state of Tripura faces a special problem in getting doctors in the public system, and they have no AYUSH colleges.

In 2 states, Uttarakhand and Haryana, the number of institutions of Allopathy and AYUSH is of a similar order. (This is also found in other states that our study did not include, such as Rajasthan and Madhya Pradesh.)

Entrance of a co-located PHC in Kathua District, Jammu

Entrance of a Co-located PHC in 24 south Paraganas District of West Bengal

A District Hospital in Nalbari District of Assam with Homeopathic OPD but no signage for the services



Notification of Ayurvedic and Homoeopathy Department Inside the District Hospital

Board outside a District Hospital in South Tripura District ,Tripura showing presence of Ayurvedic and Homeopathic OPD services

In 5 of the states, Orissa, Andhra Pradesh, Karnataka, Punjab and Delhi, AYUSH institutions are from three-fourths to half of the number of Allopathic institutions.

In the remaining 4 states, we find that the number of institutions of AYUSH is much less than the Allopathic, especially in Tamil Nadu, Sikkim, Manipur and Bihar. However, in Tamil Nadu, this is partially compensated for by the policy shift to co-locating separate Siddha and Homeopathy wings in all hospitals even before the NRHM strategy came into operation.

CO-LOCATED SERVICES

The strategy of co-locating AYUSH services in the Allopathic hospitals and health centres has been operationalised on a large scale under the NRHM. This has clearly improved the availability of services by population ratio and decreased the distance to be travelled to avail of AYUSH services (Table 7 and Figure 1).

Among the High Focus states, Orissa stands out as it has co-located a large number of AYUSH doctors early on under NRHM, in fact more than the stand-alone institutions which were also substantial (1,197 stand-alone and 1,476 co-located AYUSH in the 1,690 Allopathic health centres and hospitals). In other states too, such as Jammu & Kashmir and Uttarakhand, the proportion of Allopathic institutions getting co-located AYUSH services is high as against the number of existing Allopathic institutions (over one-third). Orissa is co-locating in almost 100% PHCs and CHCs; Uttarakhand in all DHs and 50% PHCs and CHCs; and Jammu & Kashmir in almost all PHCs. Thus, after co-location, the institution: population ratio has improved for AYUSH services beyond that for Allopathic services (Table 7 and Figure 1). However, Bihar and Jharkhand, the states which were low on stand-alone institutions, have also been late in initiating the co-location, hence there was no co-location at the time of this survey in 2008-09.

Among the North East states, co-location has been considerable in Manipur and Tripura, improving the coverage substantially (from over one lakh to just 27 thousand population per institution in Manipur). In Tripura, the coverage with stand-alone was better than Allopathic earlier and improved even further to one institution for less than 15 thousand. Both these states have done co-location at all levels, from the PHCs to CHCs and DHs. Assam added on 250 co-located services, improving coverage from 44 to 32 thousand per institution. Nagaland has only 21 co-located institutions, and they are all at the CHC level. Sikkim has co-located AYUSH services

at three DHs only, hence its coverage has not improved beyond over a lakh persons per institution.

Of the Non-High Focus states, West Bengal and Tamil Nadu have added to their pre-existing co-located institutions. The earlier co-location had been largely at the district and sub-district hospital levels, and under the NRHM it has been much more at the PHCs and CHCs. However, in Tamil Nadu, all DH and sub-district hospitals have co-location, but just over one-third PHCs and a negligible proportion of dispensaries have co-location, thus the overall coverage of AYUSH services still remains well below the Allopathic (one institution per 22 thousand persons per Allopathic institution, and 39 thousand persons per AYUSH service institution, i.e., stand¬alone plus co-located).

Andhra Pradesh, Karnataka, Haryana and Punjab lagged behind in operationalising this strategy, with only 292 co-located institutions in Andhra Pradesh; 253 in Karnataka; 6 in Haryana; and none in Punjab, at the time of survey. Andhra Pradesh and Karnataka did improve their coverage (from 77 thousand to 42 thousand in Andhra Pradesh, and 76 to 56 thousand in Karnataka), but still remain very low in spread of AYUSH services.

Delhi has done co-location at over half the Allopathic institutions, improving AYUSH service coverage from one per almost 90 thousand to one per 43 thousand, thereby coming close to the Allopathic institution coverage of 40 thousand persons per institution. Some of the co-location had been undertaken in the pre-NRHM period.

Thus, as a result of the co-location, the ratio of AYUSH services to population has improved substantially in most states, even coming to better figures than of the Allopathic services, as in Uttarakhand, Orissa and West Bengal. In the other states, despite the co-location the availability of AYUSH services remains lower than that of the Allopathic.

An issue of concern is the finding in some states that the co-location had been done by re-locating existing stand-alone dispensaries, for instance 292 in Andhra Pradesh and 54 in Karnataka, thereby not adding to the services. (Similarly, in Maharashtra, which is not a state included in this study, the regular senior experienced AYUSH doctors are being posted in the co-located health centres, which have no other medical officers, and the new contractual AYUSH doctor recruits are being posted at the stand-alone AYUSH facilities, thereby weakening the base of the stand-alone AYUSH service system.) Such means of co-location may be detrimental to the coverage and quality of

stand-alone AYUSH services rather than supplementing and strengthening AYUSH services by the public system.

AVAILABILITY OF AYUSH PRACTITIONERS IN THE PUBLIC SYSTEM

Service delivery institutions are meaningless without the service providers, and in the case of the mainstreaming strategy under NRHM, it primarily consists of posting AYUSH doctors in the Allopathic health centres. Therefore, some important questions to examine are:

- What has been the presence of AYUSH doctors in the public system prior to NRHM?
- What has been the addition under NRHM?
- Is the number of doctors sufficient for the number of stand-alone and co-located institutions?

Data collected during the survey shows that the presence of AYUSH doctors in the public system is high in some states and very limited in others, with availability of AYUSH doctors in the public system having increased under the NRHM strategy (Tables 10 and 11). The doctor to population ratio varies from about 1 for 15-20 thousand persons in Jammu & Kashmir, Orissa, Tripura and Kerala, to 1 for over a lakh in Jharkhand, and 4 lakh in Bihar. Manipur, Assam, Haryana and Tamil Nadu have 1 doctor for 30-55 thousand persons, while Punjab, Sikkim and Nagaland range from 70-85 thousand persons per AYUSH doctor.

Further, there is variation within states by those in regular service for the stand-alone institutions, and the contractual for the co-located institutions under NRHM. The role of doctors too differs, depending on the vacancies of Allopathic medical officers (MOs) and the state policy on how to deal with this problem, as well as the availability of AYUSH doctors for the public system. In this section, we deal with the availability of AYUSH doctors in the public system across states, their status and role in health care being taken up later together with the facility profile.

Relative to Allopathic Doctors

Comparing the ratio of population to AYUSH doctors in the public system with the Allopathic doctors, they are much less in all states, varying from 2 to 15 times

TABLE 10: Statewise Number of AYUSH & Allopathic Doctors in Stand-alone and Co-located Institutions by Population

State	No. of Stand-alone AYUSH Institutions	No. of AYUSH Govt. Doctors in Regular Service (2007-08)	No. of Co-located AYUSH Institutions (Pre and post NRHM) (2007-08/2008-09)	No. of Contractual AYUSH Doctors under NRHM (2007-08/2008-09)	No. of AYUSH Doctors by Institutions	No. of Allopathic Doctors in Govt. Institutions	Allopathic Doctors by Population	AYUSH Doctors by Population
High Focus States								
1. Jammu & Kashmir	422	427	340	388	815/762	2,488	1:4,970	1:15,173
2. Uttarakhand	548	NA	243	31	NA/791	1,142*	1:8,316	NA
3. Orissa	1,197	1,140	1,476	1,286	2,426/ 2,673	2,177	1:18,327	1:15,310
4. Bihar	665	211	0	0	211/665	3,979*	1:23,579	1:4,44,658
5. Jharkhand	296	257	0	0	257/296	1,701*	1:17,643	1:1,16,770
High Focus North East States								
6. Assam	437	433	250	250	683/687	2,103*	1:14,231	1:43,819
7. Manipur	22	9	89	88	97/111	653*	1:4,023	1:31,650
8. Nagaland	3	5	21	21	26/24	314	1:6,965	1:84,115
9. Sikkim	2	5	3	2	7/5	217*	1:2,737	1:84,857
10. Tripura	149	111	87	83	194/236	723*	1:4,855	1:18,093

Non-High Focus States								
11. Andhra Pradesh	1,072	991	292	NA	NA/1,364	1,977	1:41,568	1:82,926 NA for total AYUSH doctors
12. Haryana	522	539	6	0	545/528	2,112	1:11,256	1:44,104
13. Punjab	891	384	0	0	384/891	3,545*	1:7,501	1:69,247
14. West Bengal	1,610	NA	1,016 (836 under NRHM)**	NA	NA/2,626	6,113*	1:14,374	NA
15. Karnataka	759	NA	253	210	NA/1,012	5,023*	1:11,391	NA
16. Tamil Nadu	897	1,211	828	300	1,511/1,725	7,107*	1:9,342	1:54,827
17. Kerala	1,418	1,573	0	0	1,573/1,418	3,315*	1:10,326	1:21,762
18. Delhi	191	NA	203	NA	NA/394	3,629*	1:4,705	NA

** Tentative figures as obtained from the State Health Society, NRHM, West Bengal. Sources:

1. State Directorates/Departments of Health for Allopathic Services (Stand-alone and co-located)

2. State AYUSH Directorates /AYUSH Officials under State Directorates/Departments of Health/State Health Societies for AYUSH service data (Standalone and co-located

3. AYUSH in India 2007, Dept. of AYUSH, MoHFW, Government of India

4. RHS Bulletin 2009 (Statistics division, MoHFW, Government of India)

5. Projected Population for the year 2009 by Registrar General of India

[1] **Population Projections**: Methodology – The Geometric growth rate (or, the compound growth rate) of population is calculated using the following formulae:- $\mathbf{r} = [\sqrt[t]{P_t / P_0} - 1] * 100$
Where = The annual percentage rate of change,P0 = Population at the base year - Census 2001, Pt = Population at the 't'th year ,t =Number of years between P0 and Pt
The annual percentage rate of change thus calculated is then applied on Population projection of 2008 to get Population projection for 2009.

less (Table 10). Even in states with larger number of institutions providing AYUSH services (such as Kerala and Tripura), the number of AYUSH doctors is much less than that of the Allopathic doctors. This indicates the relative size of institutions, the Allopathic institutions being on an average larger, the hospitals and health centres having indoor patient services and with more doctors, while the AYUSH institutions are smaller, fewer have indoor services (no dispensary level has beds, and many of the designated hospitals only run an OPD). While the number of Allopathic doctors in the system is constrained by the shortage of doctors willing to join the system, in the case of AYUSH, the institutions are planned for a more limited set of services and a more limited number of personnel.

Orissa is an exception in that it has more AYUSH than Allopathic doctors in the public system. Besides the AYUSH doctors in the stand-alone services which are substantial, there has been recruitment of a large number of AYUSH doctors on contract for co-location under NRHM, being posted most effectively at the PHC (new) where the MOs post has been vacant for years. Many of them, therefore, have to practice Allopathy and implement the national programmes based on modern medicine as their central tasks. (Others not in the study, such as Maharashtra and Uttar Pradesh, have a large number and PHCs with AYUSH doctors providing Allopathic services even prior to NRHM.)

Kerala's ratio of 1 for about 22 thousand persons is reasonable, given that it is only about double that for Allopathic doctors. Though this coverage is not as good as Orissa in terms of numbers, the doctors are all in stand-alone units and, therefore, represent a more serious intent for provision of AYUSH services to the public.

The Regular Doctors by Stand-alone Institutions

Analysing data for the doctors in regular service (Tables 10 & 11, and Figure 5) we find:

- Haryana, Jammu & Kashmir, Assam and Sikkim have almost as many doctors as AYUSH stand-alone institutions.
- Andhra Pradesh, Punjab, Bihar, Jharkhand, Tripura and Manipur have less number of doctors than stand-alone institutions.
- Kerala, Tamil Nadu and Orissa have many more AYUSH doctors in regular service than the stand-alone institutions. In Kerala and Orissa, this represents the higher level of AYUSH facilities in the public system where they provide

TABLE 11: Total Number of AYUSH Doctors and Institutions in the Public System of Study Districts		
State	**Total No. Institutions with AYUSH Services in the District**	**Total No. of AYUSH Doctors in Public services of the Study District**
High Focus States		
1. Jammu & Kashmir	70	NA
2. Uttarakhand	87	44
3. Orissa	94	88 [52 + 36 (Contractual)]
4. Bihar	3	5
5. Jharkhand	24	23
High Focus North East States		
6. Assam	41	NA
7. Manipur	18	NA
8. Nagaland	3	4 (2 + 2)
9. Sikkim	1	NA
10. Tripura	36	NA
Non-High Focus States		
11. Andhra Pradesh	56	25
12. Haryana	51	16
13. Punjab	57	NA
14. West Bengal	81	39 (+ Drs. in Gram Panchayat AYUSH dispensaries whose, no. was NA)
15. Karnataka	67	21
16. Tamil Nadu	82	63
17. Kerala	108	111
18. Delhi	36	NA

Sources:

1. State Directorates/Departments of Health for co-located Allopathic Institutions

2. State AYUSH Directorates /AYUSH Officials under State Directorates/Departments of Health/State Health Societies for AYUSH service data (Standalone and co-located)

3. District Officials of AYUSH and District Health Societies under NRHM in the surveyed districts

4. RHS Bulletin 2009, Statistics division, MoH&FW, Government of India

specialist services as well. In Tamil Nadu, on the other hand, regular service doctors are posted at the AYUSH services co-located at health centres and Allopathic hospitals, so the number reflects both the stand-alone and the co-located institutions.

Thus, among the High Focus states, Jammu & Kashmir had an adequate number of regular doctors corresponding to the stand-alone institutions. In Uttarakhand, the aggregate number of AYUSH doctors was not available at state level, but the district level revealed about 50% vacancies (Table 11). Orissa has more doctors than the number of institutions, Jharkhand has somewhat less, and Bihar has a serious gap, with the number of doctors only about one-third the number of institutions.

In the High Focus states of the North East, Assam has adequate number of doctors for the institutions; Nagaland has 5 doctors for 3 institutions since two of the Ayurvedic hospitals also have a co-located Naturopathy and Homeopathy service; while Sikkim has 5 doctors for 2 dispensaries. Tripura and Manipur are significantly short of doctors for the number of stand-alone institutions in the state.

Among the Non-High Focus states, Haryana has adequate number of doctors in proportion to stand-alone institutions. Kerala and Tamil Nadu have greater numbers than institutions due to their being posted at co-located institutions, as explained above. Andhra Pradesh has some shortage of doctors and Punjab has a major gap, with doctors being about one-third the number of institutions. Data was not available for the state level in Karnataka, but the district data reveals that the number of doctors was only about one-third the number of institutions. In West Bengal, the gram panchayat dispensaries and the number of doctors at the district level were more than the doctors in stand-alone institutions, though we were unable to obtain the exact numbers in service.

Contractual Doctors by Co-located Institutions

The data on AYUSH doctors taken on contract under the NRHM (Table 10) shows that:

- Jammu & Kashmir has taken more AYUSH doctors on contract than the co-located institutions. Since AYUSH doctors were already in sufficient number against stand-alone institutions, the excess number of doctors probably reflects the posting of more than one doctor in the co-locations at CHCs and DHs, as well as some being deployed for performing other clinical and supervisory tasks, such as immunisation coverage.
- While Punjab had not started recruitment at the time of the survey, data for 2009-10 shows that the state has also taken more AYUSH doctors on contract than the number of co-located institutions.

- In Punjab, it will help to reduce the gap in filling of posts for AYUSH doctors in the stand-alone institutions as well. Karnataka and Tamil Nadu have fewer doctors on contract than the number of co-located institutions. In Tamil Nadu, this is due to a large number of regular doctors being posted at the co-located facilities. In Karnataka, the process of contractual recruitment of AYUSH doctors was still on.
- All other states have about as many AYUSH doctors on contract under the NRHM as the number of co-located institutions.

Of the High Focus states, Jammu & Kashmir has more doctors on contract than co-located institutions; Uttarakhand was still initiating co-location; while Orissa had a large number of contractual AYUSH doctors posted at PHC level, but had increased the number of co-located institutions and, therefore, was recruiting more doctors for the CHC and DH levels. Bihar and Jharkhand had not started co-location yet, hence no doctors had been recruited.

The High Focus states of the North East have undertaken contractual recruitment of AYUSH doctors, which corresponds well with the number of institutions. However, Nagaland, which was to have initiated 200 dispensaries during this period under the CSS, has not recruited the doctors as yet.

Among the Non-High Focus states, Karnataka has done considerable recruitment against the number of co-located institutions, though co-location is slow. Haryana and Punjab had not started recruitment at the time of the survey but subsequently Punjab has contracted substantially more than the number of co-located institutions. Tamil Nadu has recruited much less than required. Even though the state posts doctors in regular service to the co-located institutions, the total of regular and contracted doctors is less than that of the number of stand-alone and co-located institutions. There was some vacancy against regular AYUSH posts in Andhra Pradesh, and recruitment for contractual appointment for co-location was undertaken but the figure was not available.

We were not able to access the figure for doctors in the system from all states, for regular as well as contractual doctors. However, the data that we did get shows that in 3 states there are more doctors than stand-alone plus co-located institutions, in 5 the number of doctors and institutions is almost equal, but in 5 states there is still a shortage (Table 10, column 6). This is because of varied reasons - either because the number of co-located institutions given by the state is sometimes of those planned

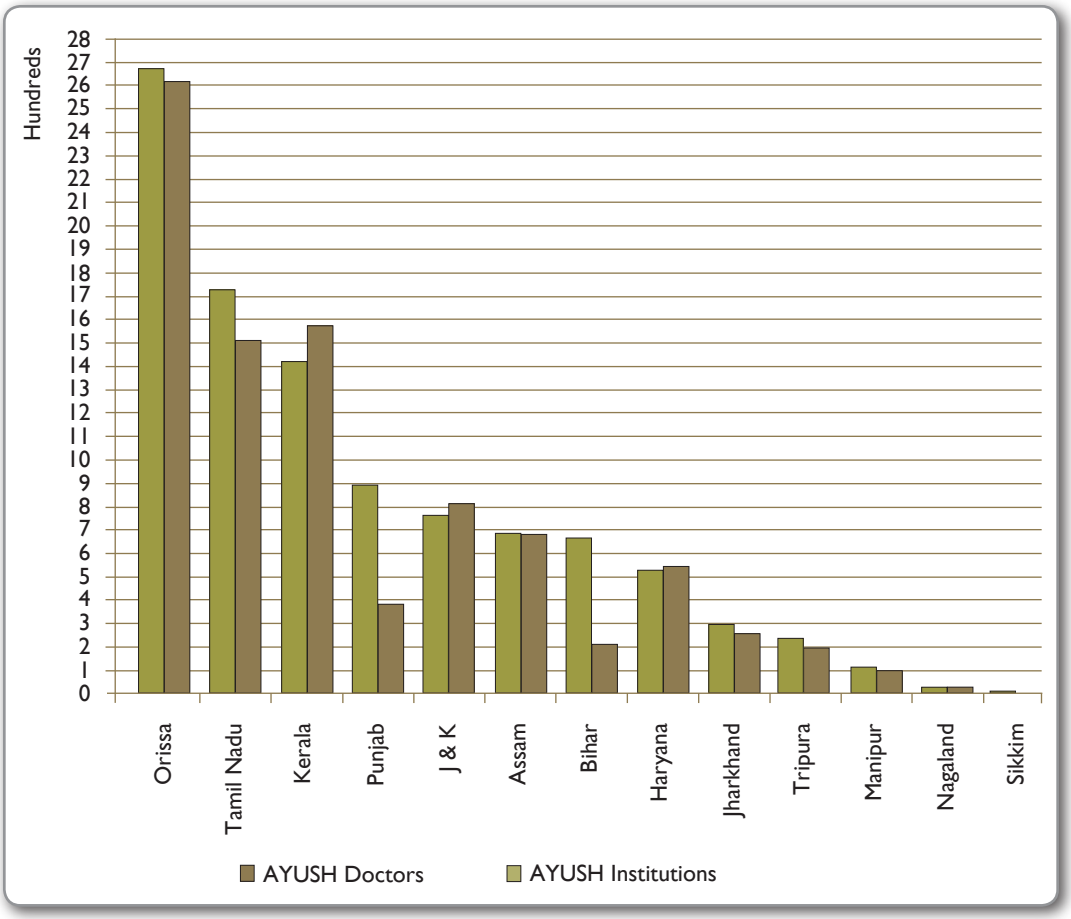


FIGURE 5: Number of AYUSH Institutions and Doctors Across States (Stand-alone & Co-located)

Sources of data:

1. *State Directorates/Departments of Health for Allopathic Institutions (Stand-alone and co-located)*
2. *State AYUSH Directorates for AYUSH Institutions (Standalone and co-located)*
3. *AYUSH in India 2007, Dept. of AYUSH, MoH&FW, Government of India*

and not those already functional, or it reveals a relocation of doctors from stand-alone dispensaries to co-located institutions with inadequate new recruitment, or a real shortage of AYUSH doctors in the public system because adequate posts have not been created, or because the doctors are not available for recruitment.

EDUCATIONAL INSTITUTIONS OF ALL 'PATHIES'

In the country, over 27,000 doctors of the AYUSH systems graduate annually from 479 recognised colleges that award undergraduate degrees of the AYUSH systems. Of

these, 98 are run by the central or state governments and 381 by private managements (Department of AYUSH, 2008).

In the 18 states studied, there were a total of 242 colleges, 80 government-run and 162 private. 12 of the 18 have government-run colleges. Jammu & Kashmir, Jharkhand and the North East states, except Assam, do not have any government colleges. Jammu & Kashmir and Jharkhand do have private colleges, while Assam and the other North East states have none. Orissa, Andhra Pradesh, Haryana and Delhi have more government colleges than private. Andhra Pradesh has the highest number of 9 government AYUSH colleges (Uttar Pradesh, not included in the analysis of data, has the highest number of 19 government colleges among all the states). Karnataka, Kerala, Tamil Nadu, West Bengal and Punjab have more than 10 private colleges, with Karnataka having the highest number of 67. (Maharashtra, not part of the study, has 110 private colleges, the highest among all states.)

Among the High Focus states, Jammu & Kashmir has no government AYUSH college but does have 3 private colleges, one Ayurveda and 2 Unani. Uttarakhand has 2 government colleges, both Ayurvedic, and 3 private colleges, 2 Ayurveda and 1 Homeopathy. Orissa has 7 government colleges, 3 Ayurveda and 4 Homeopathy with 5 private colleges, 3 Ayurveda and 2 Homeopathy. Bihar has 7 government colleges, 5 Ayurveda, 1 Unani and 1 Homeopathy with 24 private colleges, 6 Ayurveda, 3 Unani, 15 Homeopathy, Jharkhand did not have any of the colleges when it was divided out of Bihar state, and thus has no AYUSH government colleges. It has 1 Ayurveda and 2 Homeopathy private colleges (Figure 6).

Among the High Focus states of the North East, Assam has 4 government colleges, 1 Ayurveda and 3 Homeopathy, which supply doctors to all the North East states. No other North East state has an AYUSH college.

In the Non-High Focus states, Tamil Nadu is the only state which has a college of each of the AYUSH systems, with 2 Siddha, 1 each of Unani, Naturopathy and Homeopathy run by the government and 6 Ayurveda, 4 Unani, 3 Naturopathy and 9 Homeopathy run by private managements. Andhra Pradesh has 3 Ayurveda, 1 Unani, 1 Naturopathy and 4 Homeopathy colleges in the government sector and 2 Ayurveda, 1 Unani and 1 Homeopathy college in the private sector. Haryana has 1 Ayurveda and 1 Homeopathy government college as well as 5 Ayurveda and 1 Homeopathy private college. Punjab, similarly, has one government college each of Ayurveda and Homeopathy, as well as 11 private Ayurveda and 4 Homeopathy colleges. West Bengal

has a predominance of Homeopathy colleges, with 1 Ayurveda and 5 Homeopathy government colleges, as well as 1 Ayurveda, 1 Unani and 8 Homeopathy private colleges. Karnataka's predominance of private colleges is also in Ayurveda, with 5 government colleges, 3 Ayurveda, 1 Unani, 1 Homeopathy and 50 Ayurveda, 3 Unani, 3 Naturopathy and 11 Homeopathy private colleges. Kerala has 5 government colleges, 3 Ayurveda and 2 Homeopathy as well as 15 private colleges, 11 Ayurveda, 1 Siddha and 3 Homeopathy. Delhi has 1 Ayurveda, 1 Unani and 2 Homeopathy government colleges, and 1 private Unani college.

Thus, except for most of the North East states, all states are producing graduates of the various AYUSH systems within the state. Except for two states, all have graduates being produced in government colleges, but a larger number is coming from the private colleges. As compared to Allopathy colleges, 9 of the states have more AYUSH colleges, while 4 have more Allopathy colleges (Figure 6). Clearly, states such as Andhra Pradesh, Bihar, Delhi and Tamil Nadu cannot have low availability of AYUSH doctors as the reason for the gap in doctors against the number of institutions. Besides Karnataka and Maharashtra, these are also the states where the large number of AYUSH doctors being produced become part of and increase the size of the private sector services, or they migrate to other states.

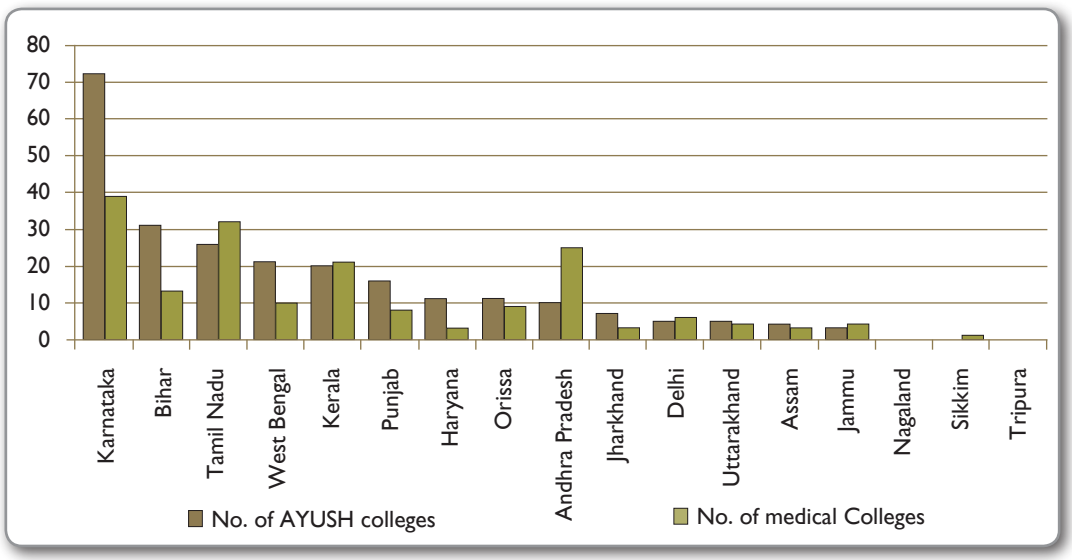


FIGURE 6: Number of Educational Institutions: AYUSH and Allopathic Across States

Sources of data:

1. *AYUSH in India 2007, Dept. of AYUSH, MoH&FW, Government of India*
2. *Medical Council of India, 2010*

SECTION 2
FACILITY PROFILE AND QUALITY OF STAND-ALONE AND CO-LOCATED AYUSH SERVICES

PROFILE OF STAND-ALONE AYUSH FACILITIES

The stand-alone AYUSH institutions were designated as either hospitals or dispensaries. The term "Hospitals" in AYUSH are to be understood as different from the way hospitals are in the Allopathic system since they are much smaller, with generally only about ten beds. They do not necessarily go beyond a general OPD and provide indoor or speciality services, even though they do, in general, have somewhat more infrastructure and human resources sanctioned for them than the dispensaries that are meant to provide only outpatient care. The AYUSH college hospitals were the ones with better infrastructure and human resources, as well as indoor services since there are norms laid down by the Central Council of Indian Medicine (CCIM) for teaching hospitals. Some Ayurvedic hospitals had speciality services such as for Panchkarma, Marma, Visha and Geriatrics in Kerala, and Kshaar Sutra in Orissa. Of the 18 hospitals covered in the study (including those designated as the District Hospitals, Government Hospitals, Rural Hospitals and the Block Hospitals, as well as the medical college hospitals), 17 had a minimum of two to a maximum of six doctors and 1-10 paramedics (Table 12). One hospital had no doctor or paramedic posted there. At the district teaching hospital, doctors also included PGs/specialists assisted by paramedics (pharmacists, Yoga instructors, nurse attendants, masseurs and Panchkarma assistants).

The dispensaries generally consisted of one room for the OPD, with the dispensing being done either from the same or a separate room. One AYUSH doctor, with or without a paramedic, manned the dispensaries. Vacancies against the sanctioned posts of doctors and paramedics were found in all states but their extent varied greatly. Of the 46 dispensaries included in the survey, 18 had a doctor and paramedic as required, 20 had only a doctor without a paramedic; 6 had a paramedic running the dispensary with no doctor; and one dispensary with a doctor and 2 paramedics; and one with 2 doctors and 2 paramedics. Thus, about one-third facilities (24/64) had a doctor but no paramedic or other support staff. Other than the paramedic, additional support staff

for general maintenance of the facilities was found only in a few places like Kerala, Punjab, Tamil Nadu and Andhra Pradesh. In all the institutions without the support staff, the AYUSH doctors did everything, from locking and unlocking the facility, to sweeping and dusting, to patient care to dispensing of medicines (Table 12).

PROFILE OF CO-LOCATED AYUSH FACILITIES

The infrastructure and services, such as diagnostics available to co-located AYUSH services, varied with the condition of infrastructure and services at the health centre/hospital in which they were co-located, but they also differed based on the presence or absence of special provisions made for the AYUSH services. Some had separate OPD space for AYUSH services, in others the AYUSH providers sat as MOs in the general OPD.

The co-located facilities primarily consisted of one doctor at the PHCs and one or two doctors at the CHC and District/Sub-district Hospitals, with one or no paramedic in each. In the 10 co-located DHs, 3 had one doctor and no paramedic; 3 had two doctors and no paramedic (one in Bihar was a Yoga practitioner who came to the hospital only for 2 hours daily, hence has not been included in Table 12), 1 had 3 doctors and no paramedic, and one each had 2 doctors + 2 paramedics, 3 doctors with 2 paramedics and 1 with 2 doctors and 4 paramedics. Thus, none met the IPHS norms of 2 specialists + 2 General Duty Medical Officers (GDMOs) + 4 paramedics (Table 12).

In 13 CHCs, 5 had 1 doctor + 1 paramedic, and 8 had only a doctor without a paramedic. Thus, none met the IPHS norms.

In 29 PHCs, 6 had one doctor with a paramedic; 17 had a doctor without a paramedic; 1 had a paramedic without a doctor; and 5 had vacancies against designated co-located PHCs. Thus, only about one-fifth met the IPHS norms.

The IPHS norm for SCs, of the ANMs being trained in AYUSH, was being met in some of the states, but with very minimal content of AYUSH in their training and only the AYUSH medicines for anaemia being given to them.

Thus, almost two-thirds co-located services (31/51) were being provided by AYUSH doctors without paramedics. Other support staff and infrastructure was better than the stand-alone since it was for the whole facility.

TABLE 12: Status of Human Resources in the AYUSH Facilities surveyed: Stand-alone and Co-located

S. No.	HR Availability		Stand-alone Institutions		Co-located Institutions		
	Doctors	Paramedics	Hospitals	Dispensaries	DH	CHC	PHC & Disp.
1.	0	0	1	-	-	-	5
		1	-	6	-	-	1
2.	1	0	-	20	2	8	17
		1	4	18	-	5	6
		2	-	1	-	-	-
3.	2	0	2	-	3	-	-
		1	2	-	-	-	-
		2	-	1	1	-	-
		3+	2	-	1	-	-
4.	3+	0	1	-	1	-	-
		1	-	-	-	-	-
		2	-	-	1	-	-
		3+	6	-	-	-	-
Total Institutions surveyed			18	46	9	13	29
IPHS Requirements for Co-located Facilities					4 Drs. + 4 Paramedics (300 - 500 bedded)	2 + 1 (and for DH upto 300 beds)	1 + 1

Source: *Indian Public Health Standards, For PHC, CHC and DH, 2006, Directorate General of Health Services, MoHFW, GOI*

Quality of AYUSH Facilities: Grading Across States

The quality of stand-alone and co-located AYUSH facilities was analysed separately, using basic minimum parameters for Infrastructure, Human Resource, Supply of Medicines, and Record-Keeping. Consideration was also given to additional service inputs being made at the institutions beyond the running of an OPD, such as growing a herbal garden in the facility premises, running a speciality clinic or Indoor Services (see the Methodology section in Chapter I for details). Dimensions of quality, such as doctor-patient interaction and patient satisfaction, were not possible to examine in a reliable manner in a one-time rapid survey. However, the parameters that were considered gave a profile of the state's inputs into AYUSH services. While the quality of the different parameters varied differentially across states, in almost all states, the quality of infrastructure, presence of human resources, supply of medicines, and record-keeping, were found to be unsatisfactory and required attention.

A general finding across the states was that, overall, the quality of inputs in the stand-alone facilities was much better than the co-located. Also, the quality of services was relatively better on most parameters in the Non-High Focus states compared to the High Focus states. Nevertheless, there were 'good' stand-alone facilities in both, the High Focus and the Non-High Focus states. In a majority of states they reached the grade of 'fair'. Among the co-located, only two states made it to even a grading of 'good', i.e., Tamil Nadu and Delhi, and all others either managed a grade of 'fair', or

TABLE 13: Grading for Quality of AYUSH Facilities Across States

State	Stand-alone	Co-located
High Focus States		
1. Jammu & Kashmir	Fair	Very poor
2. Uttarakhand	Good	Poor
3. Orissa	Good	Fair
4. Bihar	Fair	Co-location not started at the time of survey
5. Jharkhand	Fair	Co-location not started at the time of survey
High Focus North East States		
6. Assam	NA	Poor
7. Manipur	NA	Fair
8. Nagaland	NA	Poor
9. Sikkim	NA	Fair
10. Tripura	Fair	Poor
Non-High Focus States		
11. Andhra Pradesh	Fair	Fair
12. Haryana	Fair	Poor
13. Punjab	Fair	Co-location not started at the time of survey
14. West Bengal	Fair	Fair
15. Karnataka	Fair	Poor
16. Tamil Nadu	Very Good	Good
17. Kerala	Very Good	No co-location
18. Delhi	Good	Good

Source: Quality grading methodology on page no. 17, Chapter I

A dilapidated signboard for an Ayurvedic Dispensary in Puri District, Orissa

Examination room of an Ayurvedic Dispensary in South West District of Delhi

An unused signboard lying at the corner of a Govt. Ayurvedic Dispensary in Bhiwani District, Haryana

Entrance of a MCD dispensary of Ayurveda in the South West District of Delhi

Notification of State Ayurvedic Dispensary, Joynagar, West Bengal, situated in an old *Math*

were 'poor' and 'very poor'. None of the states had 'very good' AYUSH services in the co-located institutions.

Quality of Stand-Alone Facilities

Of the 18 states, stand-alone institutions were studied in 14 states. Sikkim has no separate AYUSH stand-alone institution, and in the other North East states except Tripura, the study team had difficulty in reaching them. As can be seen in Table 13, Uttarakhand, Orissa, Tamil Nadu and Kerala had among the best stand-alone services that generally predated the NRHM. In all the other states, the quality was graded as 'fair' by the indicators used. However, it is clear from the descriptions provided by investigators and the interview responses of providers and users, that even the 'fair' services of the southern states tend to be better in terms of infrastructure and supplies than those of the North East states. Among the 14, 8 were graded 'fair', 3 'good', and 2 'very good'.

Detailed findings of the five parameters used for grading quality, with the specific components for stand-alone institutions, are discussed below.

Infrastructure

Maintenance of the building, vacant space in the compound and presence of a staff quarter were included in the grading system adopted, with at least two of them positively required to qualify for one mark.

In the High Focus states, the buildings of District Ayurveda Hospitals (or designated Government Ayurveda Hospitals) were most often pucca structures, except in Bihar where it was a semi-pucca one. A poor state of maintenance was found in Bihar, Jharkhand and Jammu & Kashmir, with lack of cleanliness. Many were old buildings with large compounds in various degrees of degradation and disuse of the vacant space. For many, signboards were not properly visible or legible due to rusting and scraping off of the letters. Water and electric supplies were erratic, and there was no generator. In Uttarakhand, the hospital was fairly well maintained but its toilets remained unclean, water and electricity were erratic and without a generator. The hospital in Orissa, which was a Teaching Hospital, was exceptional; its location gave easy access, its infrastructure consisted of a good, well-maintained building, a large compound with a herbal garden, and an IPD with 100 beds.

The dispensaries were also found in variable condition, the location of some was found to be such that it made people's knowledge of the facility or approach to it difficult, some with bright new boards but ill-maintained premises. In Jharkhand, one old dispensary was in a semi-pucca building and two were newly constructed ones with pucca buildings. There was a little open area in most, except in Uttarakhand and Bihar. In Orissa, the dispensary building was in a large compound but in a dilapidated condition, in contrast to the Teaching Hospital. In Uttarakhand, the pucca building was reasonably well maintained but with erratic water and electricity supply and no generator.

In Tripura, the 7 dispensaries gave a picture of pucca buildings, but with no toilets or ill-kept, unclean toilets and poor maintenance. In one, there was reported misuse of the premises as a drinking den every night.

Among the Non-High Focus states, Kerala and Tamil Nadu with overall 'very good' grading, also had better maintenance of District and Block Level Hospitals with comparatively poorer maintenance of the dispensaries. Some dispensaries in Kerala were in semi-pucca buildings, though Tamil Nadu had all in pucca buildings. Some of the Ayurvedic dispensaries in the study district of Kerala had three separate rooms [(i) for consultation, (ii) for registration/waiting area/drug dispensing, and (iii) for drug storage]. One dispensary was located on the second floor, with no vacant space, while two dispensaries had vacant space around the compound. Delhi with an overall 'good' rating, had poor maintenance of the dispensaries with even a kaccha building for a dispensary.

The rest of the states with an overall 'fair' rating, such as Andhra Pradesh, Haryana, Punjab, West Bengal and Karnataka, showed a mixed pattern. Andhra Pradesh had all facilities in pucca buildings including the dispensaries, and good maintenance (undertaken on an annual basis). Punjab had a mix of pucca and semi-pucca dispensaries with poor maintenance, though hospitals were better maintained. Haryana had better maintenance of the District Ayurveda Hospital as compared to the dispensaries, which were poorly maintained. Karnataka had poorly maintained dispensaries, some with semi-pucca buildings in place. West Bengal had pucca dispensaries with satisfactory maintenance. Vacant space around the compound was universally found in the facilities covered across states, except Delhi, and everywhere it lay unutilised either for herbal gardens or quarters for the staff.

Thus, on an average, all the states could just qualify marginally for marks on the parameter of infrastructure.

Presence of a doctor and a paramedic gave one mark each for the grading.

Among the High Focus states, in the District Ayurveda Hospitals, there were 8 PG doctors in Orissa, 3 doctors in Bihar, and 2 in Uttarakhand. However, in Jammu & Kashmir and Jharkhand there was only one each, leaving more than one post vacant. The Bihar hospital had vacancies for the paramedic posts, with not even one paramedic in position. All others had one paramedic while the Orissa hospital had 5 nurses and other additional staff as well. Nevertheless, it still fell short of trained Ayurveda paramedics who were needed to assist in the specialised service that the hospital was equipped to provide.

The dispensaries too had vacant posts. Orissa and Uttarakhand had an MO and a paramedic in the dispensaries. In Jharkhand, the old dispensary had an MO and a paramedic, but the new ones had only the MO with no other staff. Tripura had an MO without paramedic in one and a paramedic without an MO in another. In one, the doctor was alcoholic and, therefore, not performing his duties; in another, the MO was reported to be absent most of the time.

Among the Non-High Focus states, the hospitals had presence of specialists of AYUSH particularly in Kerala, Tamil Nadu, Punjab and Andhra Pradesh with the highest number of PG doctors in Kerala. The specialists were from various branches, specially in Ayurveda, like *Panchkarma, Visha* (Toxicology), *Kaya Chikitsa* (Medicine), *Kaumarbhritya* (Paediatrics) and also *Swasthavritta* (Preventive and Social Medicine) in their OP and IP departments. Homeopathic services also had PG doctors but their area of specialisation could not be found in detail. The Siddha Hospital in Tamil Nadu also had a PG Siddha doctor. General Duty and Resident MOs were available especially at the DH and Teaching Hospitals. The support structure of the paramedics was the best in Kerala with as many as 10 paramedics in a DH to 5 in Block Level Hospitals. In Kerala, the number of paramedics was more in Ayurveda hospitals than the Homeopathic hospitals owing to procedures like massages and Panchkarma.

The dispensaries were, however, run by a 'one doctor and one paramedic' combination, or just one of the two in general across these Non-High Focus states. Kerala, Tamil Nadu, Andhra Pradesh, Karnataka, Punjab and Delhi largely had both (doctor and paramedic) with a few without doctors, whereas Haryana and West Bengal had just one person running the dispensaries in most places.

AYUSH doctor, compounder, medicines, examination and store, all are in one small 8x12 room, of a co-located PHC in West Bengal

Drug storage room in a State Ayurvedic Dispensary with an AYUSH doctor, South 24 Paraganas, West Bengal

Ayurvedic Drug storage room in an Ayurvedic Dispensary, Kozhikode District, Kerala

Drug Supply

In the grading system adopted, supply of AYUSH medicines gave one mark, and if supply was adequate it gave a second mark.

In the High Focus states, Orissa and Uttarakhand hospitals had sufficient supply of medicines while it was insufficient in Jharkhand, Bihar and Jammu & Kashmir. Another common complaint was that of inappropriate supply of formulations that were not needed in the facility while stock-outs were experienced for other commonly used ones. This picture was similar in the dispensaries as well.

In the Non-High Focus states, the stand-alone facilities had a much better supply of AYUSH medicines compared to other states, both in the hospitals and the dispensaries. Kerala and Tamil Nadu particularly had supply from Government Good Manufacturing Practice (GMP) pharmacies in adequate quantities. Andhra Pradesh and Karnataka too had supplies from Government GMP pharmacies, but also frequent stock-outs. Haryana, Punjab, Delhi and West Bengal had inadequate drug supply and frequent stock-outs, with central supply obtained largely from pharmacies located in the southern states, particularly for Ayurveda. In West Bengal, supply of Homeopathic medicines was better than that of Ayurvedic medicines.

Records

Availability of outpatient attendance data was the only criterion to qualify for a mark on this parameter. In general, the records of OPD attendance were available but further details were missing, for instance, the diagnosis/morbidity profile of patients.

In the High Focus states, records were not available in the Bihar hospital; record-keeping was found to be poor in Jharkhand; and reasonable in Uttarakhand and Jammu & Kashmir. It was good in the Orissa hospital. At the dispensaries, it was poor in facilities such as Jharkhand and Tripura where the human resources were also restricted, but reasonable in states such as Uttarakhand and Orissa where these were less constrained. No stand-alone facility had a vehicle or residential quarters for the doctors and paramedics.

In the Non-High Focus states, the records were maintained in registers generally of the OPD services and in the hospitals also some indoor patients' records were maintained. The break up of patients by new and old patient, sex and age was found in most

institutions along with the presenting symptoms or diagnosis. However, there was no information on the referral of patients at most institutions, though the OPD cards did have some referral detail, particularly in the Homeopathic hospitals of Kerala. In Tamil Nadu, the hospitals had better record-keeping systems with computers in place, but generally registers were being maintained manually. The dispensaries generally had poorer maintenance of records and registers.

Ayurveda and Siddha hospitals maintained registers of diseases in their own system's terminology, occasionally having modern medical terms for diagnosis particularly in Kerala, Tamil Nadu and Delhi. The reporting formats to higher levels were not found in most states, and wherever they were available, they only gave the number of patients with sex and age break ups, without any disease profile. The setting up of an information system for AYUSH will need to develop some way of documenting and reporting with a common terminology for presenting symptoms and diagnosis.

Kerala also had details on speciality service camps. Tamil Nadu had detailed records of Chikungunya patients at one PHC. Haryana had records of the school health checkups, contraceptive use counselling and malaria slides made at the stand-alone AYUSH dispensaries. Most of the states also had records of AYUSH health camps.

Additional Provisions

Despite having unused space in the compound, almost no facility had a herbal garden. Even facilities for indoor patients were found in only a few of the AYUSH hospitals. In most states they exist only in speciality hospitals and in the AYUSH college hospitals.

In the High Focus states, only the hospital in Uttarakhand and Orissa had indoor patient services. The Orissa hospital provided a wide range of specialist services - Panchkarma, Kshaar Sutra, Physiotherapy, Madhumeha and Aamvata units. It had 100 beds and was the only facility found to have a herbal garden.

In the Non-High Focus states, among the criteria set for this parameter, Kerala, Tamil Nadu, Punjab, Haryana and Delhi did qualify for more than two marks each, with availability of IP facilities (beds) in some co-located DHs and AYUSH Teaching Hospitals, diagnostic facilities and a vehicle in some institutions, and a herbal garden in one Teaching Hospital.

Vacant space outside the CHC of Kathua, District, Jammu, prospective ground for a Herbal Garden

Drug Corner in a co-located facility in Manipur

Other than these five states, the facilities studied did not have IP facilities, neither diagnostic facilities nor vehicles in the hospitals and dispensaries. Speciality clinics were available only in Kerala (Visha, Panchkarma, Netra Roga, etc.), Tamil Nadu (Siddha speciality, Yoga) and Delhi.

Quality of Co-Located Institutions

The co-located services varied more in their quality across the states, since they were in different stages of development. Bihar and Jharkhand were preparing to initiate co-location at the time of the study, as was Punjab. Kerala decided not do to any co-location at all.

In the 14 states where co-located institutions could be studied, their quality was graded as 'poor' in 7, 'fair' in 5, and 'good' in 2. The 'good' were in Tamil Nadu and Delhi, where the co-location preceded operationalisation of NRHM, and thereby had already got stable systems as well as awareness of patients so that utilisation was high. West Bengal has had co-location for long too, but the quality of services was graded as 'fair'.

Infrastructure

Separate space for the AYUSH services, vacant space in the compound, and signboards of the AYUSH services were the components for assessing this parameter at the co-located PHCs, CHCs, Sub-District and District Hospitals, and dispensaries.

Among the High Focus states, in the District Hospitals the AYUSH services had separate space but it tended to be located at the back of the building tucked away from where the stream of patients and visitors normally passed. Signboards were present in some but not in all, and rarely was the AYUSH service announced outside of the facility. At the CHCs, separate space was present only in Orissa, Manipur and Sikkim, and in no state had it been provided for at the PHCs. None had signboards for the AYUSH services. Most had some vacant space in the compound but none had a herbal garden. While water and electricity supply were erratic, there were overhead tanks and generators for the whole institution that served the Allopathic and AYUSH services as well, provisions that the stand-alone AYUSH institutions did not have.

Among the Non-High Focus states, 5 states, namely Haryana, Punjab, West Bengal, Tamil Nadu and Delhi, had co-located DHs, the rest had co-located PHCs/CHCs and dispensaries.

The DHs had separate space for AYUSH consultation and also vacant space around the compound; but signboards were not conspicuous enough to be noticed, especially

in Haryana, West Bengal and Tamil Nadu. DHs in Delhi also had small signboards, but had better OPD consultation space for AYUSH.

Andhra Pradesh and Karnataka had co-location only at the PHCs and CHCs, with no signboards and no separate space for AYUSH.

The PHCs and CHCs of West Bengal had consultation, drug store and dispensing – all in a small room, for AYUSH.

The co-located dispensaries in Delhi had separate space for AYUSH, generally on the second floor of the building; whereas the first floor was always that of Allopathic services. The signboards were very small and so was the vacant space around the compound.

Human Resources

Presence of AYUSH doctors and paramedics were the criteria for giving a mark each in the grading. The IPHS has set a standard of 1 AYUSH doctor and 1 paramedic at the PHC, 2 AYUSH doctors (of which one could be a specialist) and 1 paramedic at the CHC and hospitals of upto 300 beds. District Hospitals with 300¬-500 beds are to have 2 AYUSH specialists and 2 General AYUSH MOs with 4 paramedics. However, this is a far cry from the present situation.

In the High Focus states, the co-located DHs had two AYUSH doctors in states such as Uttarakhand, Manipur and Sikkim. In addition, there were paramedics to support the doctors in Uttarakhand but none in Sikkim or Manipur. Tripura had only one doctor and a paramedic as well.

All the CHCs and PHC, were sanctioned one doctor and paramedic each, but vacancies existed. In Jammu & Kashmir, there was 1 doctor and 1 paramedic at the CHC, but no paramedics at PHCs. In one of the PHCs, the AYUSH doctor's post was vacant, while in another the Allopath MO's post was vacant, the AYUSH doctor being the only MO at that institution. In Orissa, the CHC and PHCs alike had only one AYUSH doctor and no paramedic. Uttarakhand had 1 AYUSH doctor and 1 paramedic at the PHC and 1 doctor without paramedic at the Allopathic dispensaries, with no Allopathic doctor posted there.

In Assam, there were no paramedics at the CHCs, only a doctor. In Manipur, the CHCs had 1 doctor and 1 paramedic, but only 2 of the PHCs had both, 2 other PHCs having no paramedic.

The Non-High Focus states did not have good human resource availability except in Tamil Nadu and Delhi, where at least 1:1 ratio of doctor and paramedic was found. At the DHs, the ratio of doctors was even more than that of the paramedics.

In Andhra Pradesh, West Bengal, Haryana and Karnataka, the co-located facilities even at the DH level had poor paramedic support with a maximum of 1 or 2 paramedics or none, with generally 1 doctor right from DH to CHCs to PHCs. Kerala had no co-location facilities.

Drug Supply

In almost all states, medicines of the AYUSH system of the provider posted there were being made available at the hospitals and CHCs, but not in all PHCs. However, lack of medicines was observed, which was explained as a delay in supply. Nevertheless, it also indicated the general policy approach that expected the AYUSH doctors to provide Allopathic services as a substitute for the MBBS MOs.

In Jammu & Kashmir, no AYUSH medicines were being supplied, hence the co-located AYUSH doctors only practiced Allopathy. In Uttarakhand, AYUSH supplies had reached the DH and one PHC, but not the other, and were not being supplied to the State Allopathic Dispensaries (SADs) where the AYUSH doctors were posted. In Orissa, the CHCs and PHCs had supplies but in inadequate quantities. In Assam, no AYUSH medicines had been supplied to co-located institutions, in Manipur and Sikkim they were available at the DH and CHCs. In Tripura, they were at the CHCs but not the PHCs.

In the Non-High Focus states, the drug supply was good in Tamil Nadu followed by Andhra Pradesh and Karnataka, but other states like Punjab and Delhi report inadequate supply. Haryana and West Bengal were amongst the worst in terms of inadequate drug supply and stock-outs, even though there was adequate supply of Allopathic medicines. In Karnataka and Andhra Pradesh, which had fresh co-locations, drug supply was expected to start in a few facilities.

Records

The records of OPD attendance were available, but further details were missing. For instance, the diagnosis/presenting symptoms that would indicate the morbidity profile of patients and services provided by AYUSH doctors at the co-located institutions were not recorded separately from the general OPD.

A major lacuna was the irregular and incomplete reporting to the district and state level within the system of patient attendance and services provided to them by the facilities.

Registers were generally not maintained in the co-located facilities for separately recording services delivered by AYUSH and Allopathic service providers. Only some states like Tamil Nadu, Delhi and West Bengal had separate records for OPD load. Andhra Pradesh, Karnataka, Haryana and Punjab had either freshly begun or not started co-location, hence records were not found. It was found that in the records of facilities studied, no column or space was given for reporting referrals in any of the states.

Additional Inputs

Speciality AYUSH clinics, indoor services, and/or a herbal garden qualified for marks in the grading system, but no co-located facility under the NRHM was found to have started either in any of the study states, despite vacant open space in the facility compound.

These were only found in stand-alone AYUSH institutions even among the states rated as 'good' quality of the co-located services for AYUSH, i.e., Tamil Nadu and Delhi.

SECTION 3
STATUS AND ROLE OF AYUSH DOCTORS

Of the doctors interviewed, the regular doctors were largely in the stand-alone institutions and the co-located services had contractual doctors under the NRHM. In states such as Tamil Nadu, Kerala, West Bengal and Assam, almost all doctors, whether in the stand-alone or co-located institutions, were in regular service.

INSTITUTIONAL STATUS OF AYUSH DOCTORS

The AYUSH doctors tended to be younger than the Allopaths in the co-located services, since the majority were recently recruited for new contractual posts while there was regular staff for the Allopathic services. West Bengal and Kerala recorded older AYUSH doctors.

Designation

In the co-located institutions, it was always the Allopaths who were the MO in-charge, even if the AYUSH doctor was senior in years of service. They were called Assistant MOs in Tamil Nadu and Haryana, while the Allopaths were designated MOs. In other states, both were MOs, but the Allopaths would also be called Block-MO, and MO In-charge, but the MO AYUSH remained as such throughout their career.

Salary Structure

Six states had the same salary structure for the AYUSH and Allopathic doctors in the regular and contractual streams. However, in 9 states there was a differential in favour of the Allopaths with the AYUSH doctors getting lower salary scales (Table 14).

Roles and Responsibilities of AYUSH Doctors

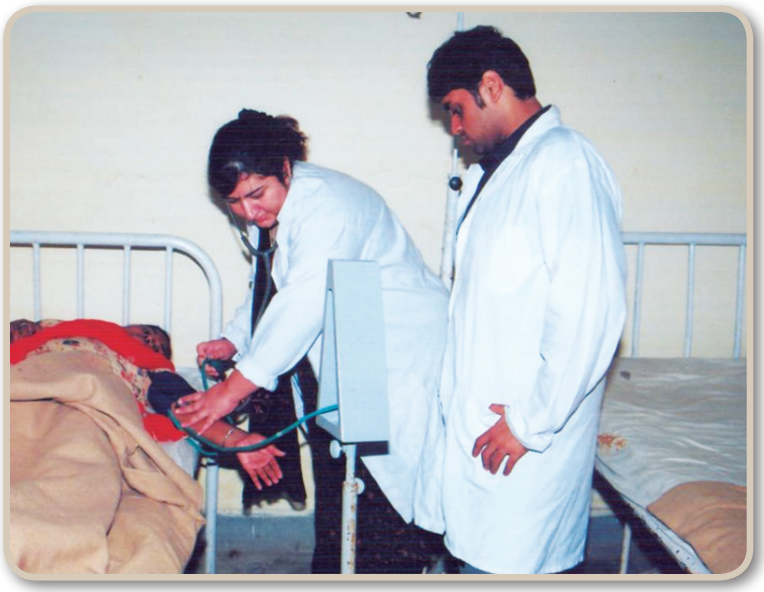
Attending to patients in the OPD services seems to be the major activity of AYUSH doctors. In some states they are also conducting institutional deliveries, such as in Manipur and Jammu & Kashmir. A majority of institutions with co-location had AYUSH medicines and the doctors were practicing their own systems as well as contributing to the patient care component of the national health programmes by referring suspected cases that they see in the OPD.

However, there is no clear role definition or guidelines for implementing the NHPs. In some states there were mobile clinics and health melas where the AYUSH doctors participated, but there is no regular outreach activity. They may also be involved in some training activity for the RCH and AYUSH component of the ANM and ASHA kits. Yoga training is given in schools in some states, such as Karnataka.

It was evident that in some states, the AYUSH doctors were being seen as additional hands to provide Allopathic services only. Jammu & Kashmir is the prime example, where a large number of doctors have been recruited but no AYUSH medicines are made available at the co-located facilities where they are posted. However, no in-service trainings or CMEs (Continuing Medical Education) are conducted in the AYUSH systems. In other states, the PHC level co-location is often with no other MO, hence practice of Allopathy is assumed.

In-Service Trainings of AYUSH Doctors Under NRHM

Most AYUSH doctors under contract by NRHM had received training in the NHPs. In some states they had also received skilled birth attendant (SBA) training, as in Jammu & Kashmir, Uttarakhand, Orissa, Manipur and Karnataka.



An AYUSH doctor assisting the Allopathic Medical Officer in examining a patient at a co-located CHC in Kathua District, Jammu & Kashmir

Induction training of the AYUSH doctors

An AYUSH doctor in, South Tripura district examining a patient

An AYUSH doctor examining a patient with a stethoscope

A co-located PHC in Tripura showing the offce of the MO i/c with AYUSH doctor posted as GDMO

TABLE 14: Institutional Status of AYUSH Doctors Relative to Allopathic Doctors

State	Age	Designation	Permanent/Contract	AYUSH Doctor's Salary		In-service Trainings		
				Regular	Contractual	Departmental	Under NRHM	Additional Activities Under NRHM
High Focus States								
1. Jammu & Kashmir	Comparatively younger than the Allopathic counterparts.	At CHCs, AYUSH doctors designated MO against the Block MO for Allopathic doctors. Rest similar.	Permanent in the stand-alone AYUSH institutions and contractual under NRHM. Largely permanent doctors in Allopathy.	9,300-34,800 + GP= 5,400 Salary AYUSH –MO (at par)	16,000 + Remote area allowance (at par)	None of the AYUSH doctors had received any AYUSH training in-service nor had Allopathic doctors received any.	Training in NHPs	-
2. Uttarakhand	Almost similar age profile	Both called as MO, but Allopaths are generally the in-charge in co-located facilities	Permanent in the stand-alone AYUSH institutions and contractual under NRHM against the largely permanent doctors in Allopathy. Largely contractual AYUSH doctors.	-	15,000 – 18,000	3/10 AYUSH doctors had some training in AYUSH in-service and also in alternative medicine, while none of the Allopathic doctors had such training.	SBA training, NHP training	AYUSH health Melas
3. Orissa	Comparatively younger than the Allopathic counterparts, especially in the co-located facilities.	Both called as MO, but Allopaths are generally the in-charge in co-located facilities	Largely contractual AYUSH doctors in the co-located facilities and permanent in stand-alone against the mostly permanent Allopathic doctors	9,300 -34,800	12,000 (12,000 -20,000)	Only one AYUSH doctor had CME training in AYUSH and one had training in Immunisation, against the Allopathic doctors who had no training in AYUSH, but all had some in-service training in their system	SBA training, NHP training	Speciality services of AYUSH doctors
4. Bihar	Similar	MO against the MO in-charge for Allopathic doctors. Rest similar.	Permanent AYUSH doctors in the regular state AYUSH services.	NA	20,000 (at par)	One AYUSH doctor had CME training, and it was interesting to find 2 Allopathic doctors trained in AYUSH/alternate medicine.	-	-
5. Jharkhand	Similar	MO against the MO in-charge for Allopathic doctors. Rest similar.	2 doctors of both streams were on contract, while all others were permanent .	-	20,000 (20,000 -35,000)	None of the AYUSH as well as Allopathic doctors had any such training.	-	-

6. Assam	Similar	Both called as MOs	Both systems had largely permanent doctors.	8,000 -35,000	15,000 & 18,000 (20,000 -30,000)	None of the doctors in any of the streams had any training in AYUSH.	-	AYUSH health Melas
7. Manipur	AYUSH doctors were younger in age than the Allopathic doctors.	AYUSH MO for AYUSH doctors, MO in-charge for Allopathic doctors.	More contractual AYUSH doctors.	-	15,000 -18,000 (at par)	2 AYUSH doctors trained. Rest none.	Training for conducting institutional deliveries and IMNCI	-
8. Nagaland	Both streams had young doctors.	MO for both.	Both streams had permanent and contractual, both in same numbers.	Lesser salary than the Allopathic doctors.	15,000 (20,000)	None had any training.	-	-
9. Sikkim	Younger AYUSH doctors.	MO for both.	More contractual doctors of AYUSH.	Lesser salary than Allopathic doctors.	15,000 (16,000)	None had any such training.	-	-
10. Tripura	Similar	MO (head) for Allopathic doctors against MO AYUSH.	Permanent doctors in stand-alone AYUSH facilities, largely contractual under NRHM of both streams.	18,000	20,000 - 25,000 + 1,000 – 3,000 area incentive (at par)	None had any such training	-	Sensitisation of primary school teachers regarding Yoga, strengthening of AYUSH cell
11. Andhra Pradesh	Similar	MO for both	Permanent doctors in both, with few contractual in both AYUSH and Allopathy.	Less than the Allopathic doctors.	9,300	None had any training	Training in NHP	State level programme coordination committee constituted with an AYUSH commissioner, IEC AYUSH, ANMs trained in home remedies
12. Haryana	Similar	AMO (Assistant MO) for AYUSH doctors against the MO Allopathy.	Doctors in stand-alone AYUSH facilities, largely contractual under NRHM of both streams.	Less than the Allopathic doctors.	15,000 -20,000 (25,000 -30,000)	None had any such training	-	State level Consultant at SIHFW, Speciality clinics, Upgradation of Research Institute, relocation of functional dispensaries for co-Location

13. Punjab	Both young and old AYUSH doctors.	MO AYUSH against MO in Allopathy.	Permanent doctors in stand-alone AYUSH facilities, largely contractual under NRHM.	10,300 -34,800	20,000 (25,000 -30,000)	None had any such training	Training in NHP	Yoga camps linked to school health programmes
14 .West Bengal	Older AYUSH Doctors	MO AYUSH against MO in Allopathy.	Permanent in both	Lowest salary across the states, much less than Allopathic doctors.	5,000 (20,000 -24,000)	None had any such training	-	RKS formed in AYUSH medical colleges and hospitals
15. Karnataka	Younger AYUSH doctors	MO AYUSH against MO in Allopathy	Largely contractual in AYUSH	Lesser salary than Allopathic doctors.	11,300 (17,000)	Few AYUSH doctors had trainings, but none of the Allopathlc doctors.	-	Training in SBA, IMNCI and NHP
16. Tamil Nadu	Similar	Assistant MO for all AYUSH doctors and MO for Allopathic doctors.	All permanent in both	15,600 -39,100 + Grade pay = 5,700) (at par)	12,000	*Panchkarma* training for all AYUSH doctors, but no training in AYUSH for Allopathic doctors.	-	Treatment of Chikingunya, training of VHNs and Supervisors in use of Siddha/Ayurveda drugs
17. Kerala No Allopathic doctor interviewed.	AYUSH doctors of mixed age groups.	MO Ayurveda and Homeopathy	All permanent except one.	20,000 (at par)	11,070 (20,000)	None had any training.	-	No co-location, but new AYUSH dispensaries by Gram Panchayats, Speciality clinics in DHs (Ayurveda), Rapid Action Epidemic Cell of Homeopathy for Chikungunya
18. Delhi	Similar	MO head for Allopathic doctors against MO for AYUSH.	All permanent Allopathic doctors. A few AYUSH doctors were contractual.	NA	-	None had any training in AYUSH systems.	-	-

*Figures in parentheses in the salary column is indicative of the salaries of Allopathic doctors in the State.

Sources of Data:

1. State Directorates/Departments of Health for Allopathic Services (Stand-alone and co-located)
2. State AYUSH Directorates /AYUSH Officials under State Directorates/Departments of Health/State Health Societies for AYUSH service data (Standalone and co-located
3. AYUSH in India 2007, Dept. of AYUSH, MoHFW, Government of India
4. RHS Bulletin 2009 (Statistics division, MoHFW, Government of India)
5. Priya R, Shweta A.S.2009: *Mainstreaming AYUSH & Revitalizing Local Health Traditions under NRHM – A Health Systems perspective, National Health Systems Resource Centre, New Delhi.*

SECTION 4
UTILISATION OF AYUSH FACILITIES

It is often said impressionistically that people continue to use traditional medicine because they do not have access to modern medical services either because of physical distance, non-affordability, or a socio-cultural non-familiarity. It is also the impression among health administrators that the AYUSH services are poorly utilised and have low patient load. Our data from the community and users of AYUSH services, detailed in Chapter III, examines these issues. However, here we bring in data from the state level records of patient load to examine this as an outcome of coverage and quality of public services.

OPD ATTENDANCE DATA OF AYUSH SERVICES

State level aggregated data on OPD attendance of stand-alone AYUSH facilities was provided by 11 of the 18 states. The other 7 were unable to do so despite repeated efforts of the investigator team and then the central team's concerted attempts for pursuing the request.

In the 11 states, 8 of the study districts provided aggregated data but 3 did not. OPD attendance data could be collected from stand-alone facilities in 13 of the districts (Table 15).

This process of data collection revealed the weaknesses in record-keeping at the facilities and the trail of data to higher levels showed the limitations of the present HMIS for AYUSH services.

Record-Keeping and Data Reporting

Since data on OPD attendance was not easily available, we attempted to trace it at all the levels possible, state and district aggregated data as well as at the facilities studied. Their triangulation was useful wherever possible to understand the strengths and limitations of the record-keeping and reporting by the AYUSH services as well as of the available data. Data was accessed from all, or atleast from some level or the other in all the states except Bihar (Table 15). From this, we find:

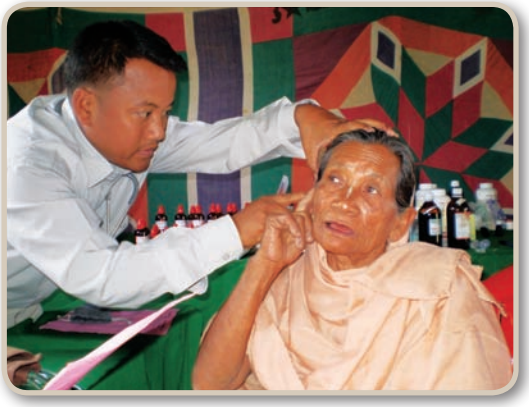
- Generally, the Non-High Focus states had better and more accessible records than the High Focus states.

Board at the entrance of a co-located Health Centre in the South West District of Delhi showing range of OPD services including AYUSH

OPD waiting space outside the Ayurvedic and Homeopathic Dispensary in a co-located Health Centre, Delhi

Waiting line outside the registration counter of an Ayurvedic Dispensary in Kozhikode District, Kerala

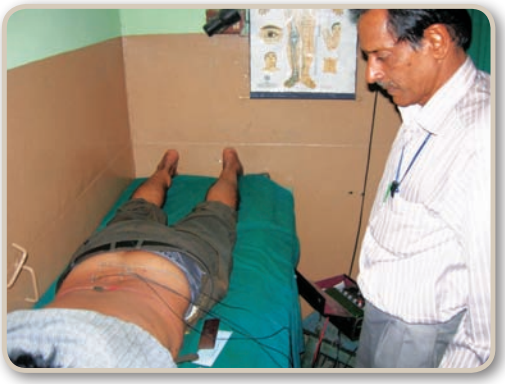
AYUSH doctors examining patients in a newly co-located PHC in Manipur



A Homeopathy doctor examining an old lady in the OPD camp in Thoubal District, Manipur

An Ayurvedic pharmacist in a State Ayurvedic Dispensary in West Bengal dispensing medicines

Homeopathic doctor in a co-located DH, Nalbari district, Assam



Acupuncture treatment in progress in a co-located DH in South 24-Parganas West Bengal

- The data was most accessible at the facility level, less so at the state level, but least available at the district level.
- Converting all three sets of data into 'average estimated attendance per facility per day' (AOP/f/d) allowed comparison of the three levels and across states.
- This analysis showed that the facility level tended to give highest figures and the state level the lowest. Since the higher levels are meant to be an aggregate of the lower levels, this discrepancy could have several explanations:-
  - The most obvious is incomplete reporting, all facilities not sending reports or are careless in compiling them. The district level has a greater tendency for such a lapse, probably since it has not been required to use the data in any way, and has a lower capacity in its HR support. The state level does better.
  - A second reason for the higher figures at facility level could be because the study districts were purposively selected from the better performing districts in the state and, therefore, the OPD attendance is likely to be higher than the average of all the districts.
- This discrepancy also assures one that there is no "mark up" happening as the data travels up to the state level.
- Almost no co-located facility was able to provide OPD attendance disaggregated for patients going to AYUSH and Allopathic providers.
- The data was generally disaggregated by child and adult, male and female.
- Generally, records were kept of the presenting complaint or diagnosis at the facility level registers. However, the illness for which the patients had come was not being compiled or reported to higher levels, thereby providing no morbidity profile of users.

UTILISATION OF AYUSH SERVICES

Going by the records at various levels, the stand-alone services were better utilised than the co-located in most states (Table 15).

Utilisation of Stand-alone Services

- The utilisation of stand-alone services across the states ranges from an average of 8 patients AOP/f/d to 78 patients, as per aggregate state records.
- Nagaland, Jammu & Kashmir, Jharkhand, Punjab, Haryana and Karnataka had an average of less than 20 patients AOP/f/d. However, data collected from the

facilities themselves was 20 or more in these states as well. Discussions with state officials revealed that only a few districts and facilities were sending reports regularly, hence there is a high degree of under-reporting at aggregate levels.

- Uttarakhand, Manipur and West Bengal got 20-40 AOP/f/d.
- Orissa, Andhra Pradesh and Kerala showed a state level average between 40 and 60 AOP/f/d.
- Tamil Nadu received the highest number of AOP/f/d, 78 was the state level figure and 43 the district level.
- At the facility level in the study districts, AYUSH dispensaries reported providing services from 20-127 AOP/f/d. The relative ranking of states, however, remained similar to the aggregate data, with minor variations, e.g., Kerala moved up over Tamil Nadu. While aggregated data for stand-alone facilities was not available from Tripura, the facility level data shows good utilisation.

Utilisation of Co-located Services

The facility level data was higher than the state level aggregate figures in all states where it was available.

- In most states, i.e., 12 of 18, data at state level obtained from the facility data aggregation in the web-based HMIS showed that the co-located facilities had a lower attendance than the stand-alone. (Kerala has no co-location.) It ranged from 1-4 AOP/f/d in 8 states, 5-9 in 2, 10-14 in 1, over 45 in 1, and over 75 in the exceptional case of Tamil Nadu.
- The co-located services in Tamil Nadu had an OPD attendance similar to that of the stand-alone. West Bengal did not make aggregate data available, but the facility level showed high usage at CHC level, and in fact had an even higher attendance at the co-located than the stand-alone.
- It is important to note that Tamil Nadu and West Bengal had initiated co-location of services well before the others in the pre-NRHM phase and have high patient loads. It can, therefore, be hoped that the attendance will pick up in the other states as the co-location stabilises.

Thus, the official records of the AYUSH institutions and the state Directorate's data on OPD attendance show a fairly good level of average facility utilisation for AYUSH stand-alone services in most states. The co-located services are well utilised where they have been in place and well functioning for several years. In most states, however,

TABLE 15: OPD Attendance at AYUSH and Allopathic Services Across States

State	State Level						District Level						Facility Level (Average Per Day)				
	AYUSH				Allopathic		AYUSH				Allopathic		AYUSH		Allopathic + AYUSH		
	Stand-alone		Co-located				Stand- alone		Co-located				Stand-alone		Co-Located		
	Total	AOP/ f/d	Total	AOP/ f/d	Total	AOP/ f/d	Total	AOP/ f/d	Total	AOP/ f/d	Total	AOP/ f/d	Hospital	Dispe-nsary	DH	CHC	PHC
High Focus States																	
1. Jammu and Kashmir	14,12,578	12	3,02,160	3	-	-	327,4 53	27	37,675	6	-	-	-	-	-	-	-
2. Uttara-khand	50,22,557	24	1,61,200	2.4	13,260,583	77	3,08,568	13	39,409	6	-	-	-	42	-	-	21
3. Orissa	1,52,68,726	47	10,79,106	3	2,56,48,023	56	NA	-	41,921	3	NA	-	-	60	-	-	NA
4. Bihar	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5. Jharkhand	NA	-	2,13,995	-	-	-	1,03,799	16	NA	NA	NA	-	-	38	-	-	-
High Focus North East States																	
6. Assam	NA	-	38,257	1	-	-	-	-	11,584	2.2	-	-	-	-	-	-	-
7. Manipur	1,33,000	-	56,110	2.3	-	-	15,762	19	13,280	3	42,236	13	-	-	10	7	-
8. Nagaland	6,606	8.2	11,412	2	1,50,000	5	-	-	1,432	3	-	-	34	-	-	17	-
9. Sikkim	NA	-	2,769	3	-	-	NA	-	-	-	-	-	-	-	-	-	-
10. Tripura	-	-	1,55,205	7	-	-	-	-	40,878	7	-	-	-	83	62	-	-

Non-High Focus States																	
11. Andhra Pradesh	17,049,184	39	10,50,018	13	2,57,71,888	53	-	-	-	-	-	-	-	55	-	-	-
12. Haryana	24,39,791	17	92,180	-	-	-	-	-	1,213	-	-	-	-	48	-	-	-
13. Punjab	-	-	4,22,539	6	-	-	-	-	19,170	5	-	-	-	21	-	-	-
14. West Bengal	12,294,360	28	-	-	4,38,58,034	-	8,49,780	38	18,142	7	36,14,797	165	-	33	-	55	-
15. Karnataka	27,96,753	10	2,22,119	3	NA	NA	NA	-	-	-	-	-	21	-	-	-	-
16. Tamil Nadu	18,982,487	78	1,70,02,294	76	9,58,910	43*	11,91,732	158	-	-	-	190	90	-	-	102	57
17. Kerala	1,85,71,940	48	-	-	-	-	-	-	5,00,903	17	-	-	275	-	-	-	-
18. Delhi	-	NA	-	-	25,524	9	-	-	-	-	-	-	-	110	171	-	-

AOP/f/d = Average OPD patients per facility per day
**Data of PHCs only*

Source of this table: State and district level records for the stand-alone facilities from

1. *State Directorates/Departments of Health for Allopathic Institutions*
2. *State AYUSH Directorates /AYUSH Officials under State Directorates/Departments of Health/State Health Societies for AYUSH service data*
3. *District Officials of AYUSH and District Health Societies under NRHM in the surveyed Districts* and the facility data were from the facilities surveyed.
4. *The HMIS web portal data on AYUSH OPD attendance in the state and the study district for the year 2008-2009 & 2009-10 for co-located AYUSH IInstitutions.*

they are still to find wide usage, though marked variations are to be expected across facilities and districts even within a state.

Comparing Across 'Pathies'

Wherever disaggregated data was available across the AYUSH systems, it showed a similar good utilisation of the various systems, especially Ayurveda, Unani, Siddha and Homeopathy (Table 16).

In Jammu & Kashmir, OPD attendance at Ayurveda and Unani institutions was similar (14/15 lakhs). In Orissa, Ayurveda and Homeopathy attendance was similar (72-79 lakhs) but Unani was lower (1 lakh plus). In Uttarakhand, it was high for Ayurveda, with Homeopathy a low second (43 lakhs and 6 lakhs, respectively). In all the North East states, Homeopathy predominated.

Ayurveda predominated in Andhra Pradesh, Karnataka and Kerala, but the total number of OPD attendees was much higher than the others in Kerala, at over 1.7 crores. In Tamil Nadu, Siddha was predominant with 1.7 crores as well.

Average OPD Attendance

Compared with Allopathy, where the data was available, it showed that the AYUSH OPD attendance was about one-fourth to half of the Allopathic services, except in Nagaland where it was a smaller fraction (4%). In West Bengal, attendance in AYUSH OPD was 28% of Allopathic. In Uttarakhand, the AYUSH OPD attendance was 38% of the Allopathic. In Tamil Nadu, the OPD attendance was almost equal for the AYUSH and Allopathic services. In Andhra Pradesh, the state level data shows that AYUSH OPD load was 66% of Allopathic in public services, while in Orissa it was 60% (Table 15).

Indoor AYUSH Service Utilisation

Data on indoor services of AYUSH was even more difficult to access than the OPD attendance figures. The bed strength was available, but number of indoor patients was not accessible for most states. For those that we do have data, reveal a variable situation, from very low utilisation in Karnataka to high in Andhra Pradesh, Uttarakhand and Orissa (Table 17).

TABLE 16: System-wise OPD Utilisation of AYUSH Across States							
State	**A**	**Y/N**	**U**	**H**	**Others***	**Total AYUSH**	**Allopathic**
High Focus States							
1. Jammu & Kashmir	14,12,578	-	15,01,536	-	-	29,14,114	-
2. Uttarakhand	43,76,376	-	-	6,46,181	-	50,22,557	-
3. Orissa	72,95,886	-	1,08,925	78,62,915	-	1,52,67,726	2,56,48,023
4. Bihar	-	-	-	-	-	NA	-
5. Jharkhand	-	-	-	-	-	2,13,995	-
High Focus North East States							
6. Assam	-	-	-	-	-	38,257	-
7. Manipur**	3,864	7,942	660	1,21,002	-	1,33,468	-
8. Nagaland	2,079	-	-	4,527	-	6,606	1,50,000
9. Sikkim	-	-	-	-	-	NA	-
10. Tripura	-	-	-	-	-	1,55,205	-
Non High Focus States							
11. Andhra Pradesh	85,26,228	-	38,76,612	46,46,344	-	1,70,49,184	2,57,71,888
12. Haryana	-	-	-	-	-	24,39,791	-
13. Punjab**	-	-	-	-	-	26,27,267	-
14. West Bengal	-	-	-	-	-	1,22, 94,360	4,38,58,034
15. Karnataka	22,76,995	13,565	2,52,538	2,53,655	-	27,96,753	-
16. Tamil Nadu	4,00,231	23,492	1,52,493	13,47,481	1,70,58,790(S)	1,89,82,487	-
17. Kerala	1,71,31,282	4,957	5,358	12,80,209	3,951 (V) 1,46,183 (S)	1,85,71,940	-
18. Delhi	-	-	-	-	-	-	-

* S = Siddha; V = *Visha*
** The OPD utilisation data is only for few districts of the state as per the availability.

Sources of Data:
1. State Directorates/Departments of Health for Allopathic Institutions
2. State AYUSH Directorates /AYUSH Officials under State Directorates/Departments of Health/State Health Societies for AYUSH service data (Standalone and co-located),
3. District Officials of AYUSH and District Health Societies under NRHM in the surveyed Districts

Reported data on utilisation of indoor care facilities, analysed for state level, shows an annual bed utilisation of 135 patients per bed in Jammu & Kashmir, while Orissa has 101 patients per bed annually. In Kerala and Haryana, it is 20 and 23, respectively. While the former figure of over a hundred represents a high patient turnover, in the latter, especially Kerala, it is probably due to longer periods of stay by chronic patients requiring therapy as well as palliative care over 7-30 days.

TABLE 17: System-wise Utilisation of AYUSH Indoor Services by Number of AYUSH Beds Across the States

System-wise Utilisation of AYUSH Indoor Services by Number of AYUSH Beds in the State								Patients Per Bed Annually	
State	**A**	**Y/N**	**U**	**H**	**Others***	**Total AYUSH**	**Allopathic**	**AYUSH**	**Allopathic**
High Focus States									
1. Jammu & Kashmir	453/155	NA/20	NA/200	-	-	NA/375	NA/12,855	NA	NA
2. Uttarakhand	65,880/ 319	NA/110	NA/8	NA/50	-	NA/487	2,28,870/1,080	135.3	212
3. Orissa	44,480/ 418	-	-	10,639/125	-	55,119/543	26,42,450/14,166	101.5	186.5
4. Bihar	-	-	-	-	-	NA	-	-	-
5. Jharkhand	-	-	-	-	-	NA/262	NA/5,044	-	-
High Focus North East States									
6. Assam	-	-	-	-	-	-	-	-	-
7. Manipur	-	-	-	-	-	NA/215	NA/1,920	-	-
8. Nagaland	-	-	-	-	-	-	-	-	-
9. Sikkim	-	-	-	-	-	NA/10	NA/1,500	-	-
10. Tripura	-	-	-	-	-	NA/30	NA/2,262	-	-
Non-High Focus States									
11. Andhra Pradesh	81,625/ 364	-	46,840/ 210	63,627/ 300	-	1,92,092 /874	21,59,510/16,374	220	132
12. Haryana	-	-	-	-	-	28,097/1,215	-	23	-
13. Punjab	-	-	-	-	-	NA/1,674	NA/10,620	-	-
14. West Bengal	NA/409	NA/95	NA/100	NA/630	-	NA/1,234	-	-	-
15. Karnataka	4,344/ 1,167	54/41	769/202	301/56	-	5,468/1,466	NA/4,708	4	-
16. Tamil Nadu	12,881	-	13,590	13,892	1,69,095 (S)	2,09,458	-	55.94	-
17. Kerala	51,075/1,714	893/30	0	2,238/920	31/30 (V), 343/20 (S)	54,580/2,714	NA/36,436	20	-
18. Delhi	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

*** S = Siddha; V = *Visha***

Sources of Data:
State Directorates/Departments of Health for Allopathic Services (Stand-alone and co-located)
State AYUSH Directorates /AYUSH Officials under State Directorates/Departments of Health/State Health Societies for AYUSH service data (Standalone and co-located)
District Officials of AYUSH and District Health Societies under NRHM in the surveyed Districts
RHS Bulletin 2009 (Statistics division, MoHFW, GOI)
AYUSH in India 2007, Dept. of AYUSH, MOH&FW, GOI

Compared with Allopathy, in Orissa, indoor AYUSH utilisation is 2% of Allopathic, but by bed utilisation, it becomes 55%, with 102 patients per AYUSH bed and 187 per Allopathic bed. In Uttarakhand, where only Ayurveda IPD data was available, it showed that bed utilisation was 29% of Allopathic in the public services, but comparable by bed utilisation at 64% (135/212). In Andhra Pradesh, AYUSH IPD was 9% of Allopathic in the public services, with a higher bed/patient ratio of 220 to 132 (i.e., 166% of Allopathic bed utilisation). This shows a very favourable utilisation of indoor services in AYUSH facilities. However, in the districts studied, there was little evidence of IPD facilities and so this dimension requires further enquiry.

Thus, the overall utilisation pattern of AYUSH services seems to reflect their relative coverage and quality across the states studied.

Among the broad state grouping, utilisation was highest in the Non-High Focus and least in the North East High Focus states. In the High Focus states, AYUSH facilities in Orissa had the highest utilisation figures, followed by Uttarakhand, the lowest attendance being in Jammu & Kashmir and Jharkhand in the High-Focus states, no data being available for Bihar.

Among the North East states, Tripura showed high attendance at the stand-alone and at the co-located dispensary, followed by Manipur, which gave good figures in the stand-alone at state level, and Nagaland where the facilities showed reasonably good attendance at the stand-alone and co-located facilities. In the Non-High Focus states, Tamil Nadu, Kerala and Delhi, which had very good or good quality, show a leap in the number of patients attending the OPD compared to the other states that obtained grade of 'fair' quality.

In the North East, there was no data available on patient load of stand-alone institutions from Assam and Sikkim and the co-located showed low average attendance of just 1-3 patients per day, except in Tripura where it was 7. Among the Non-High Focus states, Punjab, Karnataka and West Bengal showed the lowest attendance, though it was similar to that of the best states among the High Focus category.

SECTION 5
PATTERN OF AYUSH SERVICES DEVELOPMENT ACROSS STATES

WHAT ARE THE DETERMINANTS?

The pattern of AYUSH services that has emerged across states shows the development of the stand-alone and co-located services as linked phenomena, but the nature of linkages is complex and varied. From the data presented in the foregoing pages, the variations in coverage and quality of AYUSH services are evident across the states. Understanding the factors influencing the development of AYUSH services in the states will be useful in evolving appropriate policies and plans for strengthening of their services. The determinants of good coverage and good quality services can be analysed by a comparison of the factors and processes existing in the states. The financial situation of the state is one possible determinant. The health service system as a whole comprises of the public, private and informal sectors, in all three streams – Allopathy, AYUSH and LHT. The relative development of one is likely to influence development of the others. Besides these, there would be factors internal to the AYUSH service system itself, that would influence its development, such as the administrative and technical leadership, management and technical support, among others. We attempt to explore them in this section.

Factors External to the AYUSH Service System

The bar chart below (Figure 7) demonstrates the pattern of coverage of the AYUSH stand-alone and total (stand-alone + co-located) services as well as of the Allopathic services. These are superimposed with a line graph of the average per capita income of the state and the vacancy position of Allopathic doctors in PHCs (RHS, 2009). It shows that the High Focus states are clustered at the beginning and end of the bar chart, i.e., are among the ones with the highest coverage of AYUSH institutions (Uttarakhand, Tripura, Orissa and Jammu & Kashmir), or among those with least coverage (Bihar, Jharkhand, Sikkim and Nagaland). The Non-High Focus states are clustered in between (Figure 7). However, there are a number of variations from this general pattern, that allow analysis of other variables to assess their possible influence. As the pattern of clustering of states by AYUSH coverage suggests, the financial condition of a state is a major determining factor.

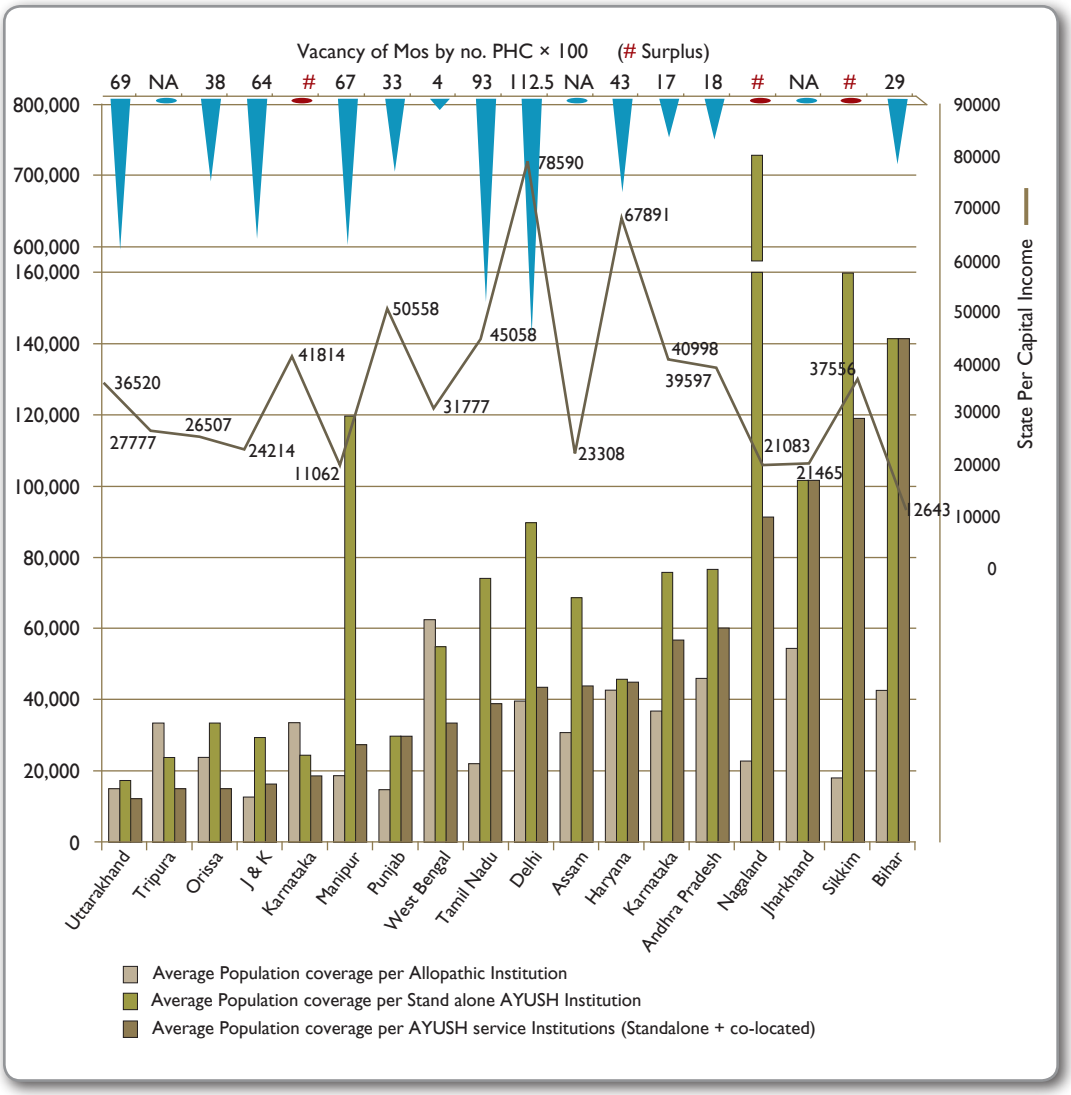


FIGURE 7: Average Population Coverage Per AYUSH Service Institution by Allopathic Institution Coverage, Average State Per Capita Income and Vacancy Position of Allopathic Doctors in PHCs

Sources of data:

1. State Directorates/Departments of Health for Allopathic Services (Stand-alone and co-located)
2. State AYUSH Directorates /AYUSH Officials under State Directorates/Departments of Health/State Health Societies for AYUSH service data (Standalone and co-located)
3. AYUSH in India 2007, Dept. of AYUSH, MoHFW, Government of India
4. RHS Bulletin 2009 (Statistics division, MoHFW, Government of India)
5. Projected Population for the year 2009, Registrar General of India
6. National Accounts Division, Ministry of Statistic and Programme Implementation, Government of India (For State Per Capita Income: Statewise)
7. Quality Grading Page no. 54, Section 4, Chapter II of this report.

The High Focus states are the ones with poorer all round development and have been divided into two categories, i.e., the High Focus North East states and the High Focus non-North East states. Among them, the North East states have a different historical experience, with geographical and socio-political isolation from the mainstream, creating a specific context for service development and, therefore, it is pertinent to analyse them as a separate category. However, all hill states have a common problem of difficult terrain and sparse population habitations, causing limited accessibility. They get special budgetary support from the centre to bridge the lag in development. Therefore, we will examine their service development from the viewpoint of higher coverage norms for them.

The High Focus States

Economic Situation of the States

It is evident that among the High Focus states, the development of AYUSH services has been along the gradient of the economic status of the state, using the average state per capita income (ASCI) as the indicator (Figures 7 & 8). Uttarakhand has the highest economic status, and the best coverage of stand-alone and total AYUSH institutions. Jammu & Kashmir and Orissa are similar in coverage, while Jharkhand and Bihar, with the poorest economic development, also have the poorest AYUSH services.

The quality of stand-alone services is partially reflective of the same, but Orissa has better functioning services, and the utilisation figures corroborate this. Among the states of Orissa, Uttarakhand and Jammu & Kashmir, the latter seems to stand out as poor quality of services, and also for primarily using the AYUSH doctors as substitutes or assistants for Allopathic services. The co-located services show the same ranking of quality between Orissa, Uttarakhand and Jammu & Kashmir, with Bihar and Jharkhand having almost no co-location at the time of the survey.

Among the North East states, if Sikkim is considered an outlier, having the best economic situation but the least development of AYUSH services, the other states demonstrate the economic gradient, in that Tripura has the best coverage and the highest per capita state income (Figure 9). The rest of the states, Manipur, Nagaland and Assam have similar economic status and low AYUSH coverage. However, among them, Manipur has improved its coverage with wide implementation of the co-location strategy, and has got a 'fair' grade for quality, which is the highest among the North East states.

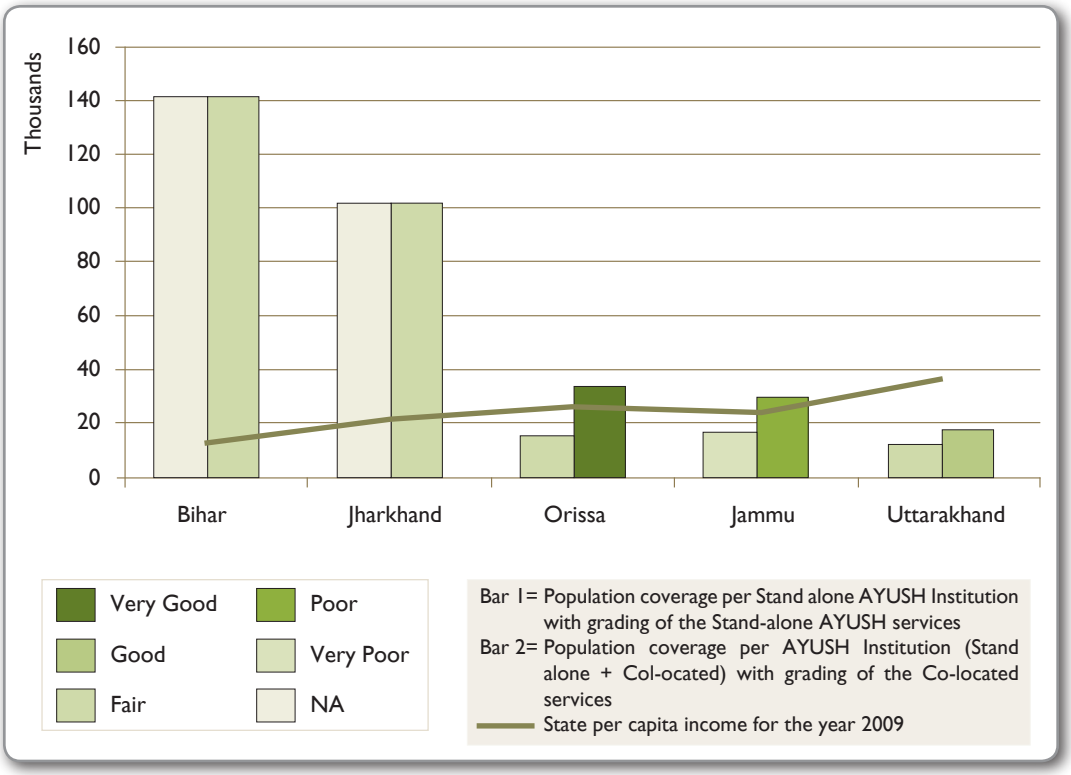


FIGURE 8: Quality Grading of AYUSH Services with Population Coverage Per Institution AYUSH & Allopathic by Economic Status: Non High Focus States

Sources of data:

1. State Directorates/Departments of Health for Allopathic Services (Stand-alone and co-located)
2. State AYUSH Directorates /AYUSH Officials under State Directorates/Departments of Health/State Health Societies for AYUSH service data (Standalone and co-located)
3. AYUSH in India 2007, Dept. of AYUSH, MoHFW, Government of India
4. RHS Bulletin 2009 (Statistics division, MoHFW, Government of India)
5. Projected Population for the year 2009, Registrar General of India
6. National Accounts Division, Ministry of Statistic and Programme Implementation, Government of India (For State Per Capita Income: Statewise)
7. Quality Grading Page no. 54, Section 4, Chapter II of this report.

Health System Architecture Across States

Among the High Focus states, Jammu & Kashmir, Uttarakhand and Orissa show good coverage with Allopathic services by population, and they have developed AYUSH services along-side. Orissa has relatively good Allopathic coverage and developed the AYUSH services, with co-location actually overtaking the number of Allopathic services. Bihar and Jharkhand have poorly developed services of both streams.

If we examine all the hill states together (Uttarakhand, Jammu & Kashmir and all the North East states), a high level of coverage of Allopathic services is seen in all

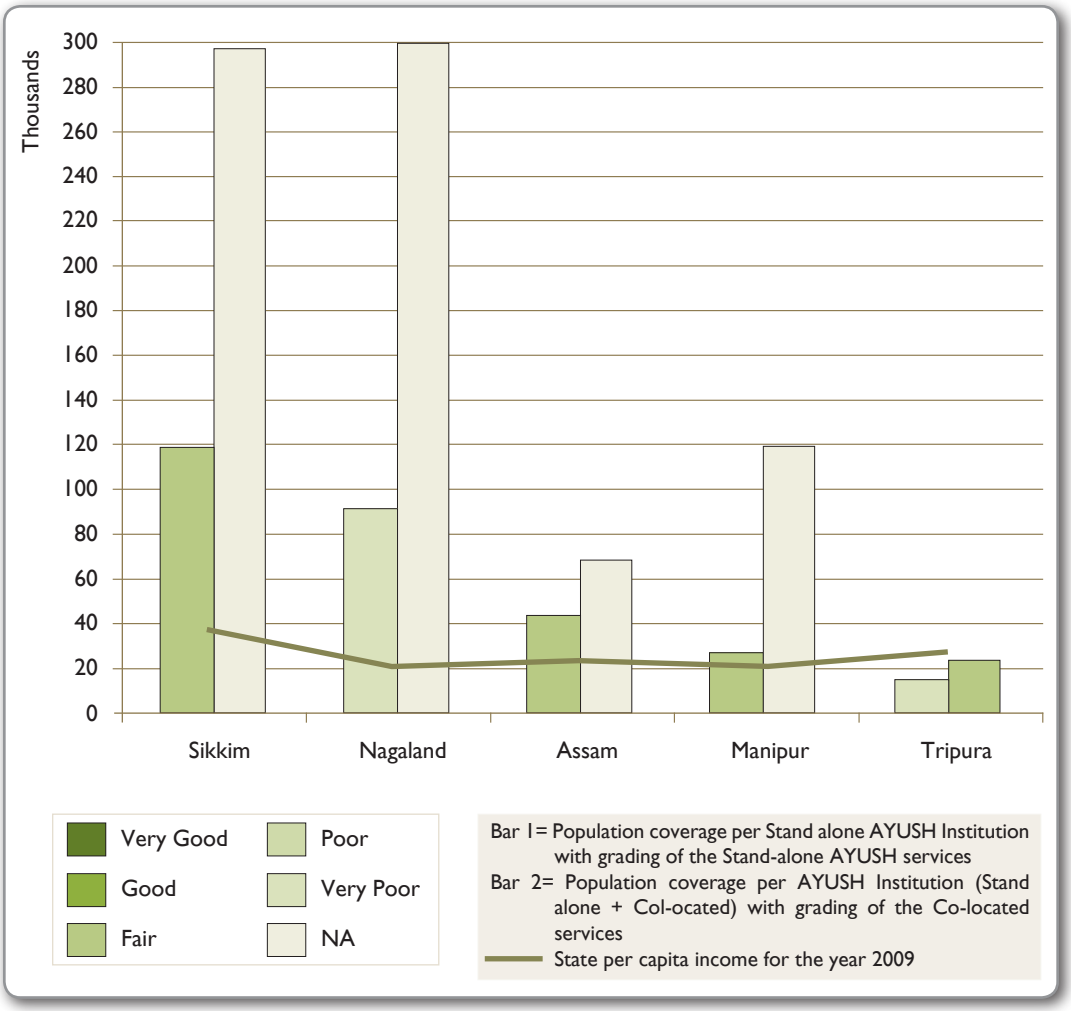


FIGURE 9: Quality Grading of AYUSH Services with Population Coverage Per Institution (AYUSH and Allopathic) by Economic Status: High Focus NE states

Sources of data:

1. State Directorates/Departments of Health for Allopathic Services (Stand-alone and co-located)
2. State AYUSH Directorates /AYUSH Officials under State Directorates/Departments of Health/State Health Societies for AYUSH service data (Standalone and co-located)
3. AYUSH in India 2007, Dept. of AYUSH, MoHFW, Government of India
4. RHS Bulletin 2009 (Statistics division, MoHFW, Government of India)
5. Projected Population for the year 2009, Registrar General of India
6. National Accounts Division, Ministry of Statistic and Programme Implementation, Government of India (For State Per Capita Income: Statewise)
7. Quality Grading Page no. 54, Section 4, Chapter II of this report.

relative to the other states, the lowest coverage being of Tripura and Assam. Tripura appears to compensate the low coverage by developing a large number of AYUSH services. Uttarakhand, Jammu & Kashmir, Manipur, Nagaland and Sikkim have

good Allopathic institution coverage, but three of them – Uttarakhand, Jammu & Kashmir, and Manipur – have a high vacancy of PHC Allopathic doctors (RHS, 2009), decreasing the value of the institutional coverage. These states are also the ones with high coverage by AYUSH services. The other two, Nagaland and Sikkim, have a high Allopathic institutional coverage and a surplus of Allopathic doctors at PHC level, and their AYUSH services were found to be negligible.

The High Focus states also tend to have a weak development of the private facilities, what exists primarily provides outdoor care. Often it is the public providers who largely provide 'private' services as well. Bihar is an exception in that it has a strong presence of private services of all levels since the public provider has also been minimally in place for several years.

The Non-High Focus States

Economic Situation of the States

Among the Non-High Focus states, Kerala and West Bengal are the outliers in terms of the level of coverage they have achieved at their level of economy relative to other states with much better economy but lower coverage (Figure 10). However, while Kerala has good coverage with quality, the quality of services in West Bengal, both stand-alone and co-located, received only a grade of 'fair'. Punjab and Tamil Nadu may be seen as having developed a coverage commensurate with their economic ranking, but the quality of Tamil Nadu's services was much better. Delhi has much lower coverage than others among the Non-High Focus states, even though it has the highest economic status, which does get reflected in the relatively good quality of services. The low coverage may be viewed as better than others at the same level, since it is largely an urban population with high density of population. Karnataka and Andhra Pradesh are the lower end of the economic gradient in this category of states and have the least coverage, and only 'fair' quality of services.

Thus, while economic status of the state does influence the development of its AYUSH services very substantially, other factors would be important determinants as well.

Health System Architecture Across States

Among the Non-High Focus states, Tamil Nadu and Kerala have well-developed services of both Allopath and AYUSH, but Tamil Nadu has a major differential in favour of Allopathy, while in Kerala, the number of just stand-alone institutions is

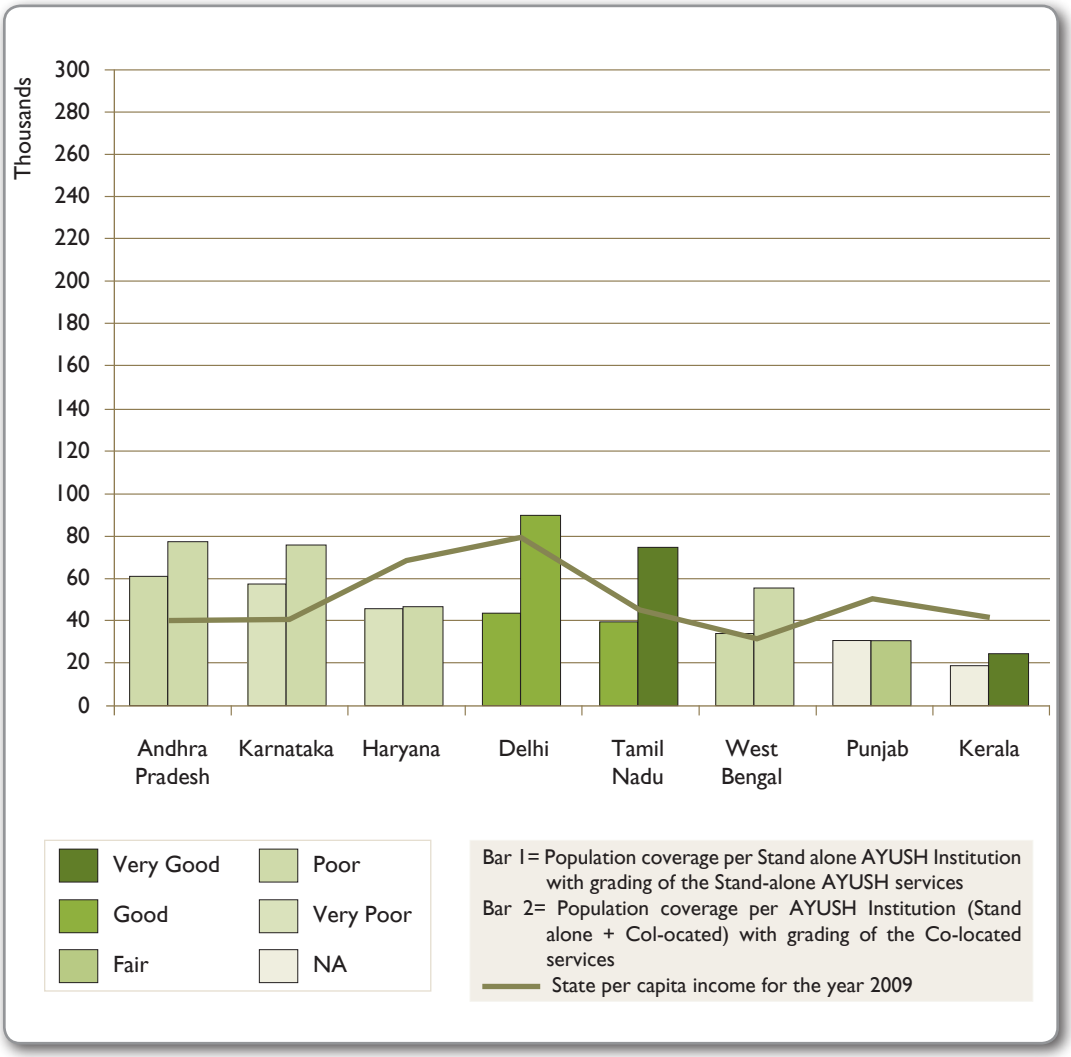


FIGURE 10: Quality Grading of AYUSH Services with Population Coverage Per Institution (AYUSH & Allopathic) by Economic Status: Non High Focus States

Sources of data:

1. State Directorates/Departments of Health for Allopathic Services (Stand-alone and co-located)
2. State AYUSH Directorates /AYUSH Officials under State Directorates/Departments of Health/State Health Societies for AYUSH service data (Standalone and co-located)
3. AYUSH in India 2007, Dept. of AYUSH, MoHFW, Government of India
4. RHS Bulletin 2009 (Statistics division, MoHFW, Government of India)
5. Projected Population for the year 2009, Registrar General of India
6. National Accounts Division, Ministry of Statistic and Programme Implementation, Government of India (For State Per Capita Income)
7. Quality Grading Page no. 54, Section 4, Chapter II of this report.

Local Private medicine shop within a Grocery Shop in a village, Tripura

Yoga training session in a private college in Tamil Nadu

A Private Yoga treatment centre in Puri district, Orissa

higher of the AYUSH services than the Allopathic. Karnataka, Delhi, Haryana and Andhra Pradesh have not developed either the Allopathic or the AYUSH services commensurate with their economic ranking.

Among the Non-High Focus states, Kerala stands out even more when we see that it has a surplus of Allopathic doctors at PHC level. Tamil Nadu and Delhi, with good Allopathic institutional coverage but lower than that of Kerala, also have a problem of high vacancies of Allopathic doctors. Yet, and despite a better economic situation, they have not created the AYUSH services as much as Kerala. What they do make up on, is the quality of services which is graded 'good' and 'very good'.

Punjab has good Allopathic coverage with relatively low doctor vacancies, and it has built up good high AYUSH coverage, but quality is lacking, being graded 'fair'. Haryana has lagged in both Allopathic and AYUSH coverage relative to its economic position, its lower Allopathic doctor vacancies and quality of its services is only 'fair'. In both these states, the private sector is also well established for both Allopathy and AYUSH services.

Karnataka and Andhra Pradesh show poor coverage of the population by facilities. However, the private sector is highly developed in these states. Andhra Pradesh's corporate sector has been the leader in medical care across the country, thereby indicating a state policy that supported the private sector and did not focus on growth or strengthening of services in the public system.

Services by Private Providers

Both the Allopathic and AYUSH services are also made available in large measure by the private sector, including the formally recognised providers and the informal providers. In most states, a large part of the outdoor care is availed of from the private sector, while indoor care of Allopathy is also used from the public hospitals, especially by the poor. We find significant variations across states; for instance, Orissa has developed Allopathic and AYUSH services to a greater level of coverage in the public system, with a minimal development of the Allopathic private sector. Karnataka, Haryana and Andhra Pradesh have, on the other hand, majorly allowed the Allopathic and AYUSH private sector to overtake the public sector, creating poor coverage and only a fair quality. Delhi and Tamil Nadu have a well developed private sector along with low coverage but very good quality of public services of both streams.

Impact on Utilisation of Public Facilities

This pattern of health service development is then reflected in the utilisation as well. The data on utilisation obtained at state level was compared along with the possible variables influencing the extent of utilisation. The bar chart below (Figure 11) gives the average OPD patient load.

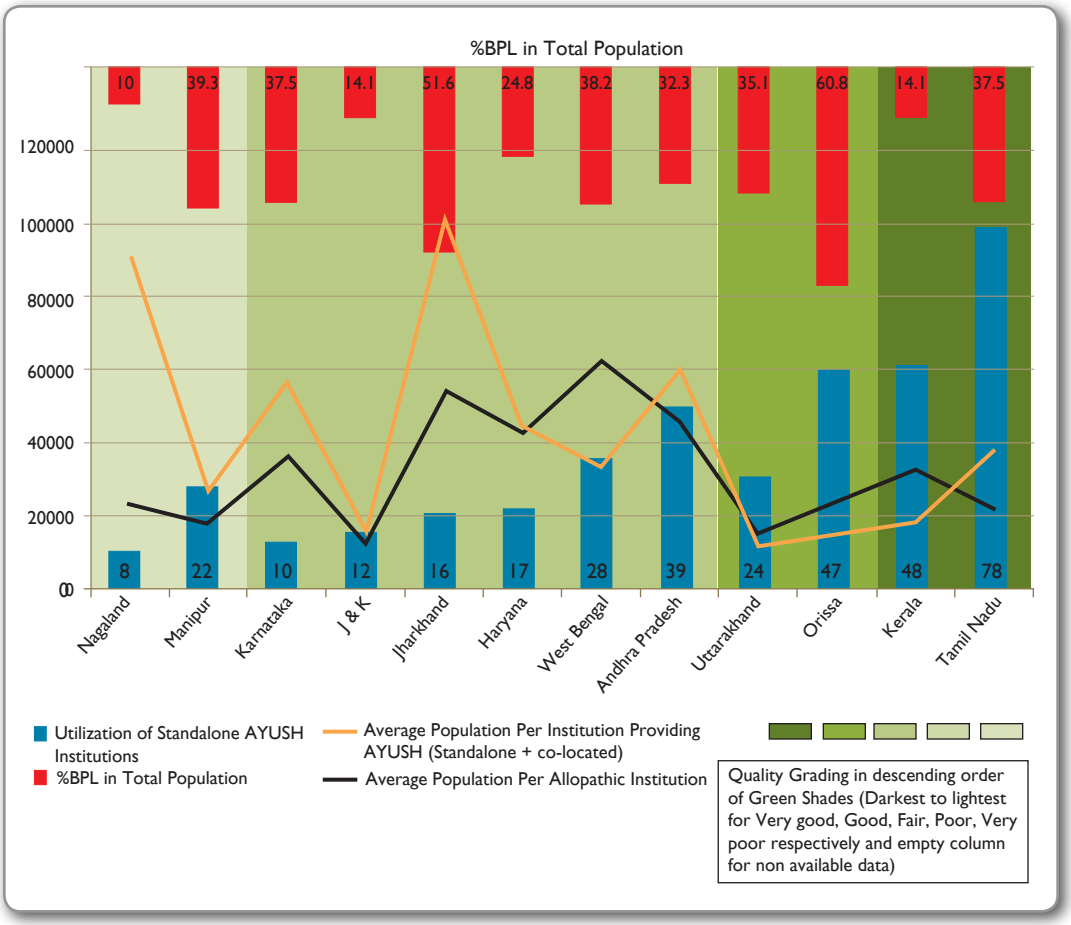


FIGURE 11: Average OPD Attendance as Patients Per Facility Per Day by the Quality of AYUSH Services, Coverage of AYUSH and Allopathic Services and % BPL in the State

Sources of data:

1. State Directorates/Departments of Health for Allopathic Services (Stand-alone and co-located)
2. State AYUSH Directorates /AYUSH Officials under State Directorates/Departments of Health/State Health Societies for AYUSH service data (Standalone and co-located)
3. AYUSH in India 2007, Dept. of AYUSH, MoHFW, Government of India
4. RHS Bulletin 2009 (Statistics division, MoHFW, Government of India)
5. Projected Population for the year 2009, Registrar General of India
6. BPL Population: Tendulkar Committee Report, Planning Commission, Nov, 2009, Government of India

Three tendencies seem to emerge clearly:

1. The quality of services encourages utilisation of the public services, as in Kerala and Tamil Nadu with 'very good' quality of services being the highest, in Orissa and Delhi with 'good' being in the next range, and in the states with 'fair' quality

the patient load is intermediate to low.

The apparently lower utilisation in Kerala compared to Tamil Nadu (45 and 75), is more an outcome of the higher coverage by services, being almost double (1:19 thousand and 1:39 thousand, respectively), so that the total utilisation is similar.

In the rest of the states, with 'fair' quality, the patient load is high where the coverage is poor, and low where the coverage is high, reflecting the fact that utilisation is relatively similar. Quality of services seems to make the major difference to utilisation rates.

2. Secondly, there is no link of utilisation rate of AYUSH services with the coverage of Allopathic services. For instance, Jammu & Kashmir, Uttarakhand and Tamil Nadu have similar coverage by Allopathic and AYUSH services, but utilisation rates are varied as per their quality gradient.
3. Thirdly, the proportion of BPL is not showing any relationship with utilisation behaviour. For instance, the lowest percentage of BPL is in Jammu & Kashmir, Kerala and Nagaland, but the utilisation is varied. Within the same quality grade, Tamil Nadu and Kerala have the same overall utilisation of AYUSH services but the BPL proportion in the population is widely varying (14% in Kerala and 37.5% in Tamil Nadu).

Factors Within the AYUSH Service System

Other than the factors of economic status and architecture of the overall health service system that influence development of AYUSH services, organisational structure and functioning internal to the AYUSH system must be analysed for delineating the requirements for strengthening of services. The roles of administrative, supervisory and technical structures are being examined here.

Administrative Structure

At the national and state levels, ISM&H was initially under the Department of Health, headed by the Secretary (H) administratively and the Director Health Services (who was the senior-most Allopathic specialist) for the technical dimensions. A separate Department of ISM&H came into being at the Centre in 1995, and in 2003 it was renamed as the Department of AYUSH, and is now upgraded to be headed by a Secretary.

Among the states, there has been large variation in the administrative structures for ISM&H (Table 18). Some states already had separate administrative control by the Director ISM&H even before 1995, for instance Orissa has had a separate Directorate since 1972. However, in most states it was under the Directorate of Health Services headed by Allopaths. In some, it was under the Director Medical Education, as in Uttar Pradesh.

In the 1990s, several states expanded the ISM&H services and strengthened the administrative structure to create full Directorates, and this task has been completed in other states after 2003, simultaneously with operationalisation of the NRHM.

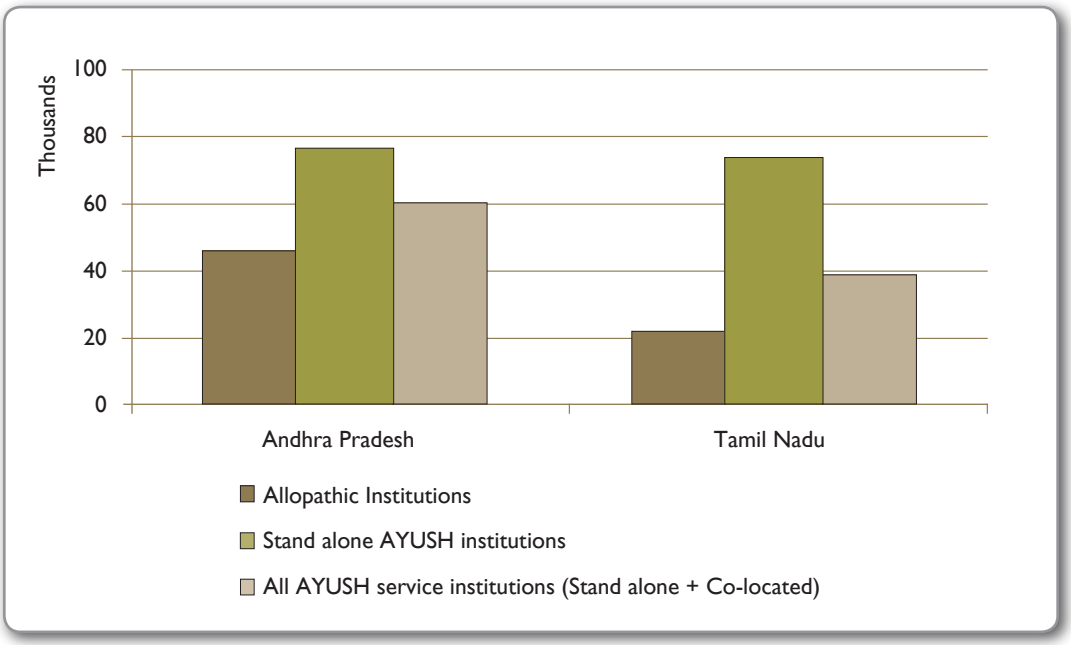


FIGURE 12: Average Population Coverage Per Institution in States with Independent Commissioner /Secretary for the Directorate of AYUSH

Sources of data:

1. State Directorates/Departments of Health for Allopathic Services (Stand-alone and co-located)
2. State AYUSH Directorates /AYUSH Officials under State Directorates/Departments of Health/State Health Societies for AYUSH service data (Standalone and co-located)
3. AYUSH in India 2007, Dept. of AYUSH, MoHFW, Government of India
4. RHS Bulletin 2009 (Statistics division, MoHFW, Government of India)
5. Projected Population for the year 2009, Registrar General of India

In 2007-08, the status in the 18 states studied showed three patterns:

i. Separate Directorate of ISM&H with an independent Commissioner/Secretary ISM&H

ii. Separate Directorate of ISM&H or AYUSH headed by a Director

iii. No separate Directorate, ISM&H services administratively under the Director of Health Services

i. Separate Directorate of ISM&H with an independent Commissioner/Secretary ISM&H: This category includes the administrators heading a separate Directorate of ISM&H, with additional or assistant directors heading the technical side – this was found in 2 of the states, Andhra Pradesh and Tamil Nadu.

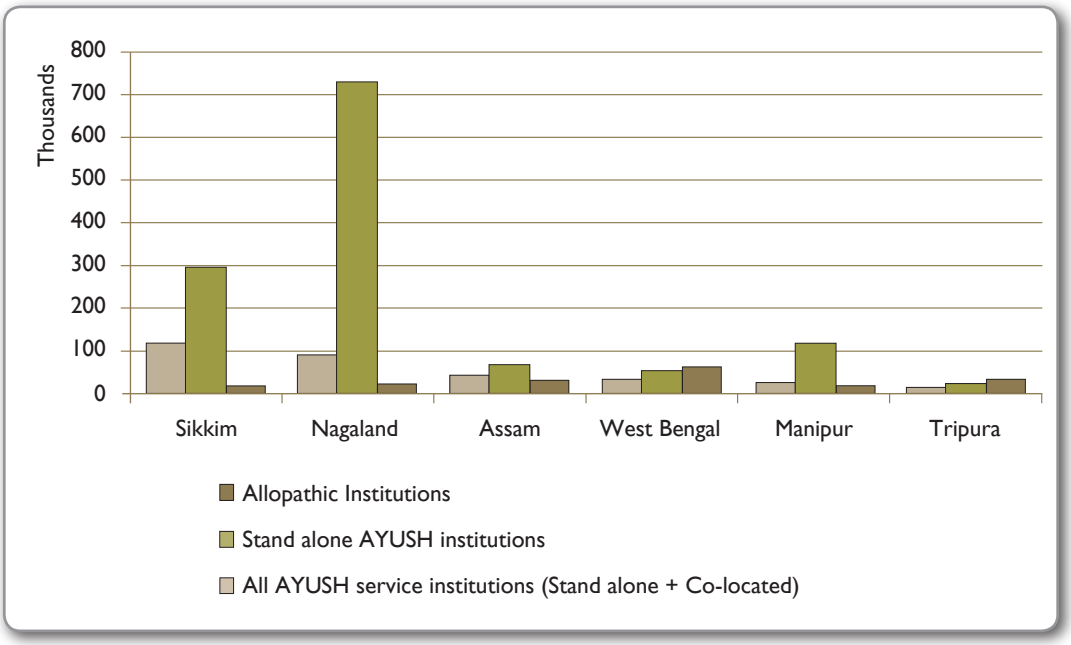


FIGURE 13: Average Population Coverage Per Institution with States having No Separate Directorate for AYUSH

Sources of data:

1. State Directorates/Departments of Health for Allopathic Services (Stand-alone and co-located)
2. State AYUSH Directorates /AYUSH Officials under State Directorates/Departments of Health/State Health Societies for AYUSH service data (Standalone and co-located)
3. AYUSH in India 2007, Dept. of AYUSH, MoHFW, Government of India
4. RHS Bulletin 2009 (Statistics division, MoHFW, Government of India)
5. Projected Population for the year 2009, Registrar General of India

ii. Separate Directorate of ISM&H or AYUSH headed by a Director: This category includes a technical AYUSH person, or in a few states persons from the civil services – this was the structure found in 10 of the 18 states. In most of the states, the Directorate was divided into ISM and Homeopathy, with a Deputy Director heading each section, but state variations abound. In Uttarakhand, there are separate units for ISM and Homeopathy. In Jammu & Kashmir, the Jammu division is headed by the Deputy Director (Ayurveda), and Kashmir division by the Deputy Director (Unani). In Kerala, there are separate Directorates for Ayurveda, for Homeopathy, and for Ayurvedic Medical Education (Figure 13).

iii. No separate Directorate, ISM&H services administratively under the Director of Health Services: This was found in West Bengal and in all the 5 North East states studied. In West Bengal, a Joint Secretary in the Department of Health and Family Welfare is the administrative head, with separate Directors for ISM and for Homeopathy, and a special officer for Unani. In Assam, a Deputy Director Ayurveda and another for Homeopathy work under the Director (Health Services), while the colleges of the two systems are under the Director (Medical Education). In Manipur, Nagaland and Tripura, the Deputy Director (AYUSH) reports to a lower rung of the administrative hierarchy in the Directorate (HS), a Joint Director. However, in Tripura, the senior-most AYUSH persons are the 'Branch Officer (Ayurveda)' and 'Branch Officer (Homeopathy)', not even designated as Deputy Director. In Sikkim, additional charge of AYUSH has been given to a Deputy Director in the Directorate (HS) and there is no separate administrative structure.

Comparing output in terms of coverage for the three patterns, there is a mixed picture, with no separate Directorate being associated with the lowest coverage and separate Directorate being associated with markedly better coverage (Figures 12, 13 and 14). However, comparing across the states with similar administrative structure at the top, it does not appear that independent charge of the Directorate by a senior administrator is an indication of the degree of importance given to the ISM&H in the state's health services (Figures 12, 13 and 14). In Tamil Nadu, the existing stand-alone and co-located AYUSH services (that were created prior to NRHM) are well developed, but coverage of institutions by population is low relative to Allopathic services and the MOs remain subordinate to the Allopaths. In Andhra Pradesh, the administrative control has translated into better coverage in relation to the Allopathic services, though coverage of both is amongst the lowest. Here, the policy approach

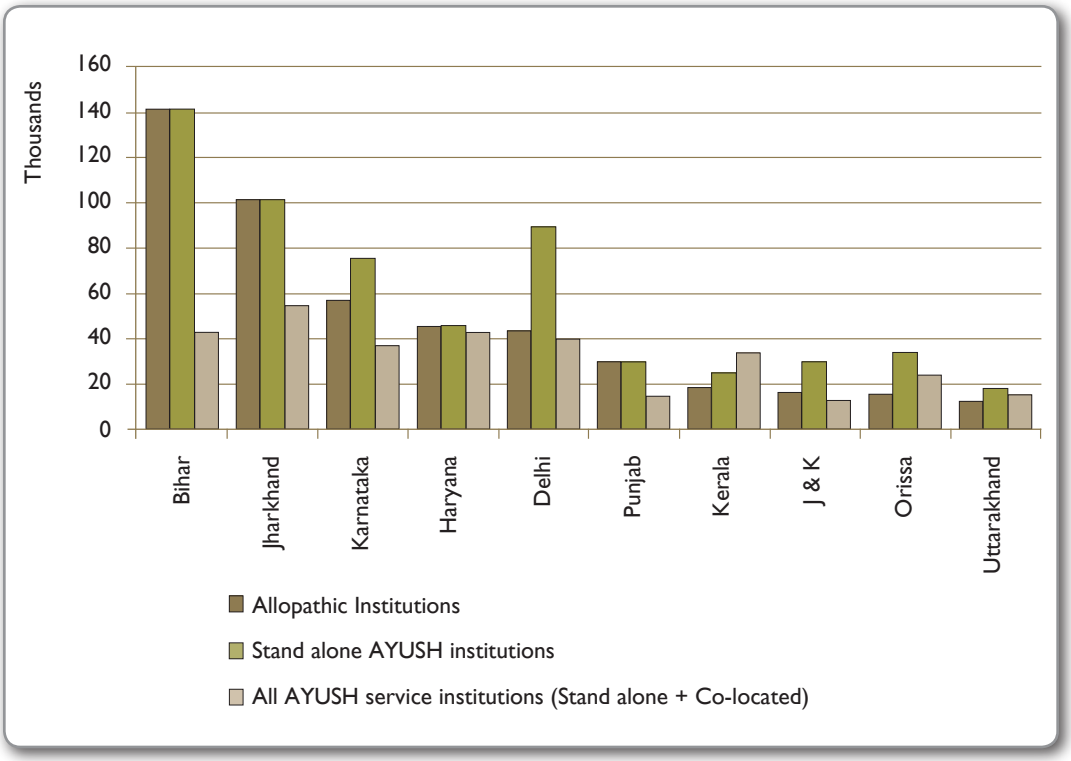


FIGURE 14: Average Population Coverage Per Institution with States having Separate Directorate for AYUSH

Sources of data:

1. State Directorates/Departments of Health for Allopathic Services (Stand-alone and co-located)
2. State AYUSH Directorates /AYUSH Officials under State Directorates/Departments of Health/State Health Societies for AYUSH service data (Standalone and co-located)
3. AYUSH in India 2007, Dept. of AYUSH, MoHFW, Government of India
4. RHS Bulletin 2009 (Statistics division, MoHFW, Government of India)
5. Projected Population for the year 2009, Registrar General of India

in favour of the private sector appears to be holding back public health services development as a whole.

Besides the administrative, technical control appears important, as can be seen in the case of Kerala where there is no separate Commissioner or Secretary, but three separate Directorates in the Department of Health & Family Welfare, that are associated with very well developed AYUSH services in the state. Kerala has, therefore, also decided not to co-locate services but to create more AYUSH dispensaries under the panchayats, 431 of them already in place. In West Bengal, with no independent

TABLE 18: Institutional Support Structure for AYUSH Services Across States

Parameters	Administrative Structure	Supervisory Structure	AYUSH Colleges		Research Institutions under the Central Councils (with OPD & IPD)	Medicinal Plants Board	Drug Production Units in the Public Sector	Drug Production Units in the Private Sector	Legal Provisions for Cross Practice
			Govt.	Pvt.					
High Focus States									
1. Jammu & Kashmir	Separate Directorate of AYUSH with Jammu and Kashmir Divisions headed by Deputy Director-Ayurveda and Unani, respectively	3 physician specialists in each Division and District AYUSH Officers for each District	0	3 (1A + 2U)	3 (Ayurveda, Unani and *Amchi* - one each)	SMPB (Directorate of ISM) exists	0	16	No, but AYUSH doctors are giving Allopathic medicines
2. Uttarakhand	Directorate of Ayurveda & Unani, and Directorate of Homeopathy	District Ayurveda, Unani and Homeopathy Officers	2 (A)	3 (2A, 1H)	1 (Ayurveda)	SMPB (CEO is Director of Herbal Research & Development Institute) active, with the Govt. promoting production of medicinal plants and even declaring it as a AYUSH state	3	153	No
3. Orissa	Separate Directorate of ISM&H since 1972 with one Deputy Director each for ISM and Homeopathy, respectively	At the District level 11 Ayurvedic and 9 Homeopathic Inspectorates cover the 30 districts	7 (3A + 4H)	5 (3A + 2H)	4 (2 Homeopathy, 1 Ayurveda, 1 Unani)	SMPB (Department of Forest & Environment) exists	3	192	No
4. Bihar	Separate Directorate of ISM with Director (*Desi Chikitsa*) and a Deputy Director each for Ayurveda, Unani and Homeopathy	District *Desi Chikitsa* Officers	7 (5A + 1U + 1H)	24 (6A + 3U + 15H)	3 (Ayurveda, Unani and Homeopathy - one each)	SMPB (Dept. of ISM) exists	0	272	No
5. Jharkhand	Separate Directorate with Director-AYUSH Additional Director and Deputy Directors for Ayurveda, Unani and Homeopathy	NA	5	3 (1A + 2H)	1 (Homeopathy)	SMPB (Dept. of H&FW) exists	0	0	No

High Focus North East States									
6. Assam	No separate Directorate; one Deputy Director-Ayurveda, and one Homeopathy, work under the Director of Health Services. Colleges of Homeopathy and Ayurveda are under the Director - Medical Education	Zonal Officers Ayurveda	4 (1A + 3H)	0	4 (1 Ayurveda, 2 Unani, 1 Homeopathy)	SMPB (Dept. of H&FW) exists	1	52	No
7. Manipur	No separate Directorate; Deputy Director-AYUSH under the division "Medical Care" which is one of the four divisions under the Directorate of Health and State Medicinal Plants Board directly under the Secretary /Commissioner (Health)	1 State AYUSH Officer and 1 Programme AYUSH Officer (CSS, NRHM, SMPB)	0	0	1 (Homeopathy)	SMPB (Medical Directorate) active; promotion of herbal gardens and plantation of medicinal plants and R &D	0	0	NA, but AYUSH doctors are doing deliveries
8. Nagaland	No separate Directorate, Deputy Director-AYUSH under the principal Director (H&FW)	Programme Officers –AYUSH	0	0	1 (Homeopathy)	SMPB (Directorate of Health Services) active; with grants to many organisations for plant schemes	0	34	No
9. Sikkim	No separate administrative set- up; work of AYUSH, including under NRHM, being looked after by a Deputy Director (In-charge AYUSH)	-	0	0	1 (Homeopathy)	SMPB (Dept. of Forest, Environment and Wildlife) exists	0	3	No
10. Tripura	No separate Directorate; a Branch Officer-Ayurveda and Branch Officer-Homeopathy function under the Director (Health Services)	DDO-MO (Ayurveda), DDO-MO (Homeopathy	0	0	1 (Homeopathy)	SMPB (Forest Department) exists	0	0	No

Non-High Focus States									
11. Andhra Pradesh	Separate Department Headed by Commissioner ISM &H assisted by Additional Directors one each for Ayurveda, Homeopathy and Unani	Regional Deputy Directors	9 (3A + 1U + 1N + 4H)	4 (2A + 1U + 1H)	7 (2 Ayurveda, 1 Unani, 4 Homeopathy)	AP Medicinal and Aromatic Plants Board (Dept. of Health, Medical & Family Welfare) exists	3	4	No
12. Haryana	Separate Directorate under the Principal Secretary (Health & AYUSH Department). Director (AYUSH) assisted by a Deputy Director (Ayurveda)	District Ayurvedic Officers	1 (1A)	6 (5A + 1H)	1 (Homeopathy)	SMPB (Department of Forest) exists	0	394	No
13. Punjab	Separate Ayurveda and Homeopathy Directorate with Director -Ayurveda assisted by Jt. Director; and Director –Homeopathy assisted by Asst. Director	District Ayurvedic and Unani Officers & District Homeopathy Medical Officers	1 (1A)	15 (11A + 4H)	1 (Ayurveda)	Exists (ISM & Horticulture)	1	340	Yes
14. West Bengal	Jt. Secretary (AUH Branch) under the Secretary (Dept. of H&FW). Separate Directors of Homeopathy & Ayurveda and Special Officer Unani function under the AUH Branch. Also Director (ISM Drug Control), Director (State Pharmacopoeial Lab & Pharmacy for Indian Medicine) and Director (SMPB)	NA	6 (1A +5 H)	10 (1A +1U + 8H)	5 (1 Ayurveda, 1 Unani, 3 Homeopathy)	SMPB (AUH Branch, H&FW) exists	1	707	No
15. Karnataka	Separate Directorate ISM&H with a Director assisted by Deputy Directors each for Ayurveda, Unani and Homeopathy, and physician Grade I Yoga & Naturopathy	Deputy Director AYUSH and District AYUSH officers	5 (3A +1 U+ 1H)	67 (50A + 3U + 3N + 11H)	4 (2 Ayurveda, 1 Unani, 1 Homeopathy)	Karnataka Medicinal Plants Authority (Kampa) (Conservator of Forest)	1	158	No, but AYUSH doctors are giving Allopathic medicines

16. Tamil Nadu	Separate Commissionerate of ISM&H. Special Commissioner (ISM &H) assisted by Jt. Director	Assistant Director and District Siddha Medical Officers	6 (1U + 2S + 3H)	20	8 (2 Ayurveda, 3 Siddha, 1 Unani, 2 Homeopathy)	Active (ISM & Horticulture)	11	560	No
17. Kerala	Separate Directorate ISM & Directorate-Homeopathy, as well as an Ayurvedic Medical Education Directorate	District Medical Officer (ISM & Homeopathy)	5 (3A + 2H)	15 (11A + 1S + 3H)	4 (2 Ayurveda, 1 Siddha, 1 Homeopathy)	The Board is functioning with administrative and technical support of the various committees which have been carved out of the key Departments The Managing Director of the SMPB is also the CEO of pharmaceutical corporation (Indian Medicine) Kerala "*Oushadhi*" under the direct control of Kerala Govt. Organizations .	2	1,146	No
18. Delhi	Separate Directorate of ISM&H under the Dept. of H&FW headed by Project Officer/ Director ISM&H. Assisted by Deputy Director-ISM and	Assistant Director-ISM, Homeopathy& Unani supervise the respective Medical Officers	4 (1A +1 U+ 2H)	1 (1U)	5 (1 Ayurveda, 2 Unani, 2 Homeopathy)	SMPB (Directorate of ISM &H) exists	0	67	No

Sources of Data:

1. State AYUSH Directorates /AYUSH Officials under State Directorates/Departments of Health/State Health Societies for AYUSH service data (Standalone and co-located),

2. District Officials of AYUSH and District Health Societies under NRHM in the surveyed Districts

3. AYUSH in India 2007, Dept. of AYUSH, MOH&FW, GOI

4. National Medicinal plant Board official website: www.nmpb.nic.in

support structures, coverage of AYUSH services is high due to AYUSH dispensaries being run by panchayats.

The case of Bihar and Jharkhand is exceptional in that there are separate directorates but hardly any services. Bihar has several colleges for AYUSH, but Jharkhand has fewer colleges and very sparse services. The directorates in these two states seem to have been created to satisfy the recommendations of the centre rather than because of a perceived need for greater attention to AYUSH by the state health administrators.

Supervisory Structure

Most states have District Officers for ISM, either to supervise the functioning of services of all systems or separate officers for ISM (Ayurveda & Unani) and for Homeopathy (Table 18). These senior AYUSH doctors have separate offices from the general district health services. In most states, the District Officers have extremely poor infrastructure, no vehicle and inadequate transport allowance at their disposal. Thereby, there is hardly any supervision happening; these officers tend to act merely as conveyors of orders on paper from higher authorities to the MOs in their district, and occasionally to convey the requirements or complaints of the MOs to the higher authorities. In several states we learnt of a high prevalence of vacancies at this supervisory level.

In West Bengal, where a large number of dispensaries of AYUSH systems, mainly Homeopathy, are run by the panchayat department, functionaries complained that there is no technical supervision for them at all. However, supervision is relatively better in the Non-High Focus states and less vacancies for Allopathic and AYUSH doctors' posts.

Among the groups of states categorised by the NRHM as High Focus and Non-High Focus states, there is clearly also a historical basis for the level of development of AYUSH services. Among the High Focus states, Bihar and Jharkhand are lagging in all spheres of socio-economic development, and also in AYUSH services. The North East states too have lagged in development of infrastructure and services of all kinds, not only AYUSH. Among them, the states that have done better in AYUSH (Tripura, Manipur and Assam) have also done better in developing Allopathic services. However, this does not hold true in the Non-High Focus states. The financial situation of the states is clearly one of the factors in creating the differentials in coverage and quality, and technical control as well as supervisory support are other major determinants.

AYUSH Medicine Production Units

The states with better-developed AYUSH services also tend to have built up a greater capacity for production of medicines, both in the public and private sector, which could be mutually reinforcing (Table 18). Uttarakhand, Orissa, Tamil Nadu and Kerala have 2-11 units in the public sector, with a much larger number in the private (153, 192, 506, 1,146, respectively). Jammu & Kashmir, Jharkhand and the North East states, with their rich herbal resources, do not have any production unit for herbal medicines run by the government and very few or none by the private enterprise.

Tripura has no production units, and West Bengal has one government-run unit and over 700 in the private sector.

Research Councils, Institutes and Colleges

Other than the central councils for research in Ayurveda, Siddha, Unani, Yoga and Naturopathy, the states have research institutions (units) under these central councils. These units also run OPD and/or IPD services, with specialised treatment for specific diseases. 1–5 such units exist in each state, covering Ayurveda in most states, Unani in Andhra Pradesh, Amchi in Jammu & Kashmir, and Siddha in Tamil Nadu. Sikkim has Homeopathy and only Nagaland was found to have no such unit. They combine research with service delivery, thereby also increasing the technical potential of AYUSH, but often they have no direct link with the general service institutions of AYUSH in the state in which they are located.

KEY FINDINGS I

AYUSH Service Development Relative to the State's Economic Condition and Development of Allopathic Public Services

The High Focus states have low per capita state income and tend to have poorer functioning of the public facilities of both Allopathic and AYUSH systems and number of facilities, and thereby the coverage varies.

Both coverage and quality of services are extremely poor in Bihar and Jharkhand.

Orissa stands out in contrast as a state with poor average state per capita incomes and yet fairly good coverage of Allopathic services and well-developed AYUSH facilities relative to other states. Their functioning is of 'good' grade, i.e., better than the other states in this economic category.

Population coverage by facilities is better in the hill states of Jammu & Kashmir and Uttarakhand, where not only is the state per capita income somewhat higher, but the population norm for facilities is also higher. They also have special budgetary support from the centre, especially Jammu & Kashmir. However, physical access still remains a problem because of the difficulties of terrain and transport. Quality issues primarily relate to HR shortages.

In the North Eastern states, the coverage of Allopathic institutions is good, but AYUSH service development is varied. Tripura has good coverage but poor quality, Manipur and Assam have low stand-alone AYUSH coverage but have made it up by co-location. Nagaland and Sikkim have lagged in development of both stand-alone and co-located AYUSH services.

Among the Non-High Focus states, West Bengal, which is not a High Focus state for the NRHM, falls within the state per capita income and proportion of Below Poverty Line of the latter. Its coverage for Allopathic services in the public system is very low by population norms, but the AYUSH services are relatively high compared to other states. The functioning of both services is average.

Punjab and Karnataka have better developed service coverage in the public system, but functional quality is unsatisfactory relative to the infrastructure and other inputs.

Andhra Pradesh and Haryana have low coverage and quality in the public system of both Allopathy and AYUSH services, not commensurate with their economic situation.

Delhi too is low on coverage of both Allopathy and AYUSH services, but is better on quality. Tamil Nadu is better on Allopathic coverage and quality, but lags on AYUSH coverage, though with good quality of what exists.

Kerala stands out with extensive coverage and very good quality of both Allopathic and AYUSH services.

KEY FINDINGS 2

The Determinants of AYUSH Service Development

In the final analysis, we find that the coverage and quality of AYUSH services in the states is determined by several factors, some of which are external, and others internal to the AYUSH service system.

The External Factors

1. Socio-political context – the cultural preferences, determined by historical processes as well as the political orientation of the state governments, have influenced development of AYUSH services.
2. The economic situation of the state in terms of average state per capita income is a strong influence, but it is not a linear relationship. Political and administrative action has been able to overcome the financial constraint in some states with a relatively low economic position, and in others these same factors did not prioritise development of AYUSH services despite relatively good economic position.
3. The development of AYUSH services reflects the importance given to health services in most states, since we find a similar relative order of institutional coverage and quality for Allopathic and AYUSH services. The overall architecture of the health services has been an outcome of the state policies regarding development of the public versus private health care services of both Allopathic and AYUSH services. For instance, Orissa has relatively

good public services and low development of the private sector, while Bihar has poor public services and high private sector development. Andhra Pradesh too has high private sector development and poorly developed public services. Delhi and Tamil Nadu have very good quality services but low coverage in the public sector of both streams, with high private sector development.

4. However, the states do reflect a variety of ways in which the AYUSH services have been influenced by the presence or absence of Allopathic services in the public and private sector. For instance, in the absence of Allopathic doctors in the institutions with co-located services, the AYUSH doctors are required to prescribe Allopathic medicines as well. Facilities such as diagnostics and electric generators became available to the co-located AYUSH services where PHCs, CHCs and DH have good infrastructure.

The Internal Factors

1. Independent administrative leadership is important for development of AYUSH services, but not enough by itself.
2. Technical leadership and supervisory support structures have been crucial in building coverage and quality of services. Separate Directorates for AYUSH have produced the best coverage and quality at any level of economic development.
3. Educational institutions in the private sector producing more AYUSH doctors in the state do not necessarily lead to better public services.

KEY FINDINGS 3

Utilisation of AYUSH Services in Relation to Health Service Development

Level of utilisation of AYUSH services in the public system across states was largely dependent on the quality of AYUSH services. It was not markedly influenced by level of coverage of Allopathic institutions.

III

Knowledge, Practices and Perceptions of the Health Service Providers and the Community

Systems of health and healing, their knowledge base, their practices in the community, the provider's social base and the hierarchy between various categories among them, their interaction with the patients and communities, the norms and ethics they espouse, as well as the organisational, financing and regulatory structures, all come together to create a health system. While Chapter II dealt with this aspect more in terms of formal structure of services, this chapter focuses on the knowledge base, perceptions and practices of the formal health care providers of AYUSH systems, and most importantly, of the community ***in the study districts across 18 states***. The findings are representative of the districts and may not necessarily reflect the state's picture owing to district specific local variations; but for the convenience of the readers, the state names are used. The names of the specific districts surveyed are listed in Chapter I.

This chapter is divided into three sections:

Section 1 deals with the practices and perceptions of the Health Service Providers (including AYUSH practitioners, Allopathic doctors, ASHAs, ANMs and paramedics) regarding AYUSH and LHT along with their suggestions for improvement based on the interviews of the providers in the study districts. A few interviews of the informal providers (non-institutionally qualified practitioners) who were providing health services with good community acceptance were included.

Section 2 deals with the community's knowledge, perception and utilisation of AYUSH and LHT, based on household and the exit patients' interviews as well as the focus group discussions. The utilisation of AYUSH by the households, their reasons for doing so, and the conditions for which AYUSH is used, along with their perceptions about its limitations, are discussed in detail. The awareness and use of medicinal plants, food items with medicinal properties, home remedies for mother and child care, for conditions of malnutrition, convalescence and various health problems by the community, are also presented here.

Section 3 deals with validation of the above knowledge and practices of the community regarding AYUSH and LHT, and the providers' prescribing practices based on principles of their system. This section links the community's knowledge and LHT with the codified knowledge of AYUSH systems and highlights the contemporary relevance of knowledge of AYUSH. It explores, to some extent, the possibility of validating practices of AYUSH and knowledge of LHT by the fundamental principles and parameters of these systems of health care instead of putting efforts to fit in the validation standards set by the modern medicine parameters.

SECTION I
HEALTH SERVICE PROVIDERS: PRACTICES AND PERCEPTIONS REGARDING AYUSH AND LHT

The survey covered interviews with 182 ASHAs, 38 AYUSH paramedics [including 25 pharmacists (dispensers and compounders)], 5 dais, 83 Allopathic paramedics (including 50 ANMs, 19 pharmacists and rest as Multi-Purpose Workers and Staff Nurses), 159 AYUSH doctors (including doctors from all AYUSH systems except *Amchi*) and 94 Allopathic doctors, **in the selected districts across the 18 states**. Other than these formal health care providers, a few informal health care providers including the Traditional Health Practitioners (THP), Faith Healers (FH) and Folk Healers (FoH) were also profiled in few districts.

RATIONALITY OF PRESCRIBING PRACTICES OF AYUSH AND ALLOPATHIC DOCTORS

During the exit interviews with patients at the facilities, the prescriptions were noted or photocopied, and an analysis of these prescriptions was undertaken during the analysis phase. The prescriptions were available for 13 out of 18 districts (states) of Homeopathy, Ayurveda, Siddha, and of Unani systems, as per the availability of AYUSH doctors. The remaining 5 districts had unclear prescriptions mentioning use of "AYUSH medicines" without their names, e.g., Haryana, Andhra Pradesh, Assam and Jharkhand, because of the methodological error in recording them by the investigators of these states. Prescriptions from Kathua District in Jammu & Kashmir clearly showed use of Allopathic medicines by the AYUSH practitioners.

Out of the 13 states for which validation was done, Homeopathic prescriptions were in highest number of states (all except Karnataka, i.e., in 12 states), followed by Ayurveda (in 8 states), and Siddha and Unani each in Tamil Nadu and Delhi, respectively. But, the bulk of the prescriptions were of Ayurveda, followed by Homeopathy and Siddha. 7 states, namely Bihar, Delhi, Kerala, Orissa, Punjab, Tripura and Uttarakhand, had both Ayurveda and Homeopathic prescriptions, whereas the North East states like Manipur, Sikkim and Nagaland, along with West Bengal, had only Homeopathic practitioners and their prescriptions for validation.

Validation by Their Own System

The validation exercise undertaken for the AYUSH medicines using principles of the system (as detailed in Chapter I on Methodology) verified that in general over 75% of the prescriptions used AYUSH medicines as per their system's rationale. (Details are given in Section 3 of this Chapter.)

i. In the stand-alone facilities which were surveyed in 15 states, in as many as 12 states they prescribed their system's treatment. "By their system's treatment", here it is meant that they used their own drugs (packaged Ayurveda, Siddha, Homeopathy and Unani drugs supplied to their facilities). These drugs were generally found within the AYUSH references as per the methodology of validation with a smaller percentage outside the references (Tables 3, 4, 5 and 6). These included states like Bihar, Delhi, Jharkhand, Karnataka, Kerala, Nagaland, Orissa, Punjab, Tamil Nadu, Tripura, Uttarakhand and West Bengal. The remaining 3 states - Andhra Pradesh, Haryana and Jammu & Kashmir, also recorded use of AYUSH medicines in the stand-alone facilities but specific names were not recorded, hence validation could not be done for these states.

ii. In the co-located services which were found in 15 states, the prescriptions showed that in Jammu & Kashmir they used only Allopathic treatment. In 8 states - Uttarakhand, Orissa, Bihar, Assam, Manipur, Nagaland, Sikkim and Karnataka, they generally used their own system's treatment but reported that **they also used Allopathy 'when their own medicines were not available or in emergency cases'. In 6 states, they reported exclusively using their own system's medicines.** These states were Delhi, Punjab, Tamil Nadu, Tripura, West Bengal and Jharkhand.

iii. The diagnosis/presenting symptoms in the prescriptions show that the AYUSH doctors in all states were using their own system. Sometimes they also used modern methods of diagnosis in combination. They also prescribed modern diagnostic laboratory tests along with traditional methods of pulse diagnosis, and asked questions about signs and symptoms.

iv. In 3 states they used exclusively their own system's terminology for diagnosis - Tamil Nadu, Kerala and Punjab. In 7 states, they used a mix of their traditional and the modern terminology - Delhi, Karnataka, West Bengal, Haryana, Andhra Pradesh, Tripura, and Orissa. In 8 states, Jammu & Kashmir, Uttarakhand, Bihar, Jharkhand, Assam, Manipur, Nagaland and Sikkim - they used only modern terminology for diagnosis. The use of diagnostic terms like "*Sandhivata*", "*Swasaroga*" and "*Jwara*" were generally used by Ayurveda practitioners, though a

lot of them also used terms like 'osteoarthritis', 'bronchitis', 'fever', etc., showing a mixed usage of both AYUSH and Allopathic terms. Homeopathic practitioners used exclusively Allopathic terminologies of diagnosis.

v. In 6 states, use of drugless therapy was reported by AYUSH doctors, including 'pathya', i.e., dietary regimens, fomentation, Yoga, Naturopathy, Acupressure and meditation, but in the remaining states this was not apparently found.

vi. Raw herbs were rarely used by the doctors in the public system; only 6 out of the 159 AYUSH doctors interviewed reporting some use.

Thus, AYUSH doctors were found to be generally prescribing AYUSH medicines available in packaged form with the help of both their systems and modern medicine diagnostic tools, but almost negligible use of raw herbs.

The detailed prescriptions with validation are annexed for two states (Tamil Nadu and Orissa) for reference (Annexure 2).

Rationality by Universal Criteria

Since they were **OPD prescriptions,** we also chose two common situations for identifying rational and irrational practices of the doctors:

One was to consider any injections being prescribed at the OPD level as irrational (World Health Organization, 1993).

The second was to analyse the treatment for diarrhoeal disease for prescribing of oral rehydration, anti-motility drugs and antibiotics by the Allopaths and Oral Rehydration Solutions (ORS) plus validation of the AYUSH drugs by the AYUSH system of the practitioner.

FINDINGS

From a total of 745 OPD patients of the AYUSH system, only 1 was prescribed an injection; while 140 of the 548 patients treated by the Allopaths were prescribed injections, i.e., 25.5% (Table 19).

Among the patients with diarrhoeal disease, 10 of the 37 patients treated by Allopathy were given prescriptions that contained oral rehydration. Only 1 in 21 patients treated by the AYUSH systems was prescribed ORS. Dietary advice is habitually given verbally

in the Indian context, hence verbal instructions may also have been given for ORS by the doctors of both streams. All AYUSH doctors prescribed medicines of their system. The Allopaths were found to be prescribing antibiotics, and even injectables for diarrhoea (Annexure 4).

TABLE 19: Injections and Treatment of Diarrhoea: Pattern of AYUSH and Allopathic Prescriptions in OPD

State	No. of Injections Prescribed in OPD (All Cases)		Prescription of Medicines for Diarrhoea		Prescription of Oral Rehydration for Diarrhoea	
	AYUSH	Allopathic	AYUSH	Allopathic	AYUSH	Allopathic
High Focus States						
1. Jammu & Kashmir	0	3/40	NA [1]	Allopathic medicines with antibiotics.	NA	1/3
2. Uttara-khand	1/44 (Piles case)	4/30	AYUSH medicines	Allopathic medicines with antibiotics, injection in 1/2 of the cases	0/2	1/2
3. Orissa	0/42	9/38	AYUSH medicines	Allopathic medicines with antibiotics	0/5	2/2
4. Bihar	0/22	17/52	No case reported	Allopathic medicines	0	0/2
5. Jharkhand	0/6	12/57	AYUSH medicines	Allopathic medicines, injection in one case	0/1	1/6
High Focus North East States						
6. Assam	0/28	7/22	AYUSH medicines	Allopathic medicines	0	0/1
7. Manipur	0/34	0/7	AYUSH medicines	No case reported	0/1	0
8. Nagaland	0/6	0/2	No case reported	No case reported	0	0
9. Sikkim	0/10	0	No case reported	No case reported	0	0
10. Tripura	0/62	8/76	AYUSH medicines	Allopathic medicines	0/1	0/1
Non-High Focus States						
11. Andhra Pradesh	0/27	8/33	AYUSH medicines	Allopathic medicines with IV glucose	1/1	4/4
12. Haryana	0/102	3/25	AYUSH medicines	Allopathic medicines	0/4	0 /1

13. Punjab	0/51	0	No case reported	No case reported	0	0
14. West Bengal	0/40	3/58	No case reported	No case reported	0	1/6
15. Karnataka	0/41	11/28	AYUSH medicines	Allopathic medicines	0/1	0/3
16. Tamil Nadu	0/80	53/69	AYUSH medicines	Allopathic medicines	0/4	0/4
17. Kerala	0/100	NA[2]	NA	No case reported	0	NA[2]
18. Delhi	0/49	2/12	AYUSH medicines	Allopathic medicines	0/1	0/2
Total	**1/745**	**140/548**	**-**	**-**	**1/21**	**10/37**

[1] J&K did not have any AYUSH prescription as AYUSH doctors prescribed Allopathic medicines.

[2] Kerala does not have co-location; Patients were interviewed only at the Standalone AYUSH institutions.

PERCEPTIONS OF THE HEALTH SERVICE PROVIDERS REGARDING AYUSH AND LHT

Allopathic Doctors

The Allopathic doctors were generally quite supportive of AYUSH systems. 70% (66 of 94) perceived them as useful, while the rest thought they were redundant and unscientific (Table 20). Over half the Allopaths, 55%, perceived value in home remedies and suggested that such practices must be documented, scientifically studied and revived. They prescribe home remedies to patients sometimes, but termed other LHT as harmful (FH, FoH, etc.).

Auxiliary Nurse Midwives

All the ANMs interviewed across the states were unaware of public AYUSH services for referring cases, except Tamil Nadu where 25% of the VHNs were trained in ISM, had medicines in their kit and were also referring cases to public AYUSH facilities. However, 52% of the ANMs admitted use of home remedies in minor ailments for themselves and families.

Accredited Social Health Activists

The ASHAs had little awareness of the AYUSH public facilities in the area, except for Orissa and Kerala where the awareness was 60% and 100%, respectively. This was despite them knowing the 1-2 AYUSH remedies they had in their kit, e.g., Ayurvedic

Interviews with ASHAs in Sikkim

ASHAs in Tripura

drug for anaemia (Table 20). *Punarnavadi Mandoor* was among a few mentioned in their kit in Orissa and Tamil Nadu.

However, 60% of them did know of local home remedies. Some of them used these remedies in their own families, but did not prescribe them to patients, as in Uttarakhand. Others prescribed them to patients in the community, as in Bihar, Orissa and Tamil Nadu. Hence, in general, ASHAs were unaware of AYUSH services but, to some extent, were using home remedies for their families and sometimes for patients.

Almost all ASHAs (90-100%) were aware of medicinal plants in 12 states, 70% in 2 states, 50-65% in 3 states, and 10% in Kerala; though they were of the opinion that proper use of the medicinal plants is not known to them (Figure 18 and Table 20). ASHAs suggested that generating more awareness on AYUSH and LHT would be useful for the community.

AYUSH Doctors

In all the states, the AYUSH providers showed keen interest in strengthening services of their own system. The details of their perceptions are listed briefly in Table 20.

Around 80% of AYUSH doctors found value in home remedies and prescribed them (Table 20). The doctors also gave examples of the prevalent forms of LHT in the area, e.g., taking oil massage daily, administration of breast milk for eye diseases, and going to a traditional healer for snake bites, jaundice, etc.

Almost 30% saw value in the work of the THPs. They suggested more research in the LHT and training of the THPs to improve their practices specially related to snake bites, jaundice, allergies, etc. Largely, AYUSH doctors were found to be de-linked with the LHT, but believed in the efficacy of their own systems and were prescribing packaged medicines supplied to them at the facilities.

Problems Faced by the AYUSH Doctors

In general, the AYUSH doctors had problems in delivering services owing to lack of support from the health administration, and poor infrastructure and support structures, as well as the medicine supplies.

TABLE 20: Perception of the Providers on AYUSH & LHT

State	Views about AYUSH		Views about LHT		
	Allopathic Doctors	ASHA/ANM	Allopathic Doctors	AYUSH Doctors	ASHA/ANM
High Focus States					
1. Jammu & Kashmir	Recognised by doctors (4/6).	ASHAs not aware of AYUSH (5/5). No ANMs interviewed.	Affirmative for home remedies saying that the patients often use them at home (4/6).	Doctors advise herbs and home remedies to the patients (5/5) and also valued the knowledge of Traditional Health Practitioners (1/5).	ASHAs use and advice home remedies to the community for common ailments (5/5). No ANMs interviewed.
2. Uttara-khand	Recognised by doctors, especially naming Ayurveda and Homeopathy as useful (4/5).	ASHAs not aware of AYUSH services.(9/9) ANMs not aware of AYUSH services (5/5).	Doctors advised home remedies and believed in the usefulness of the herbs (3/5).	Doctors saw value in LHT, home remedies and folk healers (3/10).	The ASHAs (9/9) and ANMs used local herbal medicines for their family and self, and named several but did not advise patients (3/5).
3. Orissa	Recognised the usefulness of AYUSH and said that they are good for many diseases (4/7).	ASHA kits had "*Punarnavadi Mandoor*" an Ayurvedic medicine for anaemia, which they were using and found useful, not much aware of AYUSH services in the area (6/10). No ANMs interviewed.	Doctors were prescribing home remedies to their patients. Most of them termed folk and traditional practitioners as harmful (5/7).	Except for the use of home remedies by the doctors (8/8) and of raw herbs by a few (2/8), none had much idea about LHT.	ASHAs advising home remedies to patients and most of them were aware of the Folk Healers in the area (6/10). No ANMs interviewed.
4. Bihar	Recognised the usefulness of Ayurveda, Yoga and Naturopathy (3/6).	ASHAs not aware of AYUSH (7/8). ANMs non responsive (0/9).	All doctors advising home remedies to the patients, and think that it is useful (6/6).	Except for the use of home remedies by the doctor, no idea about LHT (1/1).	ASHAs advising home remedies and aware of the presence of Folk and Faith Healers in the area (6/8). ANMs aware of medicinal plants and use home remedies.(4/9)
5. Jhar-khand	Termed them useful at times (5/8).	ASHAs not aware of AYUSH (0/8). ANMs non responsive.(0/7)	Doctors prescribing home remedies to the patients, other LHT as harmful (3/8).	Using home remedies frequently and also mentioned of Gunis/herbalists (4/6).	ASHAs (8/8) were aware of local herbs and prescribe them for minor ailments. Using LHT frequently, particularly Folk Healers. ANMS also aware of medicinal plants (6/7)
High Focus North East States					
6. Assam	(3/3) said that AYUSH systems are not redundant and are useful in asthma, fistula, etc.	ASHA not aware of AYUSH (0/8). No ANMs interviewed.	Using a few home remedies, find effective only in minor conditions (3/3).	Using home remedies, not aware of LHT (1/1).	ASHAs were aware of local herbs and prescribe them for minor ailments at home (8/8).
7. Manipur	(3/6)did not comment, while the remaining 3/6 said they are not redundant but useful. Specially recognised Yoga as useful.	ASHAs had no clue about AYUSH, but used home remedies and herbs for the people (11/18). No ANMs interviewed.	Prescribing home remedies to patients. No comment on LHT (4/6).	Using home remedies, but had no comment on LHT (5/8).	ASHAs aware of the medicinal plants in the area and were advising home remedies to the patients.(16/18) No ANMs interviewed.
8. Nagaland	(1/4) said that AYUSH is not redundant but useful.	No response on AYUSH, had knowledge of the local herbs (7/16). No ANMs interviewed.	Non response	One AYUSH doctor admitted use of herbs and also prepared formulations. Had knowledge about the Traditional Health Practitioners, bone setters of the area (1/4).	ASHAs had knowledge of medicinal plants and using home remedies.(18/18) No ANMs interviewed.

9. Sikkim	2/3 doctors recognized the usefulness of Homeopathy.	ASHAs not aware of AYUSH services.(0/26) No ANMs interviewed.	2/3 Doctors used home remedies.	1/1 AYUSH doctor recognized the use of LHT specially the home remedies.	ASHAs aware of medicinal plants and using home remedies.(26/26) No ANMs interviewed.
10.Tripura	Half of the Allopathic doctors thought AYUSH to be useful (3/6).	Not aware of AYUSH .(0/20)	Allopathic doctors termed home remedies as useful (2/6)	Only one AYUSH doctor accepted the need of LHT (1/9).	ASHAs had knowledge of medicinal plants and using home remedies (20/20).
Non-High Focus States					
11.Andhra Pradesh	(4/5) termed it useful but also had the opinion that a lot of research is required.	ASHAs unaware of AYUSH services.(6/6) Non response of the ANMs .(0/1)	Using a few home remedies, find effective only in minor conditions (2/5).	One doctor recognised the bone setters' practice in the area (1/6).	ASHAs aware of medicinal plants in the area. (6/6) Half of them use home remedies at home. ANM non responsive.
12.Haryana	All were of the opinion that they are useful upto some extent.(2/2)	ASHAs using home remedies like *Tulsi* and honey as part of AYUSH (10/12). No ANMs interviewed.	Only one doctor was in support, rest termed it as redundant (1/2).	Recognised use of home remedies and suggested research on LHT (15/18).	ASHA s aware of local home remedies and healers (4/12). No ANMs interviewed.
13.Punjab	(4/5) termed them useful.	ASHAs not aware of AYUSH services.(6/6) ANMs also were unaware of AYUSH services.(10/10)	Only in support of home remedies, other forms of LHT termed as redundant (4/5).	Using herbs and home remedies, not much awareness of LHT (17/20).	(2/6) ASHAs interviewed had awareness about the medicinal plants. (6/10)ANMs had awareness of herbs and were using home remedies.
14.West Bengal	(8/8)AYUSH doctors termed AYUSH to be useful.	ASHAs and ANMs not interviewed.	Most of the Allopathic doctors termed them as redundant.(5/8)	(7/7) AYUSH doctors termed LHT as useful specially the home remedies and experienced traditional healers.	ASHAs and ANMs not interviewed.
15.Karna-taka	3 out of 8 termed them redundant.	(0/9)None of the ASHAs had awareness about AYUSH services. 0/3 ANMs had no idea about AYUSH.	Non response	6/15 AYUSH doctors prescribed home remedies and were aware of LHT in the area.	Non response
16.Tamil Nadu	Recognised by 6/7 doctors.	(2/8) VHNs trained in ISM but all had medicines in the kit, refer cases to AYUSH.	Suggested documentation and research on LHT in areas like snake bite (4/7).	Suggested documentation and research on LHT in areas like snake bite, saying that people use it (6/8).	Suggestions for improvement in public AYUSH services; awareness through schools about home remedies. Mobile AYUSH clinics in villages (8/8 VHNs).
17.Kerala	Allopathic doctor not interviewed.	All ASHAs had some awareness of AYUSH services (8/8). (7/7)JPHNs had awareness' about AYUSH services but cases are not referred by them.	Allopathic doctor not interviewed.	Most of them aware of the international health practitioners of Ayurveda, All not appreciative of LHT but recognized THPs (13/13).	All were aware of medicinal plants and their use as home remedies (8/8). All JPHNs mentioned some medicinal plant of use.(7/7)
18.Delhi	5/5 termed them useful.	All ASHAs unaware of AYUSH services (11/11). No ANMs interviewed.	Prescribing home remedies to patients (5/5).	AYUSH doctors Valued home remedies (14/19).	ASHAs aware of local medicinal plants and herbs (8/11). No ANMs interviewed.
Total	**66/94** Doctors valued AYUSH systems.	Awareness of ASHAs about AYUSH services **= 18/182** Awareness of ANMs about AYUSH services **= 9/50**	**51/94 Doctors** valued home remedies. **25/94** Doctors valued LHT.	**127/159** AYUSH Doctors valued home remedies. **48/159** acknowledged other LHT also.	**156/182**ASHAs aware of medicinal plants and using home remedies **26/50** ANMs aware of medicinal plants and using home remedies.

According to the doctors, in the stand-alone facilities the patients face problems because no first aid facilities are available in the hospital, diagnostic facilities are also lacking and there are no support staff, or the number of helpers is inadequate, leaving only the doctors to run the OPD. They felt poorly connected with the overall health system, in spite of delivering dedicated services.

In the co-located facilities, the doctors feel the need of a pharmacist and an assistant with the doctor. Separate and good infrastructure for AYUSH is not available. The assistant could also help in teaching the patients how to take the medicines. Better dispensing mechanisms for the medicines was suggested at these facilities as well. One AYUSH doctor was handling two PHCs in Tamil Nadu. He felt he was not able to do justice to either. Similarly, in Manipur, doctors were also helping with deliveries but were treated as substitutes to Allopaths with lesser salaries.

The doctors felt marginalised by the health system in terms of their role in health service delivery, and their own status in terms of professional interaction with the Allopaths.

SUGGESTIONS FOR IMPROVEMENT BY THE HEALTH CARE PROVIDERS FOR AYUSH AND LHT

In the Stand-alone Facilities

Almost all AYUSH doctors suggested improvements in the areas they face barriers to implementation of their tasks, i.e., lack of medicines, poor infrastructure, lack of equipment, and lack of support staff, as well as a congenial professional environment to deliver efficiently.

They, therefore, suggested improving drug supply, infrastructure and filling vacant posts. Some suggested that training be given to in-service AYUSH doctors and paramedics. Some of the anecdotal findings from them cover in general the entire range of suggestions across the states.

"All government-run AYUSH dispensaries are lacking in space. More space is needed for each dispensary. Each dispensary must have a doctor's consultation room with patient-examining facilities, one dispensing room, and one store room, patient waiting room, water, electricity and toilet facilities, and full staff strength."

"AYUSH medicines are not readily available in the remote rural areas though most of the government-run dispensaries are located in the rural areas." Thus, they suggested ensuring regular and proper drug supply to the facilities.

"Regular training and reorientation programmes should be undertaken by the Government for the practicising and in-service AYUSH doctors to make them aware about the current advancement of the AYUSH system throughout the world and instil confidence in them."

The AYUSH doctors also suggested strengthening of AYUSH services by awareness generation among the public with proper resources for organising AYUSH medical camps.

In the Co-located Facilities

The Allopathic doctors suggested strengthening of AYUSH services by awareness generation among the public, improving supply of AYUSH medicines and training the AYUSH doctors in modern methods as well as regularising the contractual doctors' employment. 30% of them were non responsive to this question.

ASHAs and ANMs generally were non responsive, 22% of ANMs suggested that they themselves and the Allopathic doctors be trained in AYUSH and LHT with information about the AYUSH services in their area so that they can advise the public about them. In Tamil Nadu, they also suggested raising awareness by holding programmes and schemes in the schools and providing mobile AYUSH clinics in villages.

61% of the ASHAs suggested that they get proper training in use of local medicinal plants. They also showed interest in knowing about AYUSH services in their area.

The AYUSH doctors opined that "*Some sort of training to tackle acute emergencies at initial stage before transferring patients to suitable treatment centre must be given to each AYUSH doctor working in the remote rural areas."*

"*Total separate administrative set up from top to bottom is acutely required for the proper development of AYUSH treatment. More AYUSH centres must be opened and AYUSH doctors must be included in the Rogi Kalyan Samiti, District Health Society, Village Health and Sanitation Committee."*

They also suggested regular monitoring of AYUSH facilities under NRHM.

Regarding Local Health Traditions

The Allopathic doctors were generally non responsive to the question on suggestions for improvement in LHT. However, 55% of them reported use of home remedies to their patients as well as their families. The Allopathic doctors in Tamil Nadu, Kerala, Orissa and Manipur particularly suggested more documentation and research on LHT, specifically mentioning snake bites, jaundice, allergies and their treatment by the Traditional Healers and scientific validation of some of their useful practices.

Less than 30% of AYUSH doctors suggested that more and more people should grow medicinal plants and herbs in their kitchen garden so as to propagate its use, and also acknowledged some of the useful practices of the local healers of the area but largely did not have many suggestions for improvement, particularly for LHT.

The ASHAs and ANMs were aware of many medicinal plants in the area across the states (Figure 18 in Section 2 of this Chapter) and requested for more knowledge about their use saying that a lot of herbs are available in the villages which should be utilised. In Jharkhand and the North East states, it was particularly recommended to provide more awareness on this, owing to substantial presence of medicinal flora in the villages.

Perceptions and Practices Related to Combination Therapy and Cross-Referral

In all states the AYUSH and Allopathic doctors named at least some conditions for which they thought a combination of systems was useful, those for which referral happened from AYUSH to Allopathic services, and those for which cases were referred from Allopathy to AYUSH.

Conditions Named by Allopathic and AYUSH Doctors for Combination Therapy

- Digestive disorders, arthritis, asthma, anaemia, diabetes, piles, allergic disorders and memory loss, were some of the common ones named for combination therapy by the Allopaths.
- Similar but a shorter list was given by the AYUSH doctors with more emphasis on the acute conditions like pneumonia, TB, diabetes and cardiovascular diseases.

Conditions Named by Allopathic and AYUSH Doctors for Cross-Referral

- Injuries, accidents, complications of pregnancy and TB, were named by the Allopaths as those referred to them by AYUSH services.
- The AYUSH doctors added the following conditions to those listed by the Allopaths – pneumonia and acute abdomen.
- Allopaths listed arthritis, asthma, liver disease, piles, diabetes and skin diseases, as those they referred to the AYUSH services.
- AYUSH doctors said paralysis and neuromuscular disorders were also referred to them by the Allopaths.

In general, all the AYUSH doctors across the states perceived the importance of Allopathy in injuries, accidents, complicated pregnancies, deliveries and acute conditions, and more than 50% of the Allopathic doctors perceived the importance of AYUSH in non-communicable diseases such as diabetes, cardiovascular disorders, neuromuscular disorders, digestive disorders, jaundice, mental disorders, some gynaecological problems and allergic disorders. Other than this general perception across the states, cross-referral was also found for Chikungunya, hepatitis and snake bites in states like Kerala and Tamil Nadu. Thus, use of AYUSH was perceived largely for the non-communicable diseases by the Allopathic practitioners and also some communicable diseases.

These findings are suggestive of the fact that there is an informal acceptance of the strengths of the systems of both Allopathy and AYUSH among the providers of both the systems, though at a formal level combined regimens or cross-referral are as yet uncommonly recognised.

This is largely because of the fact that there are no mechanisms established for this inter-systems referral.

SECTION 2
THE COMMUNITY'S KNOWLEDGE AND PRACTICE

Community perceptions were gathered from 1,375 household interviews, 106 group discussions of the households, and exit patients' interviews of 744 patients taking AYUSH treatment, and 547 taking Allopathic treatment.

Findings regarding the perceptions of the community for both AYUSH and LHT are being presented separately in this section.

COMMUNITY'S PERCEPTIONS AND UTILISATION OF AYUSH

The findings from the households provided information about the percentage of households reporting use of AYUSH services in the last three months, what they used it for, their reasons for doing so, and their perceptions of the limitations of AYUSH services.

The exit patients' interviews provided data on the duration of suffering from the presenting health problem of patients seeking treatment from both Allopathy and AYUSH systems, conditions for which AYUSH is used, and reasons for using AYUSH.

Utilisation of AYUSH as Reported by Households

There was a large variation found across the states in the proportion of households having used AYUSH services in the last three months (Figure 15).

- Data from three states showed less than 20% usage - Jharkhand, Andhra Pradesh and Karnataka.
- In Kerala and Uttarakhand, 20-30% households said they had used AYUSH in the last three months.
- 30-60% households reported usage in Punjab, Haryana, Delhi, Tripura, Manipur and Bihar.
- Over 60-90% reported it in West Bengal, Assam and Nagaland.
- Tamil Nadu and Orissa had an almost universal positive response (98%).

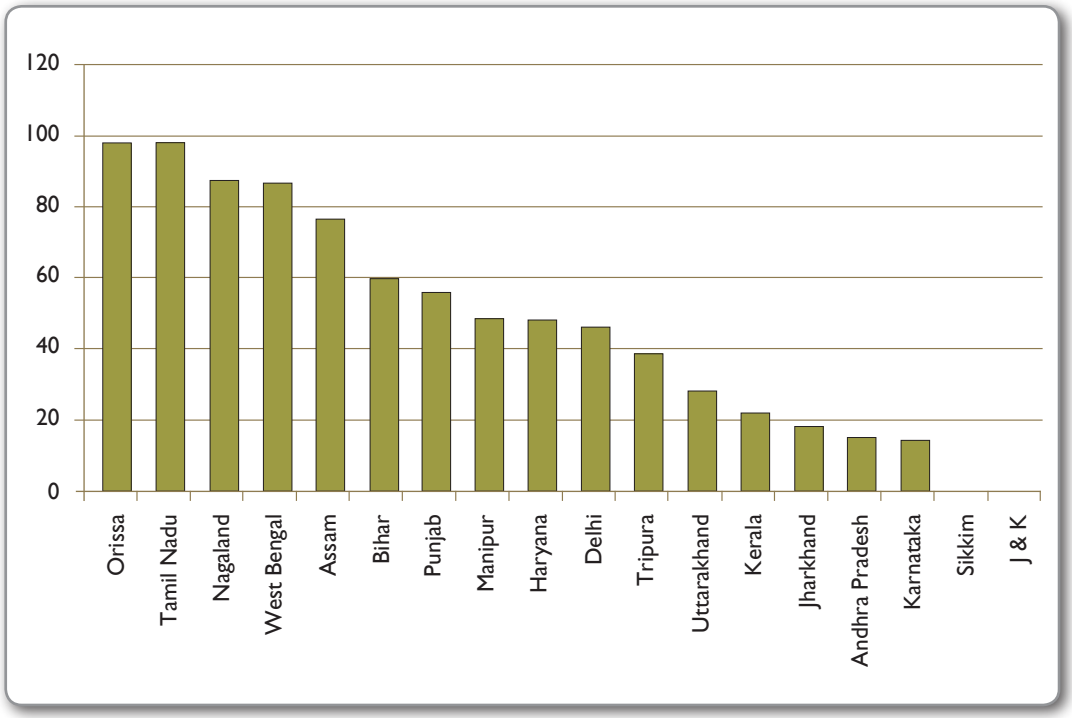


FIGURE 15: Percentage of Households Reporting Utilization of AYUSH Services in the Last Three months in the Study District

For the states with low utilisation, it is important to bring out the fact that the investigating team in these states had specified the utilisation of AYUSH for public services, unlike in the others that are showing high level of utilisation. The high reported utilisation has to be interpreted taking into consideration the specific context which includes the following:

1. Large private AYUSH service utilisation is likely to be included in the response.
2. The study districts were purposively chosen from among the good AYUSH service area of the state. Availability of AYUSH doctors and medicines regularly over several years, and general utilisation of government services may be higher in these relative to other districts.
3. The household samples were generally taken from the Sub-Centre villages with close physical access to a co-located PHC or stand-alone AYUSH dispensary.
4. High prevalence of chronic disease and self-perceived morbidity in states such as Tamil Nadu and Kerala.

5. The general popularity of specific systems in the states, based on their links with the socio-cultural roots of the state, e.g., Ayurveda in Orissa and Haryana, Siddha in Tamil Nadu, Homeopathy in West Bengal and the North East states, and Yoga in Uttarakhand.

Reasons for Utilising AYUSH

Taking the five commonest reasons given by respondents in each state shows that there are some shared perceptions regarding AYUSH across the country (Table 21). While the rank order varied, the repeated reasons were:

1. Past experience of effectiveness in their own case or of others had led them to seek the effective treatment.
2. This was more so in conditions where Allopathic treatment was not effective.
3. The common perceptions expressed were 'gives complete cure', 'cures from the root cause', and 'looks at the total problem', which relate to the holistic nature of the practice of AYUSH systems.
4. 'No side effects' or 'less side effects' was another shared perception, especially when long-term medicines had to be taken.
5. 'Easily available', 'nearby location', 'easy availability of medicines' and 'easy to use', were some responses that spoke of convenience in use. It has to be borne in mind that the households interviewed were in close proximity to the facilities, as per the design of the study. The study districts were also those with relatively better AYUSH services in the state.

Conditions for which AYUSH was Used

The exit interviews gave a good listing of the conditions for which the respondents had gone to the AYUSH service providers at that time. The household respondents recalled the conditions for which they had gone in the last three months and gave relatively more general replies. Therefore, the five commonest responses from the exit interviews and household interviews were tabulated separately (Table 22).

1. The highest number of cases tended to be of the common every day acute problems such as cold-cough-fever, diarrhoea, digestive disorders such as abdominal pain/indigestion/vomiting/gas/ acidity, and difficulty in breathing. Jaundice, Chikungunya and malaria were also named.
2. Chronic problems such as joint pain, backache and leucorrhoea, high BP, asthma, eczema, allergy, skin problems and piles were also common ailments in the list.

TABLE 21: Self Reported Reasons for Choosing AYUSH by the Patients (Exit Interviews) and Households

High Focus States					
1. Jammu & Kashmir	No/Less side effects	Cheap	Easy to understand	-	-
2. Uttarakhand	Helps maintain good health	Beneficial for complete relief from disease	No side effects, harmless	Cheap	No relief from Allopathy
3. Orissa	Effective and good	No side effects	Easy to take	-	-
4. Bihar	Beneficial	Cheap	Harmless	Easily available	Easy to use
5. Jharkhand	Do not produce heat	Advice from Sahiya (ASHA)	Cheap	Good	As per body's requirements
High Focus North East States					
6. Assam	Less side effects	Gives permanent cure to the diseases	Easily accessible	Economical	No relief from Allopathic treatment
7. Manipur	Only AYUSH doctors available	No relief from previous Allopathic treatment	No side effects	Got information from radio	Good if Allopathic doctors are not there
8. Nagaland	Past experience	Allopathic medicine did not work	Less side effects	Herbal medicines are good	Cheap
9. Sikkim	Ayurveda and Yoga best for rural people	No side effects	Safe system	Family tradition and belief	-
10. Tripura	Ayurvedic medicine is good	Homeopathy is free from side effects	Gives complete cure	Good for everyone	Can be practiced by self
Non-High Focus States					
11. Andhra Pradesh	Do not know	Looks at the total problem	No side effect s	Better than other systems	Less expensive
12. Haryana	Old past experience	Recommendation by friends	Trust in Ayurveda	Good and effective treatment system	It's a proper medical science
13. Punjab	Ayurvedic medicine is good	No side effect	Good services	Easily available in the village at low cost	Good system of treatment
14. West Bengal	Very cost-effective medicine	Faith in the system	Tried Allopathy for long with no relief	Cures diseases permanently although takes time	No side effects
15. Karnataka	Information from radio	Faith in the system	No relief from other system	Effective if treated in both systems	Do not know
16. Tamil Nadu	Experience of effectiveness by close relatives and friends or self	Strong belief in the efficacy of traditional medicine	No side effects	Easy availability of medicines	Suffering from side effects of Allopathy
17. Kerala	No side effects	Previous use of Ayurveda and Homeopathy	Effective and complete cure	Easy to take	Only choice when Allopathy fails
18. Delhi	Good medicine	Nearby location	No side effect s	Cures from the root cause	Very effective

TABLE 22: Five most Common Conditions for which AYUSH is Used by Community in the Study District

State	Five Most Common Diseases (Exit Patients)					Five Most Common Diseases (Households)				
	1	2	3	4	5	1	2	3	4	5
High Focus States										
1. Jammu & Kashmir	NA	-	-	-	-	-	-	-	-	-
2. Uttarakhand	Digestive disorders	Difficulty in breathing	Joint pain	Backache and leucorrhoea	Fever and high BP	General debility	Children's diarrhoea	Digestive disorders(gas)	Paediatric disorders	-
3. Orissa	Digestive disorders (indigestion, vomiting)	Difficulty in breathing	Cold, cough and fever	Diarrhoea	White discharge	Joint pain	Fever	Acidity	Difficulty in breathing	Cough and cold
4. Bihar	Fever	Cough and cold	Digestive disorders (gas)	Piles	Leucorrhoea	Fever	Joint pain	Cough and cold	Stomach disorders (gas)	Diarrhoea
5. Jharkhand	Fever	Loose motion	Malaria	Body pain	Bleeding from mouth	Fever	Diarrhoea	Asthma	Abdominal pain	-
High Focus North East States										
6. Assam	Fever	Diabetes	Stomach pain	Weakness	Jaundice	Piles	Joint pain	Fever	Jaundice	Gastric problem
7. Manipur	Cough, cold and fever	Piles	White discharge	Acidity and pain	Loss of appetite	Cough and cold	Sinusitis	Paralysis	Jaundice	Urinary problem
8. Nagaland	Fever	Back problem	Body ache	Warts	Malaria	Cough and cold	Diarrhoea	Fever	Fistula/piles	Jaundice
9. Sikkim	Allergy, respiratory problem	Backache	Anal fissures	Menstrual bleeding	Mouth ulcer	NA	-	-	-	-
10. Tripura	Pain in the body and joints	Cough and cold	Heart disease	Back pain	Abdomen pain	Joint pain	Fever	Stomach pain	Piles and constipation	Diabetes

Non-High Focus States										
11. Andhra Pradesh	Loose motion	Weakness	Joint pain	Skin disease	Fever, cough and cold	Joint pain	Gastric ulcer	Stomach ache	-	-
12. Haryana	Cough and cold	Indigestion and gas	Joint pain	Fever	Itching	Fever and cold	Constipation	Backache	-	-
13. Punjab	Skin disease	Cough, cold and fever	Acidity and gas	Joint pain	BP	Joint pain	Diabetes	Cough and cold	Obesity	Asthma
14. West Bengal	Joint pain	Skin disease	Hyperacidity	Pain in breast	Diabetes	Joint pain	Cough and cold	Skin problem	Asthma	High BP
15. Karnataka	Skin problem	Anaemia	Cough and cold	Asthma	Joint pain	Allergic cold	Mild fever	Piles	Joint pain	-
16. Tamil Nadu	Joint pain and knee pain	Itching	Cough, cold and fever	Backache	White discharge	Knee joint pain	Baby's immunity	Skin problem	Asthma	Back pain
17. Kerala	Joint pain	Fever	Shoulder pain	Cough and cold	Menstrual problem	Fever	Allergy	Back pain	Chikungunya	Jaundice
18. Delhi	Fever, cough and cold	Skin problem	Leucorrhoea	Acidity	ANC	Fever	Cough and cold	Skin problem	Diarrhoea	Cough

3. Warts, heart disease, diabetes and skin problems were also named.
4. General debility, weakness and 'baby's immunity' were conditions where the promotive and preventive role of AYUSH was resorted to.

Duration of Suffering from the Health Problem of Patients taking AYUSH and Allopathic Treatment

1. The duration of present illness was asked for in the exit interview and it provided a pattern of extent of chronic and acute illness going for AYUSH and Allopathic treatment (Tables 23 & 24; and Figures 16 & 17).
2. It is evident that a higher proportion of cases coming to AYUSH are of chronic illness relative to those going to Allopathy (Tables 23 and 24).
3. If we combine 1-6 months and over 6 months categories, all states, except Jammu & Kashmir where data was unavailable for AYUSH, show use of AYUSH for chronic illness; 9 states show higher usage of AYUSH ranging between 58-100%,

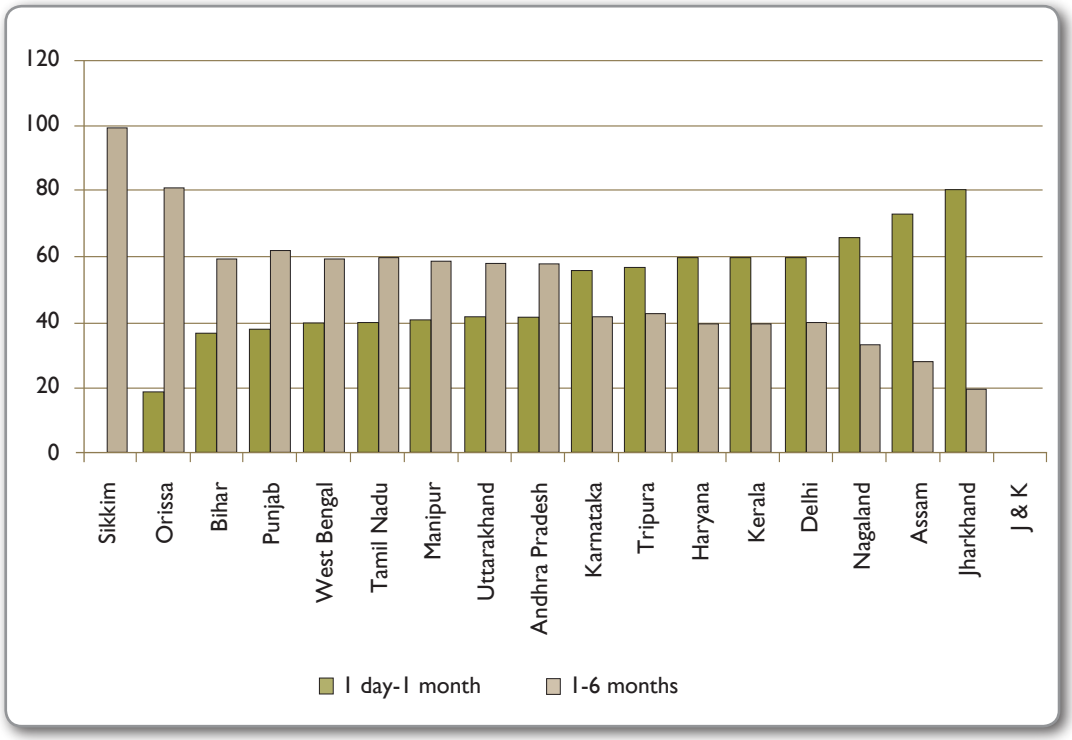


FIGURE 16: Duration of suffering from the Presenting Health Problem of Patients Seeking AYUSH Treatment in the Study District

with Andhra Pradesh being lowest at 58%, and Sikkim showing all the AYUSH cases over one month duration, followed by Orissa at 80% (Figure 16).

Comparing with those seeking Allopathic treatment, only 11 states show use in the duration of 1 to over 6 months with less than 50% range. The higher percentage is reported in Bihar at 48%, and the lowest being Karnataka with less than 2% (Figure 17).

4. However, it is also important to note the trend across states if we combine 1-7 days and 7-30 days categories. As many as 8 states have reported a higher percentage of patients seeking AYUSH treatment in this category in the range of 42% in Karnataka to as high as 80% in Jharkhand. The remaining 7 states also report use of AYUSH for illness upto a month in the range of 19% in Orissa to 42% in Andhra Pradesh.

   Comparing with those seeking Allopathic treatment, all states (except 3 where data was unavailable) used Allopathic treatment for acute illness upto 30 days. 8 states used it in the range of 80-100% with as many as 4 showing universal use, and the remaining 4 within 80% (Andhra Pradesh, Tripura, Jharkhand and Uttarakhand), The remaining 7 states also show use in the range of 31-75.5% with Bihar being the lowest at 31%, and West Bengal highest at 75.5% (Figure 17).

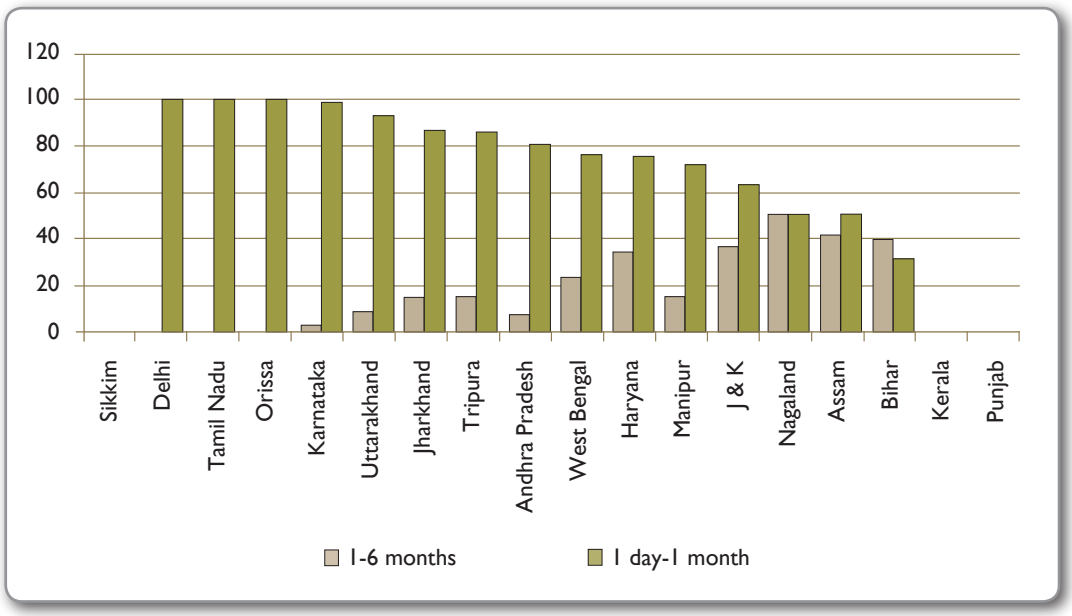


FIGURE 17: Duration of Suffering from the Presenting Health Problem of Patients Seeking Allopathic Treatment in the Study District (% Responses)

TABLE 23: Pattern of Resort to AYUSH Treatment by Duration of Illness (Exit Interviews)				
State	Duration of Suffering from Presenting Illness			
	1-7 Days	7 Days -1 Month	1-6 Months	>6 Months
High Focus States				
1. Jammu & Kashmir	NA	-	-	-
2. Uttarakhand	36.8%	5.2%	32.0%	26.3%
3. Orissa	0.0%	19.0%	33.0%	48.0%
4. Bihar	22.7%	13.6%	18.1%	40.9%
5. Jharkhand	60.0%	20.0%	0.0%	20.0%
High Focus North East States				
6. Assam	42.0%	30.7%	3.8%	23.8%
7. Manipur	20.5%	20.5%	23.5%	35.2%
8. Nagaland	50.0%	16.6%	33.3%	0.0%
9. Sikkim	0.0%	0.0%	30.0%	70.0%
10. Tripura	35.4%	21.0%	6.4%	14.5%
Non-High Focus States				
11. Andhra Pradesh	42.0%	0.0%	40.0%	18.0%
12. Haryana	44.6%	16.3%	23.9%	20.6%
13. Punjab	16.0%	22.0%	16.0%	30.0%
14. West Bengal	12.0%	28.0%	20.0%	40.0%
15. Karnataka	24.0%	32.0%	30.0%	12.0%
16. Tamil Nadu	15.0%	25.0%	45.0%	15.0%
17. Kerala	22.6%	36.3%	16.3%	20.1%
18. Delhi	50.9%	9.1%	3.6%	38.9%

Thus, it is evident that AYUSH treatment was used both for acute and chronic illness with higher percentage using it for chronic problems, but also a substantial percentage using it for acute illnesses.

TABLE 24: Pattern of Resort to Allopathic Treatment by Duration of Illness (Exit Interviews)				
	Duration of Suffering from the Presenting Illness			
State	1-7 Days	7 Days -1 Month	1-6 Months	>6 Months
High Focus States				
1. Jammu & Kashmir	37.5%	25.6%	20.5%	15.0%
2. Uttarakhand	69.5%	23.0%	8.0%	0.0%
3. Orissa	31.5%	68.4%	0.0%	0.0%
4. Bihar	17.3%	13.4%	25.0%	13.4%
5. Jharkhand	72.9%	13.5%	8.1%	5.4%
High Focus North East States				
6. Assam	18.2%	31.8%	40.9%	0.0%
7. Manipur	14.2%	57.1%	14.2%	0.0%
8. Nagaland	50.0%	0.0%	0.0%	50.0%
9. Sikkim	0.0%	0.0%	0.0%	0.0%
10. Tripura	63.2%	22.3%	1.3%	13.1%
Non-High Focus States				
11. Andhra Pradesh	66.0%	14%	0.00%	6.0%
12. Haryana	29.1%	45.8%	20.8%	12.5%
13. Punjab	0.0%	0.0%	0.0%	0.0%
14. West Bengal	45.4%	30.1%	22.5%	0.0%
15. Karnataka	56.3%	41.8%	1.5%	0.0%
16. Tamil Nadu	50.7%	49.3%	0.0%	0.0%
17. Kerala	0.0%	0.0%	0.0%	0.0%
18. Delhi	89.3%	16.7%	0.0%	0.0%

Perceived Limitations of AYUSH

1. The people perceived some very specific limitations of the systems of AYUSH (Table 25).
2. Not effective in emergencies, serious ailments, major injuries and surgical cases.
3. Takes time to cure.

TABLE 25: Limitations of AYUSH as Perceived by Households in the Study District

High Focus States			
1. Jammu & Kashmir	Not effective in serious diseases	Cannot tackle emergencies	No help in surgical cases
2. Uttarakhand	Not effective in emergencies and accidents	Not effective in serious problems	-
3. Orissa	Long term use for effect	Medicines not available	-
4. Bihar	No effect in emergency and accidents	Not effective in serious problems	No idea
5. Jharkhand	Limited use in case of emergency	Not effective in case of accidents	-
High Focus North East States			
6. Assam	Takes time to cure	Services and medicines not available	Cannot cure serious ailments
7. Manipur	No idea	-	-
8. Nagaland	Takes time to cure	Less knowledge about the services and untrained doctors	Problematic in emergency cases
9. Sikkim	Cannot be used in emergency and surgery	-	-
10. Tripura	In acute conditions cannot be trusted	Not suitable for all diseases	-
Non-High Focus States			
11. Andhra Pradesh	Do not know	Not good for injuries	Works in limited cases
12. Haryana	No scope of surgery/operation	Limited to few diseases	-
13. Punjab	Medicines not available	Not suitable in major conditions, injuries and surgeries	-
14. West Bengal	Cannot be applied in acute and emergency conditions	No publicity of AYUSH and its importance	Lack of good doctors in AYUSH
15. Karnataka	Takes too long	No cure in emergency conditions	-
16. Tamil Nadu	Cannot be applied in emergency conditions	-	-
17. Kerala	Time consuming	Costly	-
18. Delhi	No treatment for emergency	Medicine supply is not adequate	Services are not satisfactory

4. Poor availability of services and/or medicines was perceived as a problem in some states.
5. A few also identified the problem of doctors being less knowledgeable and poorly trained.

The state-wise details of the limitations mentioned by respondents are listed in Table 25.

COMMUNITY'S PERCEPTIONS AND USE OF LOCAL HEALTH TRADITIONS

LHT refer to health promotive, preventive and curative methods having general acceptance and prevalence among households of different socio-economic strata. While these have common roots with the indigenous textual systems, it is not necessary that these practices conform exactly to different ancient health systems and their texts. They may be practiced by the households themselves as '**home remedies**'/**self-care**, or through the services of various traditional and folk practitioners. Although they have no legal sanctity, they are time-tested through people's experiential knowledge. Other than the home remedies, various forms of **informal providers** are catering to people's health needs. These are being categorised into four broad groups:

Traditional Health Practitioners (THP) = Non-institutionally qualified practitioners who learnt a textual system through a hereditary passing on of knowledge, or from an older practitioner.

Folk Healers (FoH) = Non-textual 'system' learnt hereditarily, or from another teacher - the 'guru', often addressing a specific health problem.

Faith Healers (FH) = Those who use non-material means of prevention or treatment, invoking 'spiritual' forces to do so, may or may not combine with herbal/animal medicines.

Dais = Traditional birth attendants (TBAs). As such, these practices and the informal providers need to be examined in the light of contemporary knowledge.

The questionnaires were so designed that the respondents could be comfortable with the kind of information we expected to obtain from them, e.g., the detailing on LHT was not asked straightaway but was done in a sequential way - starting from questions about commonly known medicinal plants, common food items and

their medicinal properties, followed by the specific LHT as use of home remedies, FH, FoH and THP.

The responses are discussed below as findings regarding use of all these by the community.

Awareness of Medicinal Plants

The household respondents were asked to name local medicinal plants and to tell about food items with their medicinal values. Responses showed that awareness about medicinal plants and medicinal value of food items was found to be almost universal (Figure 18). It was low only in Kerala and Karnataka (about 50%). In fact, in Kerala, they seemed more aware of names of Ayurvedic formulations than about plants and food items, but since this was not the question, the investigators did not record these responses.

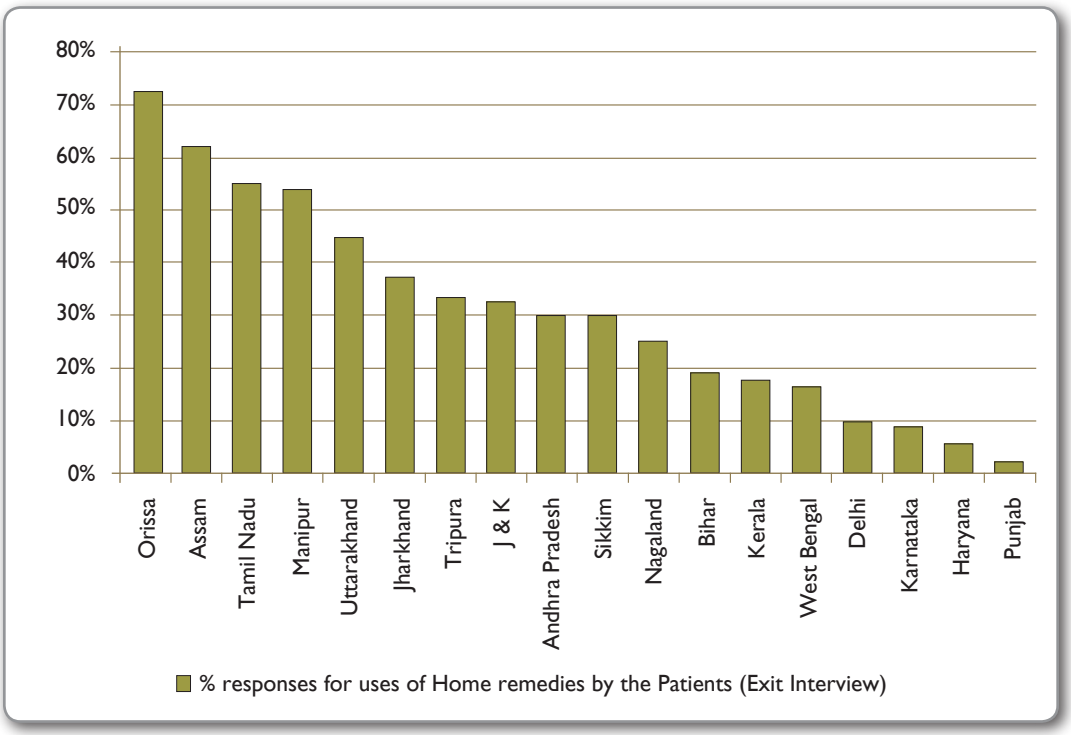


FIGURE 18: Self reported use of Home Remedies by the Patients at Exit Interview in the Study Districts

Banana *(Musa paradisiaca)*, a food item locally identified with medicinal properties in south 24-Parganas, West Bengal

Local medicinal plant in the vicinity of a household in Tripura

A local medicinal plant Pippali *(Piper longum)*

Household interviews in Assam

The responses revealed some commonly known medicinal plants and foods along with uses across the states, e.g., *Tulsi*, *Vasaka*, *Amla*, *Neem*, etc.

The ASHAs interviewed showed a variation in awareness about medicinal plants in their area. Kerala had a low of 12%. Haryana, Punjab and Karnataka showed a range of 50-70%. Orissa, Bihar and Manipur had 70-90% of ASHAs with awareness of medicinal plants. In the rest, 10 states, all the ASHAs were aware of local medicinal plants (Figure 18) and home remedies. The level of awareness was similar to that of the local community in 10 states, but lower in 7 states. In West Bengal, ASHAs were not recruited at the time of survey.

Awareness of Medicinal Uses of Food Items

Specific questions were asked about the medicinal uses of food items that they know about.

Out of 18 states, 13 states gave 100% responses on the awareness about food items with their perceived medicinal properties, namely Orissa, Jharkhand, Nagaland, Sikkim, Uttarakhand, Jammu & Kashmir, Delhi, Tripura, Punjab, Haryana, Tamil Nadu, Assam and Andhra Pradesh. All the households in these 13 states had long lists of usage of such food items. Two states out of the remaining 5 states, namely, Manipur and Bihar, gave over 90% responses on the awareness of food items. West Bengal showed more than 80% response; whereas Karnataka reported 50% use; and Kerala a mere 10% (Figure 19).

Apart from plant-based items, many food items with animal, mineral or sea origin were also part of the food items mentioned by the households. For example, use of chicken soup, dog meat, red meat and eggs for general weakness; use of raw rock salt, cooking in iron utensils for "increasing blood" (anaemia), and use of fish, cod liver oil and frogs (Nagaland), were found respectively across the states. Food items mentioned showed community specificity in terms of their geographical and cultural background. For details, refer Section 3 of this Chapter.

Use of LHT by the Community

The use of LHT by the community in the form of home remedies was assessed both from the exit interviews as well as from the household interviews by asking for their

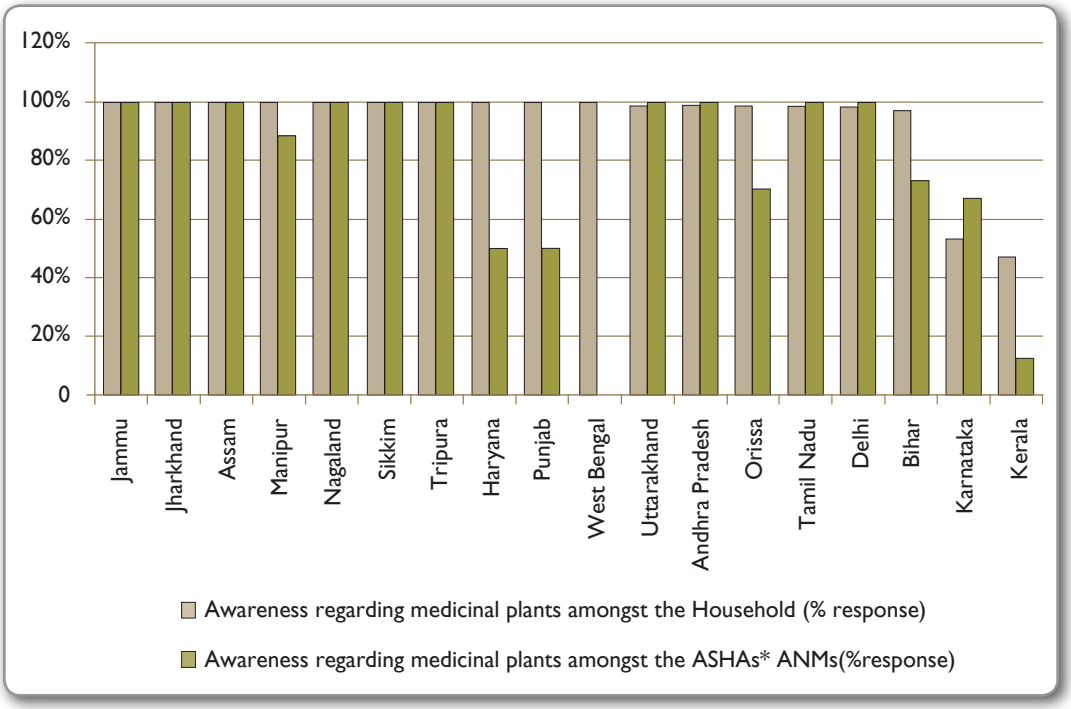


FIGURE 19: Percentage of Households and ASHA /ANMs in the Study District with Awareness regarding Medicinal Plants

* ASHAS not interviewed in West Bengal and Tamil Nadu

use along with the prescribed treatment by the AYUSH/Allopathic provider from the patients and in general for any purpose at any point of time from the households. Subsequently, when the households were asked about the use of home remedies for treating 20 specific conditions, they showed higher reporting.

From the Exit Interviews

The use of LHT was assessed by whether the exit interview respondents had used any form of LHT for their present episode of illness. The question was particularly focused on use of home remedies by the patients using both Allopathy and AYUSH treatment. Of the patients at facilities who were interviewed, from 2% to 73% reported use of LHT (home remedies particularly) across the states. Punjab had the lowest figure of 2%, and Orissa the highest of 73%.

Figure 20 shows that 4 states - Delhi, Punjab, Haryana and Karnataka, had a low usage of home remedies in between 2-10%; 6 states - West Bengal, Kerala, Bihar,

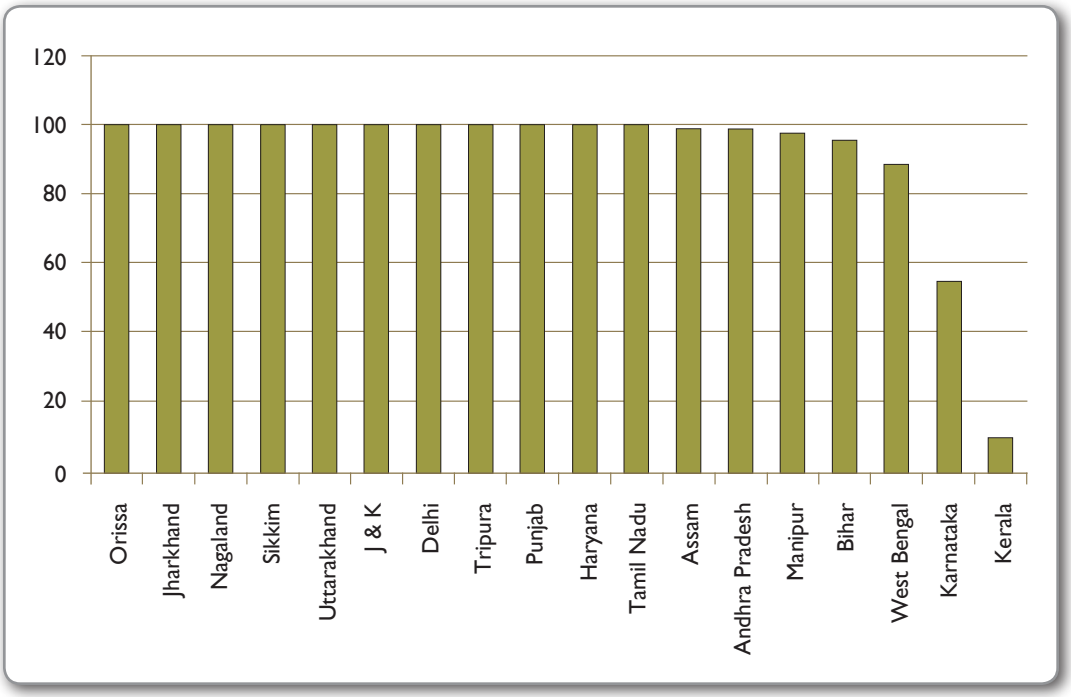


FIGURE 20: Percentage of Households Reporting Use of Food items with Perceived Medicinal Properties in the Study District

Nagaland, Sikkim and Andhra Pradesh, had the figure in the 20-30% range. 4 states - Uttarakhand, Jharkhand, Tripura and Jammu & Kashmir, had about 30-45% patients reporting use of home remedies. The remaining 4 states - Orissa, Assam, Tamil Nadu and Manipur - reported over 50% patients using home remedies.

From the Household Interviews

In 11 of the 18 states, 80% or more households reported use of home remedies. (Figure 21)

In 5 states 40-80% use was reported, and in 2 states below 20% use was reported.

The households of the High Focus states reported 80-100% use of home remedies, except for Tripura, which reported only 18%.

The Non-High Focus states showed somewhat lower order of responses acknowledging use of home remedies, only Andhra Pradesh having 73% use.

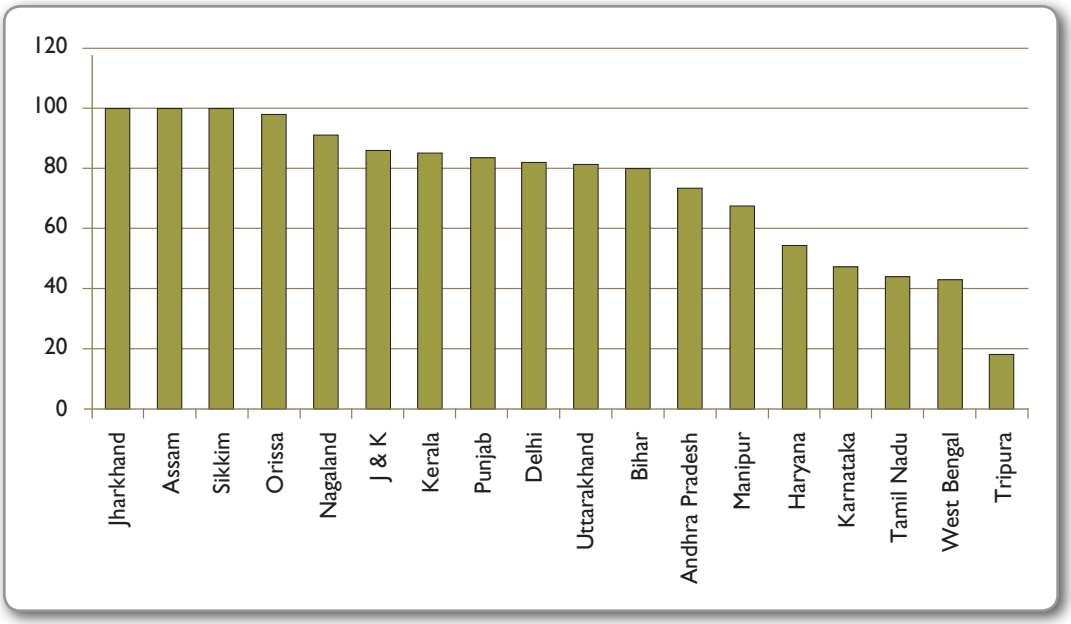


FIGURE 21: Percentage of Households Reporting Use of Home Remedies in the Study Districts

The survey covered in detail the home remedies used by the community for 20 types of disease conditions and health problems* (Figure 22). Questions were asked about use of home remedies for various diseases. Figure 19 presents the highest number of responses of the households that use home remedies for any disease (details of the responses in Annexure 2 for two states).

Generally, across the states the responses for diseases like cough and cold, diarrhoea, anaemia, constipation and joint and back pain were high. 6 states show above 80% households giving a positive response for usage of home remedies for one or more of the specified conditions, 4 above 60%, 6 almost 50%, and only 1 state had responses in the range of less than 40%.

The conditions where no home remedies are commonly used, were similar across the states such as emergency conditions, accidents, heart diseases and surgical conditions, to name a few.

* 20 conditions for which home remedies were asked: Cough and cold, diarrhea, fever, jaundice, diabetes, fistula and piles, chronic headache, chronic joint pain, memory loss, general debility, chronic constipation, mental illness, white discharge, anaemia, menstrual problems, malnutrition, insect bites, worm infestation, minor injuries and major injuries.

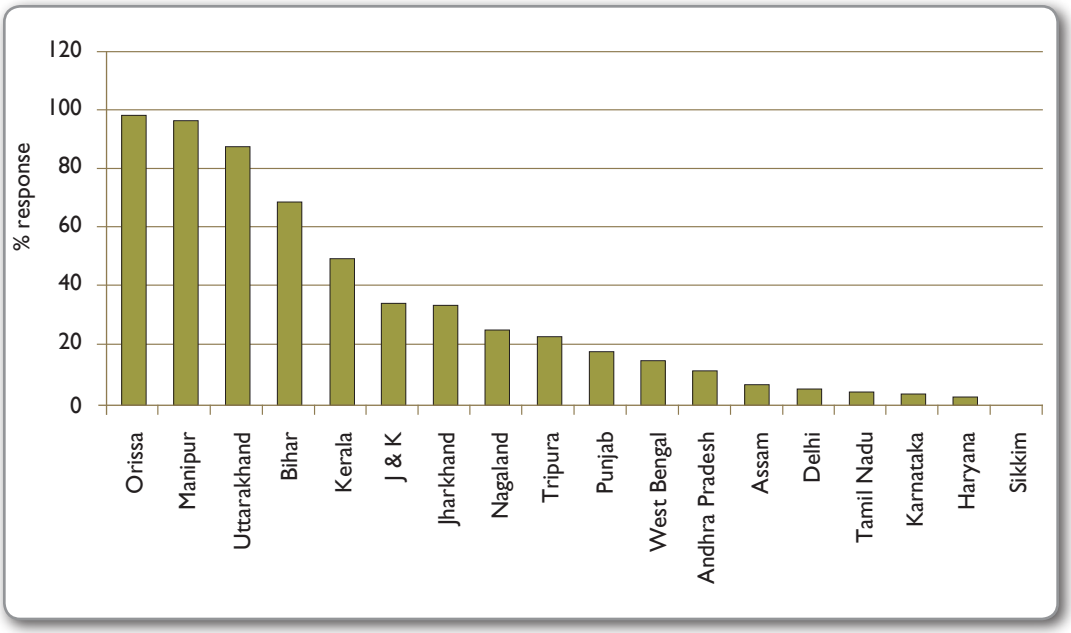


FIGURE 22: Percentage of Households Reporting Use of Traditional Health Practitioners in the Study Districts

Use of Home Remedies for Mother and Child Care

Specific questions about use of LHT for mother and child care in different stages elicited responses showing a high usage for RCH issues specifically under the headings of home remedies for healthy pregnancy, safe delivery, healthy lactation and health of the baby.

- Home remedies were used for healthy pregnancy by 80-98% of the households in the High Focus states, except Orissa (58%) and Karnataka (5%) (Figure 23).
- In the Non-High Focus states, it ranged from 0-80%; West Bengal, Kerala, Delhi and Haryana in the range of 50% and above; Tamil Nadu almost 20%; and Andhra Pradesh not reporting its use.
- The proportion of users went up further for safe delivery (Figure 24) and lactation (Figure 25).
- However, in the other entire better-off states, the figures were lower.

Even for safe delivery, home remedies were reported to be extremely well used by the households, e.g., as many as 11 states reported more than 60% use and

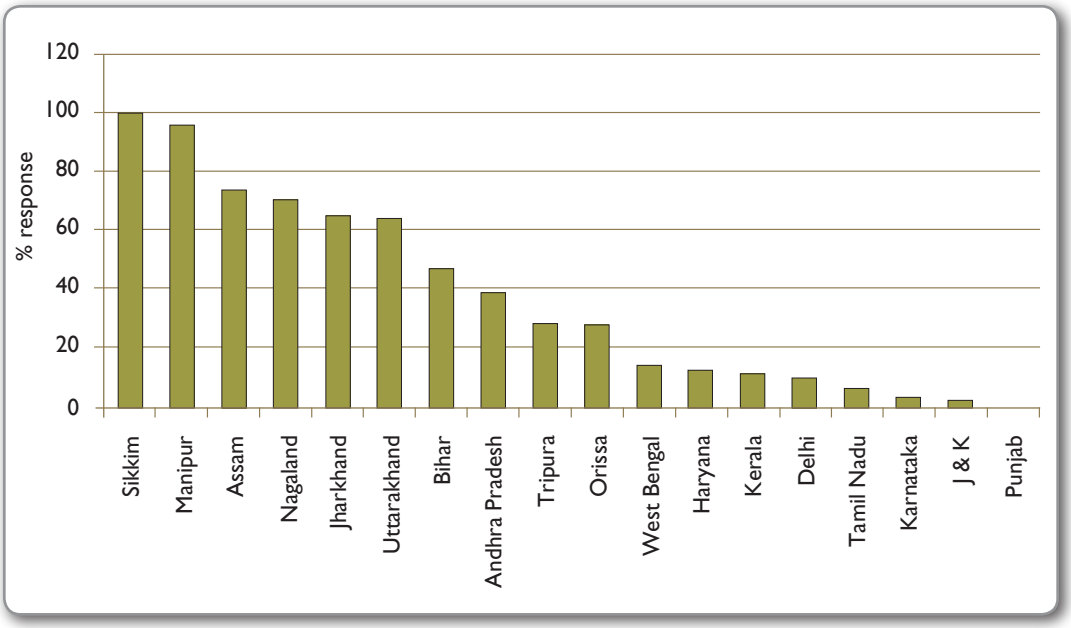


FIGURE 23: Percentage of Households Reporting Use of Folk Healers by the Households in the Study District

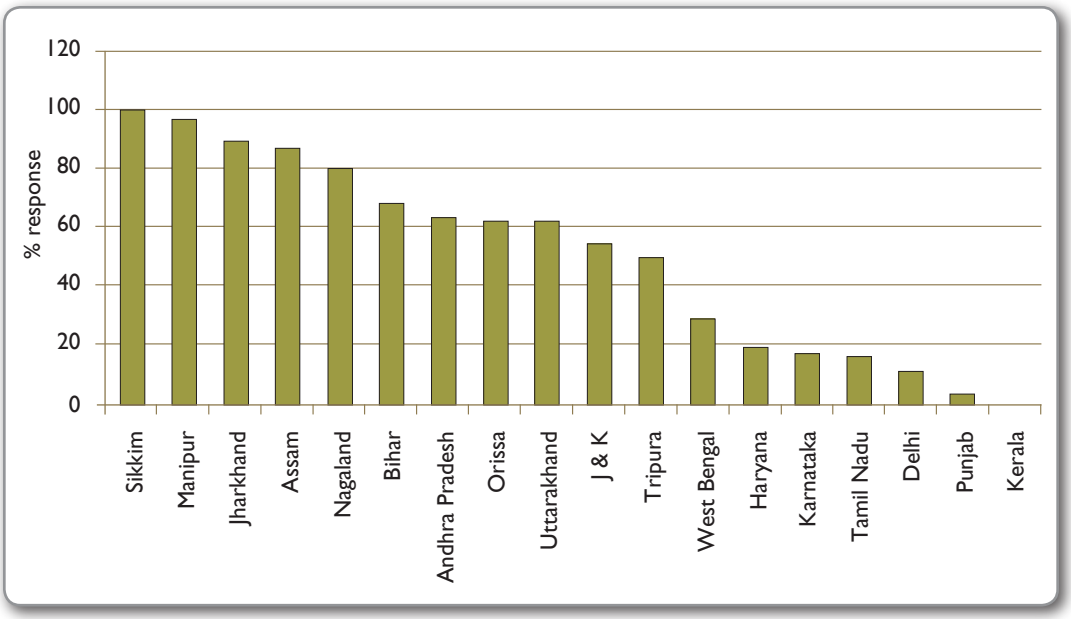
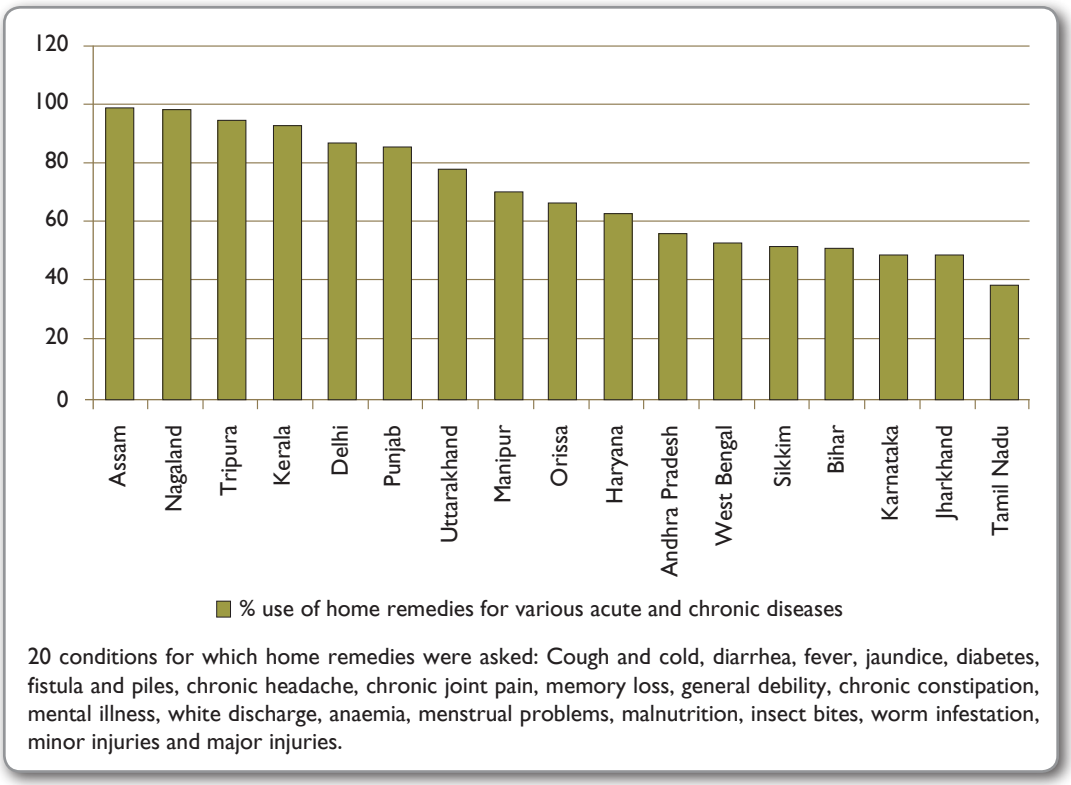


FIGURE 24: Percentage of Households Reporting Use of Faith Healers by the Households in the Study District

the rest in between 10-50%. Generally, all the High Focus states (districts) reported high use with an exception of Orissa at 50%, and Jammu & Kashmir at 10%. The better-off states like Kerala, Punjab and Tamil Nadu also reported high use (Figure 24).

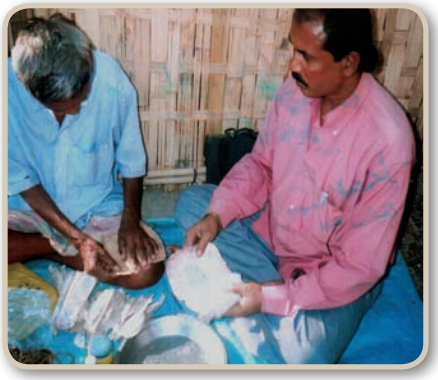
As many as 10 states reported 80-95% households using home remedies for healthy lactation; 4 states reported 40-70% use, and the rest 4 states reported less than 40% with Jammu & Kashmir as less as 22% (Figure 25).

- Kerala did show over 90% use for baby's health (Figure 26).
- In all the MCH users, Kerala was a high user state among the Non-High Focus states (38-90%), with Andhra Pradesh a high user for all, other than the safe delivery.
- Orissa comes out as an intermediate user reporting state (50-90%), with Jammu & Kashmir being consistently among the lowest users (5-45%).



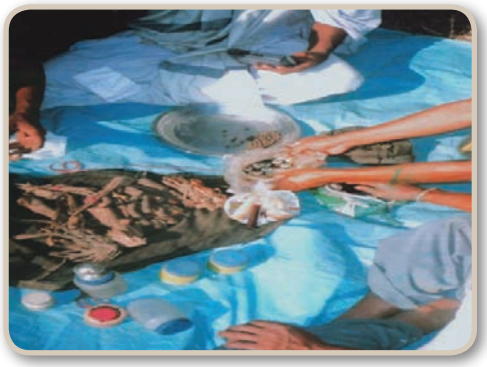
20 conditions for which home remedies were asked: Cough and cold, diarrhea, fever, jaundice, diabetes, fistula and piles, chronic headache, chronic joint pain, memory loss, general debility, chronic constipation, mental illness, white discharge, anaemia, menstrual problems, malnutrition, insect bites, worm infestation, minor injuries and major injuries.

FIGURE 25: Percentage of Households Reporting Use of Home Remedies for 20 Specified Conditions



An interview with Traditional Health Practitioner in a village, Tripura

Faith healer with investigating team in Tamil Nadu



Local medicinal herbs with the Traditional Health Practitioner in Tripura

Folk healer in a village of South Tripura district, Tripura

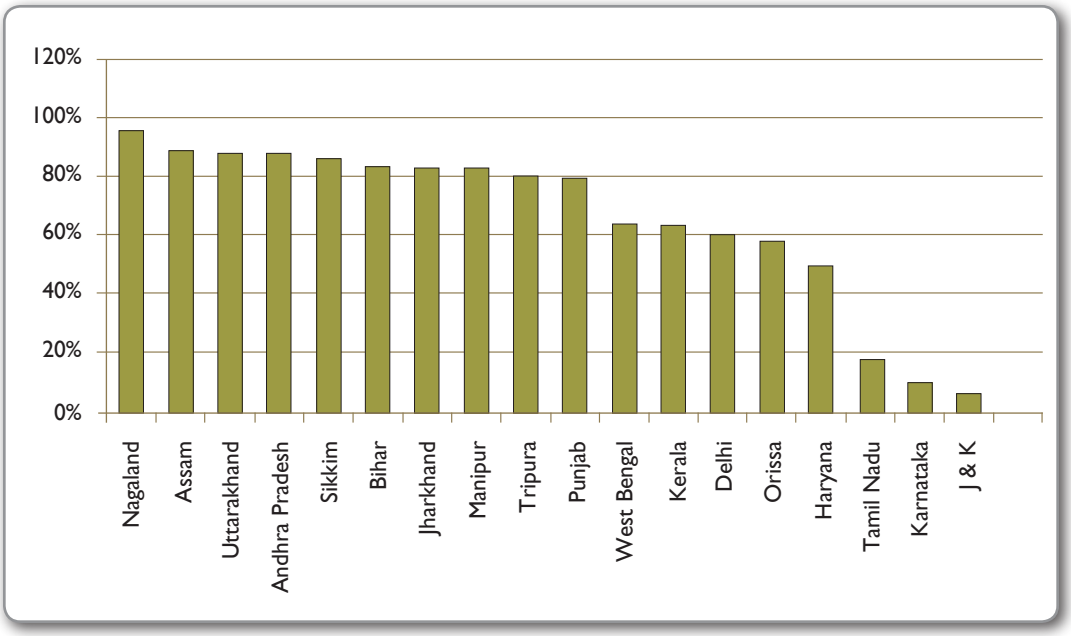


FIGURE 26: Percentage of Households Reporting Use of Home Remedies for Healthy Pregnancy in the Study District

Use of Informal LHT Providers

Use of THP, FoH and FH

Other than the home remedies, the households also responded to queries on other forms of LHT:

- In Uttarakhand, Orissa, Manipur and Bihar, use of THP was just as widely acknowledged showing 70-98% responses. However, states like Delhi, Tamil Nadu, Karnataka and Haryana showed less than 10% use of THP (Figure 27).
- Use of FoH was highly resorted to in Uttarakhand, Bihar, Jharkhand, all the North East states and Andhra Pradesh in the range of 50-100% (Figure 28).
- Use of FH also showed a similar pattern with all of the North East states, as well as other High Focus states, showing high use (Figure 29).

Thus, LHT are most commonly used in the poorest regions, which also have the poorest services in the public and private sectors. However, the use of home remedies is high in all states. Effective, cheap, easily available, easy to use, and no side effects, were the commonly cited reasons why the LHT were found useful (Table 26).

TABLE 26: Advantages of Using Home Remedies as Perceived by Households in the Study District

State	Advantages of Using Home Remedies as Perceived by Households			
	1	2	3	4
High Focus States				
1. Jammu & Kashmir	Available at odd hours/easily available	Cheap and simple	Convenient to use	Safe/without side effects
2. Uttara-khand	Easy to use for all	Effective if right knowledge applied	Cheap/free	Harmless
3. Orissa	Cheap	Easily available	No side effects	Prevent diseases without taking medicines
4. Bihar	Easily available	Cheap	Easy to use	Harmless
5. Jharkhand	Easily available and convenient	Harmless	Beneficial	No expense
High Focus North East States				
6. Assam	Easily available	No side effects	Economical and affordable	Quick healing at home
7. Manipur	Can prepare at home	Easily available	No side effects	Cheap
8. Nagaland	Convenient, at home	Cheap	Less side effects	First aid and preventive measure
9. Sikkim	Affordable	Easily available	Easy to practice	Safe, no side effects
10. Tripura	Good in primary stage of disease	Homely and comfortable	No side effects	Cheap
Non-High Focus States				
11. Andhra Pradesh	Goodwhendoctors not available	Economical	As emergency for minor ailments	Do not know
12. Haryana	Immediate benefits	Good for prevention of diseases	Cheap and fast	Immediate treatment
13. Punjab	Harmless, useful for children	Present in home, useful in emergency	Good preventive measure	Gives quick relief
14. West Bengal	Beneficial	Cost-effective	Easily available	Useful for children
15. Karnataka	Goodwhendoctors not available	Economical	Good in all situations	-
16. Tamil Nadu	Time saving owing to easy availability	Economical	Traditional methods are the best	-
17. Kerala	No side effects	Cheap	Easily available	Prevent disease without any medicine
18. Delhi	No side effects	Free of cost	Effective	-

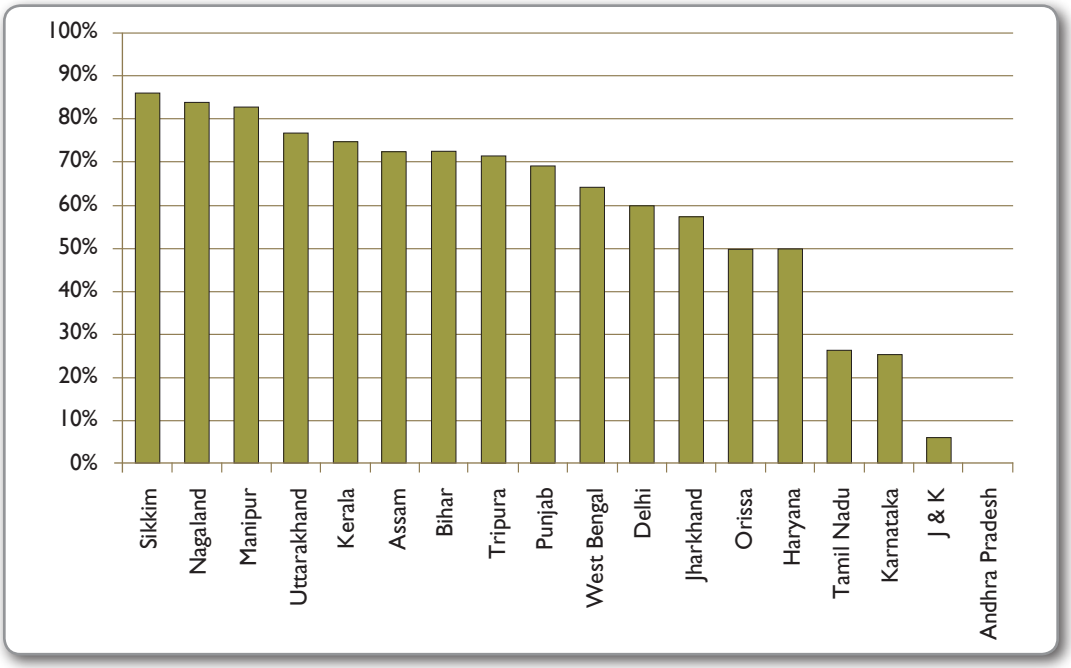


FIGURE 27: Percentage of Households Reporting Use of Home Remedies for Safe Delivery in the Study District

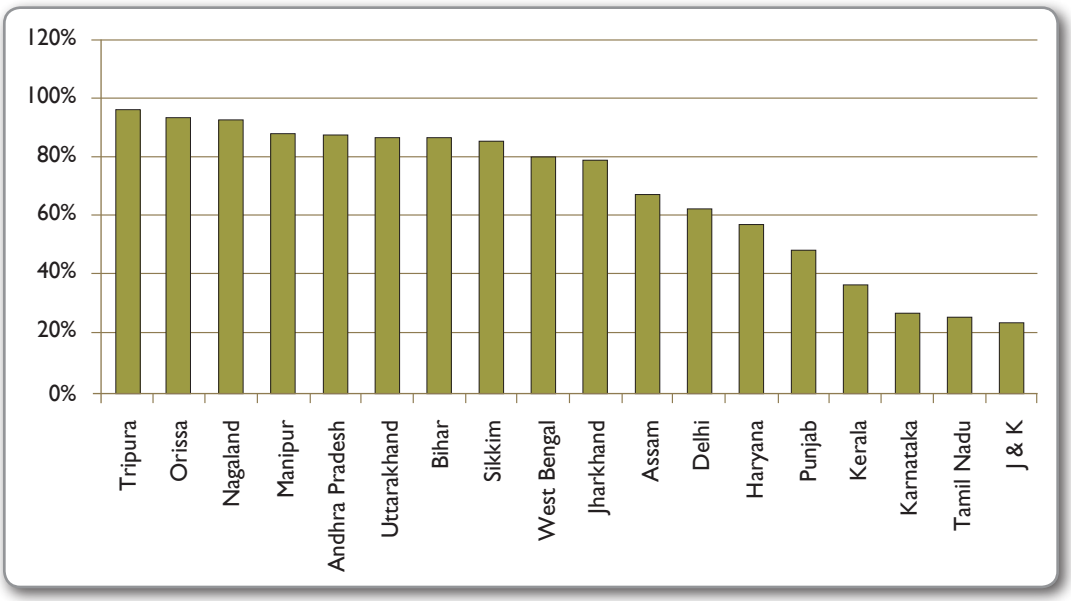


FIGURE 28: Percentage of Households Reporting Use of Home Remedies for Healthy Lactation in the Study District

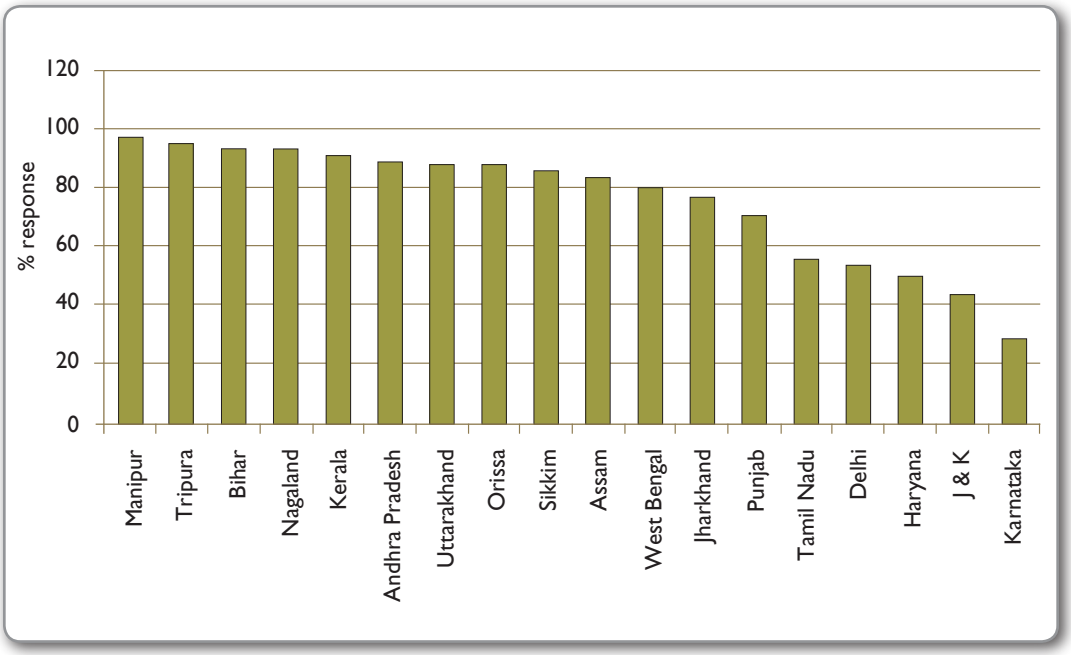


FIGURE 29: Percentage of Households Reporting Use of Home remedies for Baby's health in the Study Districts

In the states like Tamil Nadu, Kerala, Andhra Pradesh, Tripura, West Bengal, Haryana and Manipur, some of the THPs, FH and FoH were interviewed in the Sub-Centre villages.

As a general finding, the informal providers interviewed were well-known in the area for treating particular diseases. For instance, in Tamil Nadu and Kerala, for snake bites THP and FH were the first choice of the villagers. FoH and FH were quite popular in Tripura and West Bengal for treating jaundice and asthma among the villagers by using herbs and oils. A THP in Tamil Nadu, who specialised in preparation of a powder for lactating women and growing children, was quite popular in the locality. Overall, these practitioners were dealing with a variety of health problems largely of chronic nature, e.g., diabetes, fractures, snake bites, asthma, leucorrhoea, constipation, stones (kidney and gall bladder), as well as daily acute problems like cough, fever and diarrhoea. They were using raw herbs for preparing medicines for the patients. It was found that about half of them were documenting the cases they were treating.

Use of Services of Traditional Birth Attendants

While there was clearly a low response to use of services of dais (traditional birth attendants) for deliveries (Figure 30), there was still considerable reporting of their services during antenatal and post-natal periods (Figures 31 and 32).

Of a total of 1,229 responses for deliveries in the last 3 years, 107 (9%) reported the delivery being conducted by a dai at home. The findings show that the deliveries by dais were in the range of 2-25%. The High Focus states of Jharkhand, Bihar, Jammu & Kashmir and West Bengal being in the upper range, and Karnataka, Delhi, Tamil Nadu and Kerala in the lower range.

A higher percentage reported taking some care from the TBA during the antenatal period (59%) and post-natal period (52%). 80-90% mothers did so in the High Focus states, up to 50% in the North East states, and up to 50% in some of the Non-High Focus states. It was negligible in Tamil Nadu. However, the dais' services were used during these periods by a significant proportion even in Kerala and Andhra Pradesh.

Some of the anecdotal findings in the group discussions (state names are in parentheses after the anecdotes in italics) were:

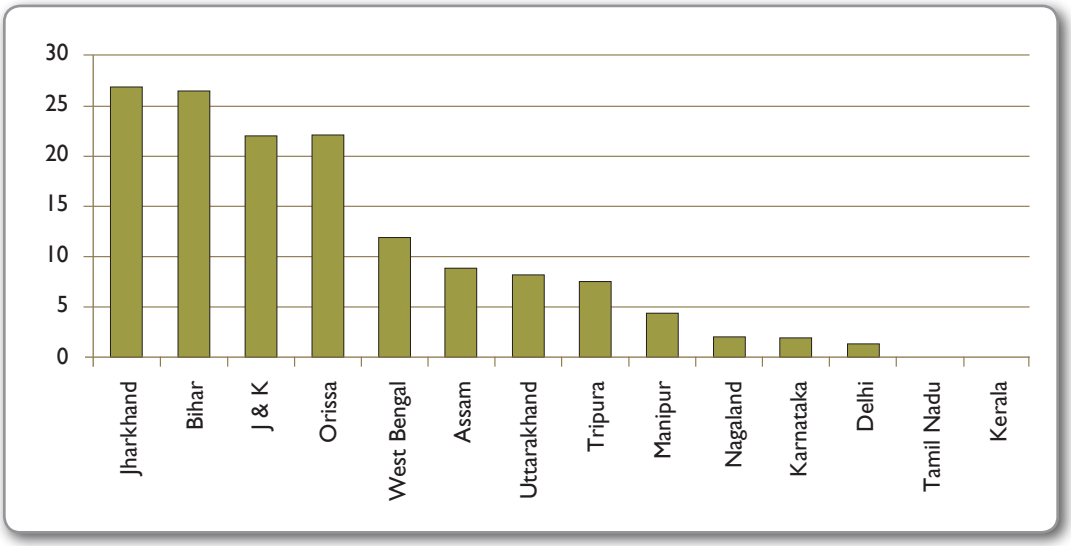


FIGURE 30: Percentage of Households Reporting Use of Traditional Birth Traditional Birth Attendants (TBAs) for Deliveries in the Study District

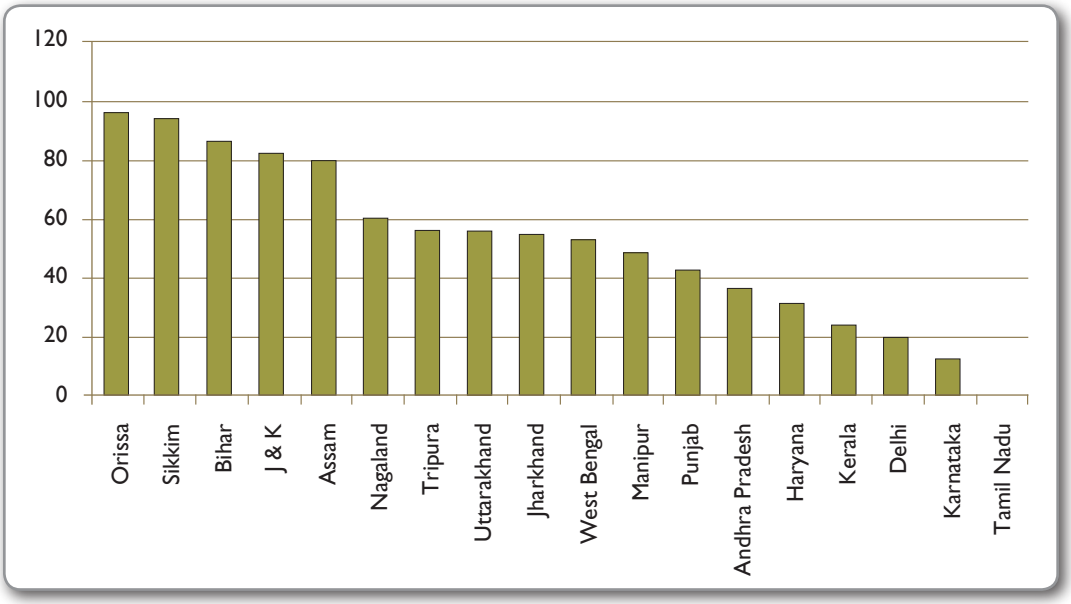


FIGURE 31: Percentage of Households Reporting Use of TBAs for Health Problems During Ante Natal Period in the Study District

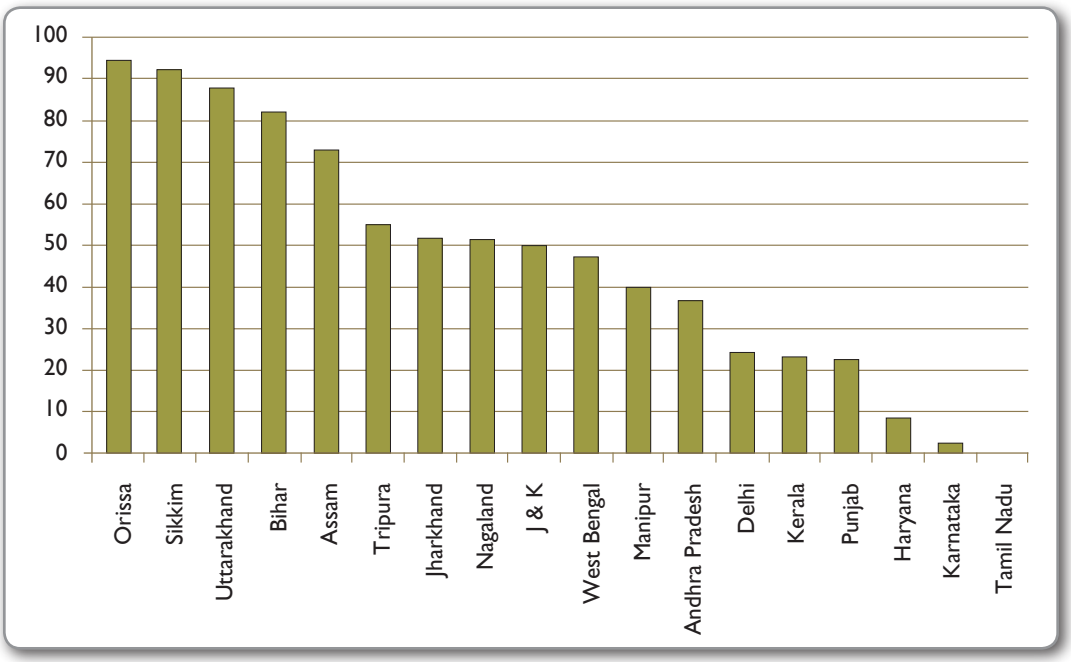


FIGURE 32: Percentage of Households Reporting Use of TBAs for Health Problems During the Post Natal Period in the Study District

A group discussion in progress

Group discussion in South 24-Parganas, West Bengal

"Earlier safe deliveries were done by dais at home. Although the practice is still there, but the number is reduced." (Kerala, Uttarakhand, Assam, Manipur, West Bengal, Bihar and Punjab)

"Dai ma used many plants as medicines which worked effectively, but because government did not recognise these medicines, the total system is getting lost. (West Bengal and Uttarakhand)

Home-based care for the mother and child may also include the dai knowledge on these. There should be a platform for these health care providers to protect the rare traditional knowledge of their practices, and to also sensitising them towards any unhygienic and harmful practices as per the contemporary requirements for ensuring safe deliveries.

Perceptions Expressed in the Group Discussions

Perceived Limitations of AYUSH and LHT

Some common perceptions as anecdotal findings:

"The first choice of treatment for most of the illnesses is Allopathy owing to its 'easy availability' and 'quick relief'; whereas AYUSH services are not available in the government sector and takes 'longer time to cure'." (Bihar, Jharkhand and Sikkim)

"In case of injuries or complicated cases, we have to rush to government District Hospital as AYUSH and LHT practitioners are not equipped to handle these cases." (Orissa, Uttarakhand and Manipur)

"Good doctors of AYUSH as well as their drugs are not easily available in our village." (Punjab, Karnataka and Andhra Pradesh)

Potential of AYUSH and LHT

In general, as also found in the group discussions across the states, elderly people as well as young adults mentioned:

"*In our childhood so many home remedies, use of plants and local healers were available and we depended more on the health traditions. But nowadays health is taken care of by the services available at the facilities and people do not give time to Yoga, pranayama and this knowledge is getting lost." (West Bengal)*

The villagers were of the opinion that "*Most of the people are labour class and are very busy earning their daily livelihood and do not give importance to health promotion, etc., or choice of system for treatment. Since large infrastructure of Allopathy is available and it has quick results - they prefer that.*" However, among the discussants it was a general opinion that *for children, the elderly and women, they prefer Homeopathy and Ayurveda, as they are more cost-effective. But not many qualified practitioners of these systems are available so they have no choice but to take Allopathy only." (Punjab)*

Some of them also stated:

"*Antibiotics and tablets are out of reach of villagers; they may continue Allopathy for few days but within few days stop the medicines because they can't purchase them and then shift to Ayurveda, Homeopathy or Traditional Healers." (Orissa)*

"Nowadays people are busy fulfilling their urge for various commodities of daily life, so maximum time of the day they are spending to earn money, and time for self-care is nowhere, which is the main cause of illness. Common people will gladly accept AYUSH if it is easily available." (Bihar, Uttarakhand and West Bengal)

The people strongly believed in the efficacy of AYUSH systems and LHT, but were not confident and aware of their health services and qualified practitioners in the public system. LHT were generally more depended upon.

"If Central government can arrange easy availability of these systems for common people, then everyone will be eager to enjoy the benefits, specially the poorer sections of society. Then we can decide that in which circumstance which treatment will be more useful to us." (Jharkhand, Tripura and Jammu & Kashmir)

"Health status change between the two generations is because of the decreased immunity due to lifestyle change and wrong food habits. AYUSH systems are good in maintaining a balanced life." (Uttarakhand, Jammu & Kashmir, Orissa and West Bengal)

SECTION 3
VALIDATION OF PROVIDER AND COMMUNITY KNOWLEDGE & PRACTICES BY AYUSH PRINCIPLES AND REFERENCES

This section of the chapter deals with the validation of all our above findings across the states related to health practices and measures adopted by the AYUSH doctors and the community for a wide variety of health problems, right from mother and child care, communicable and non-communicable diseases, as well as preventive and promotive care.

MEANING OF VALIDATION

Here 'validation' was taken as verifying the content of formal providers' prescriptions and people's knowledge of medicinal plants and foods, as well as home remedies in light of AYUSH epistemology and documented codified knowledge. Within the available time and resources, quick referencing from the available texts was considered the most feasible way for this validation exercise.

The following data sets across the states were validated:

a. ***Prescriptions given by the government AYUSH doctors***
b. ***Local community knowledge and practices*** - Under this, the state-wise lists were generated from responses of the households regarding their awareness and use of:
    i. Common medicinal plants and herbs
    ii. Food items and their special medicinal properties
    iii. Home remedies used - by type of ailment, sex and age group for the 20 specified health problems, for mother and child care, malnutrition and convalescence (Table 27 and Annexure 2).
    iv. 3 specific disease conditions analysed separately - diarrhoea, diabetes and anaemia (Table 27).

VALIDATION OF PRESCRIPTIONS OF AYUSH DOCTORS IN GOVERNMENT INSTITUTIONS

The validation was done for AYUSH systems, including primarily Ayurveda, followed by Homeopathy, Siddha and Unani, across 18 study districts. Findings on the prescriptions of the Ayurvedic practitioners (9 states), Homeopathic

practitioners (11 states), and of Siddha and Unani (1 state each), were validated by their respective system.

The AYUSH doctors' prescriptions were validated as per the methodology detailed in Chapter I (Tables 3, 4, 5 and 6). We found that the doctors were largely practicing as per their system's rationality (Table 27). It is to be kept in mind that the packaged drugs prescribed were largely as per the system's rationale; however, the diagnostic methods and terms used showed a mixed pattern of Allopathy and AYUSH.

This was a partial audit of the AYUSH doctors' prescriptions obtained from patients exiting the institutions, where the drugs prescribed by them were validated against the given diagnosis or presenting symptoms. Across the 8 states, in general over 75% of the prescriptions used Ayurveda medicines and approximately 25% of the prescriptions were outside Ayurveda references, comprising of non-classical proprietary medicines and Allopathic medicines (Annexure 2 Tables (I) (II) (III) (IV) Orissa). In Tamil Nadu, Siddha prescriptions were valid upto 78% (Annexure 2 Tables (I) (II) (III) (IV)). For Homeopathy, across 12 states detailing of symptoms along with potencies and frequency of repetition was missing to validate prescriptions, though the medicines prescribed were Homeopathic only and as per the indicated symptoms (Annexure 2). In 3 states, they exclusively used Ayurveda terminology for diagnosis, whereas in 4 they used a mix of Ayurvedic and modern terms. The prescriptions also showed that in all states they were using their own and sometimes also modern methods of diagnosis (prescribing tests) in combination.

A majority of the AYUSH treatment prescribed was validated by the classical texts and/or principles of the system. More than 75% prescriptions were validated by these texts in all the 18 states, except where data on the prescriptions was inadequate for validation, e.g., in Jharkhand, Assam, Nagaland, Sikkim, Andhra Pradesh and Haryana. However, it was found that they were prescribing their own medicines in these states.

Across these 18 states, about 25% prescriptions were outside the AYUSH references or principles, comprising of non-classical proprietary medicines and those practicing Allopathy. Kerala was an exception in that it had only 5% prescriptions outside the AYUSH system. Jammu & Kashmir showed a clear practice of Allopathy by the AYUSH practitioners, and some cases were also reported in Manipur, Andhra Pradesh, Karnataka, Punjab and Orissa, though largely in the stand-alone facilities the doctors were practicising their system.

It is an important finding **that the practice of AYUSH within the government services is largely (over 75%) rational by its epistemology and standard texts**. The

Ayurvedic, Homeopathic, Siddha and Unani prescriptions were largely valid based on their methodology (Table 27 and Annexure 2 for 2 States Sample).

However, particularly with respect to the prescriptions by the AYUSH doctors, the methodology has limited scope since, (i) it only includes references from the classical texts, verifies the medicines prescribed and grossly the diagnostic terms and methods, and (ii) whether diagnosis and diagnostic measures adopted are as per the basic principles, was beyond the scope of validation. It is also important to keep in mind that due to inadequate study inputs during most of the 'institutionalised AYUSH courses' (particularly Ayurvedic), many doctors are not practicing with conviction and confidence in their own system largely in the private sector and practicing Allopathy where they are used as low paid substitutes specially in the northern states and in Maharashtra(ref). In our data, except for a few states like Jammu & Kashmir where the AYUSH doctors were only practicing Allopathy; Orissa and Karnataka where a few prescriptions by AYUSH doctors were found to contain Allopathic medicines, most AYUSH doctors were practicing their own system.

Only the prescriptions with AYUSH regimens (with or without combination with Allopathy) were taken as sample. The practices by AYUSH doctors need to be further probed for validation by the foundational principles of AYUSH to formulate Standard Guidelines or regimens for treatment (e.g., *Chikitsa sutras* based on *Doshas, Prakruti, Vikruti*, etc., in Ayurveda for instance, and similarly for Homeopathy, Siddha, Unani and Yoga/Naturopathy).

VALIDATION OF COMMUNITY KNOWLEDGE

Community knowledge was validated in Tamil Nadu using Siddha texts and principles since that was the most commonly used textual form of traditional medicine in the state. In West Bengal and Tripura, Homeopathy was the most commonly available AYUSH system, but since we were validating knowledge of medicinal plants, medicinal value of foods and home remedies, we used Ayurveda as reference, as we did for the remaining 15 states where Ayurveda was predominantly in use.

Validation of the Medicinal Plants Mentioned by the Households

The medicinal plants mentioned by the households were verified by their botanical names validated by the contemporary compilations from classical texts. Almost all states found

100% validation, except for states like Nagaland, Assam and Manipur where the percentage was 50-80%. Overall the community's awareness about medicinal plants was found validated in the range of 80-100% with all the names mentioned by the households found in the classical references, e.g., *Tulsi* was validated for botanical name Ocimum Sanctum and given category V3 of validation. Similarly, for plants like *Neem*, *Ashoka, Vasaka*, *Aloe vera* and *Giloy*, botanical names as well as classical validation was done (Table 27 and Annexure 2 Table (IV) & (V) for 2 States). All states had *Tulsi* and *Neem* as commonly mentioned plants by the households. In each region, specific medicinal plants, such as, *Pitpapda* in Jammu, *Guwarpatha* in Delhi, *Teetipati* in Sikkim, *Makoiya* in Haryana, *Sonapata* in West Bengal, *Kurunthotti* in Kerala, and *Brihar* in Orissa, were also found.

Validation of Food Items with Medicinal Properties as Perceived by the Households

The validation of community knowledge about medicinal value of foods was largely verified by the texts, from 75-86% items were validated across the states (Table 27). However, there was also a component of modern knowledge about nutritional value of food items, from 10-25%. Apart from plant-based items, many food items with animal, mineral or sea origin were also part of the food items mentioned by the households, e.g., bird and duck meat are perceived to be useful in 'weakness' by households from Nagaland, whereas milk, almonds and bananas were cited in Punjab, as few examples. Unlike the common myth for AYUSH to be only a plant-based health system, many food items with animal, mineral or sea origin were also part of the food items mentioned by the households.

Among the food items mentioned, many items were for digestive disorders, for respiratory infections, or as nutritional supplements. Food items were mentioned for use in arthritis, diabetes, renal stone, asthma and worm infestation. It was interesting to see more than one medicinal property mentioned for a food item by the households, e.g., ginger for cough and cold as well as for digestion, which were all valid as per AYUSH principles. Medicinal properties like "rich in carbohydrates and iron" are indicative of modern medicine knowledge among the households (Annexure 2 Table (VII) & (VIII) for 2 States).

Validation of the Home Remedies

We had asked specifically for home remedies for a list of 20 conditions. We are presenting the analysis of only 3 disease conditions here as illustrative of the general patterns; the

diseases, being among the commonest conditions covering the communicable, non-communicable and nutritional categories, have been included - diarrhoea, anaemia and diabetes (Table 27).

Three conditions denoting promotive and preventive action have also been included - MCH, malnutrition and convalescence.

As a general finding, 70-95% of the reported home remedies in use under the above-mentioned categories were validated in all states by the AYUSH references (Table 27).

Validation of Home Remedies for Specific Conditions

Diarrhoea: For diarrhoea, the validation across states was quite high in the range of 83-100%. Some of the common remedies mentioned across the states were lemon juice with sugar and salt, buttermilk, *Ajwain*, *Pudina*, black salt, coconut water and raw banana, to name a few. Those outside the validation included use of ORS packets. Details of the remedies mentioned are annexed for two states as sample (Annexure 2).

Diabetes: For diabetes, the home remedies mentioned by the households were found valid in the range of 72-100% across states. *Karela* (bitter gourd), *Jamun, Methi* and *Neem* were most commonly mentioned across the states (Annexure 2) Table IX, X.

Anaemia: For anaemia, the remedies mentioned were valid in the range of 71-98% across the states. Some of the common examples found valid as per Ayurveda and Siddha across the states were beetroot, dates, *Munakka*, banana, *Curry Patta*, *Anar* (pomegranate), *Masur dal*, milk and papaya. Duck soup, fish and chicken soup, were amongst the common remedies mentioned in Nagaland. Examples outside AYUSH references linked to modern science, like green leafy vegetables for anaemia, were also part of the home remedies mentioned by the households.

Other than the above, most of the preparations mentioned as home remedies like castor oil in constipation, *Neem* in skin diseases, and pepper with honey and *Tulsi* for cough and cold, are age-old known remedies fully validated by Ayurveda. The laxative action of castor oil, immunity enhancing effects of *Tulsi,* and anti-infective properties of *Neem,* are now accepted with modern scientific evidence also.

Taking the example of two states, Tamil Nadu and Orissa (that we have analysed in Annexure 2), we get specific remedies. In Tamil Nadu, for 20 types of diseases, as many as 119 types of home remedies were mentioned under four categories (infant,

children, male and female). The validation of all these shows that 115 (97%) were as per the Siddha principles and references in Siddha classical texts, while around 3% were outside these references. Majority of them are for cough and cold (28 types), followed by 7 types for diarrhoea, 4 recipes for chronic constipation, malnutrition, memory loss, worm infestation, jaundice, anaemia, diabetes, fistula, insect bites and minor injuries were mentioned, as well as for white discharge and chronic joint pain.

In Orissa, for 20 types of health problems 84 types of home remedies were used. Validation of all these show that 80 types (95.2%) were as per Ayurveda's principles and references in classical texts, while around 4.8% were outside the references. Maximum number of home remedies were mentioned for cough and cold, diarrhoea, worm infestation, insect bites, joint pain and jaundice.

Details of the remedies mentioned are annexed for two states as sample (Annexure 2) Table IX, X.

Validation of Home Remedies for MCH

Under this category, home remedies were asked for four specific conditions; healthy pregnancy, safe delivery, healthy lactation and baby's health. The remedies were found valid in the range of 70-86% across states (Table 27).

Use of *Amla*, milk products, eggs, herbs, massage with *Til* oil, as well as Yoga (Uttarakhand) were mentioned in the states for ensuring safe delivery; massage and mother's milk for baby's health, and use of jaggery and ginger preparations pre and post-pregnancy are some of the examples quoted for mother and child health as home remedies, which find mention in the texts as well. The details of these for two states are annexed (Annexure 2) Table X d.

Validation of Home Remedies for Malnutrition and Convalescence

For malnutrition, the home remedies mentioned were found valid in the range of 70-95% across states. The findings largely suggest the awareness among the households with a mix of traditional and modern forms of knowledge regarding balanced diets/green leafy vegetables, proteins, etc., as also advocated by modern science. Breast-feeding, use of palm jaggery, dates, almonds, etc., are more towards the items advocated by AYUSH science. As many as 46 home remedies have been mentioned by the respondents which are all valid as per the validation categories selected for Siddha references (Annexure 2 - Table X a, b).

TABLE 27: Validation of the Prescriptions of AYUSH Doctors and the Community Knowledge of Local Health Traditions in the Study District

State	Systems of Validation (Prescriptions and Community Knowledge)	Validation %	Prescriptions of AYUSH Doctors (% for Ayurveda ,Siddha and Unani only)	Community Knowledge of the LHT						
				Medicinal Plants by Households	Food Items and Medicinal Properties	Home Remedies for Selected Health Conditions *				
						Mother & Childcare **	Malnutrition and Convalescence	Diarrhoea	Diabetes	Anaemia
High Focus States										
1. Jammu & Kashmir	Ayurveda	% Validated by AYUSH references	0%	100%	83.2%	84.3%	70.3%	90.2%	92%	80.5%
2. Uttara-khand	Ayurveda & Homeopathy		88.2%	100%	86.1%	81.5%	94.5%	93.4%	98%	92%
3. Orissa***	Ayurveda &Homeopathy		92.64%	88%	96.6%	93.1%	93.3%	100%	85.7%	100%
4. Bihar	Ayurveda & Homeopathy		76.7%	94%	76.7%	83.1%	78.7%	89.6%	94.7%	86%
High Focus North East States										
5. Assam	Ayurveda	% Validated by AYUSH references	NA	80%	76.4%	79%	79.3%	97%	98.7%	92%
6. Manipur	Homeopathy & Ayurveda		Homeopathic only	80%	77.77	82%	84.5%	94%	99%	98%
7. Nagaland	Homeopathy & Ayurveda		Homeopathic only	50%	82.3%	84.3%	92.7%	89%	72%	87%
8. Sikkim	Homeopathy & Ayurveda		Homeopathic only	100%	79.8%	78.7%	85.6%	94%	87%	85%
9. Tripura	Ayurveda & Homeopathy		74.6%	100%	83.7%	83.2%	76.5%	91.4%	78.9%	76.4%

Non High Focus States										
10. Andhra Pradesh	Ayurveda	% Validated by AYUSH references	NA	100%	73.2%	71.2%	81%	89%	79%	75.1%
11. Haryana	Ayurveda		NA	100%	71.9%	75.2%	77%	94%	84%	76.6%
12. Punjab	Ayurveda & Homeopathy		76.4%	100%	75.7%	77.8%	73.4%	92%	92%	79.7%
13. West Bengal	Homeopathy & Ayurveda		Homeopathic only	100%	78%	81%	82.8%	96%	89%	76.6%
14. Karnataka	Ayurveda		74.1%	100%	76.4%	73%	79.8%	87.8%	78%	78.4%
15. Kerala	Ayurveda and Homeopathy		94.1%	100%	69.7%	86.2%	84.8%	83%	83%	73.7%
16. Tamil Nadu	Siddha & Homeopathy		77.77%	98%	78.26	93%	95.1%	100%	100%	71.4
17. Delhi	Ayurveda, Homeopathy and Unani		80.4%(A),90%(U)	100%	75.6%	79.5%	86.2%	97%	99%	97.5%

* *The % of those found valid by AYUSH references is out of the number of households responding to the particular specific condition where the number of persons responding varied across states from 2 to 80 households.*

** *For Mother and Child Care use of Home Remedies for four specific conditions, namely, healthy pregnancy, safe delivery, healthy lactation and baby's health, was asked.*
The highlighted rows of Tamil Nadu and Orissa is to indicate that the validated data sample is attached for the States in Annexure 2.
Refer Validation Methodology Chapter 1 (tables 3, 4, 5, 6)

*** *Responding for malnutrition have been validated as for convalescence NR was found for home remedies.*

Many food items were commonly used for convalescence.

In all the age groups, food items right from cereals/pulses/green vegetables to milk/dates/meat, all are considered important; jaggery, honey, dates, pulses and milk are also recommended items under AYUSH for daily nutrition. As many as 62 items were mentioned as home remedies as multiple responses by the respondents and all of them are valid as per Siddha principles. Many of the components of balanced diet in the modern medicine also hold true for Siddha medicine like boiled eggs and fruits, indicating a link between the two as well (Annexure 2).

Similar findings were found across the states regarding the home remedies, food items with medicinal properties and medicinal plants (Annexure 2).

Conceptual Issue in Assessing Evidence and Knowledge

The systematised forms of Traditional Medicine and Homeopathy have laid out well-organised methodologies for verification of causality and generation of evidence to establish causality. As an example, AYUSH systems have their own worldview to verify/analyse things, in this case specifically the verification of the health related knowledge. *The methodology of validation thus used "pramanaas" (means of verification) for validating health related knowledge.*

Ayurveda has clearly defined four "*pramanaas*" or ways of verification as per its epistemology:

1. *Aaptopdesha* (Authoritative testimony)
2. *Pratyaksham* (Direct observation)
3. *Anumaan* (Inference)
4. *Yukti* (Reason /logical experiment)

   (Reference: Charak Samhita, Sutrasthana: 11/17)

The exact translations of these Sanskrit words into English language cannot be done to explain the precise meaning, but can be largely understood as indicated by the words in parentheses. Of the above four ways, we have largely depended on the first, i.e., the authoritative testimony (V1, V3, V4) followed by the second, i.e., inference (V2) for AYUSH principles, and (V3, V5) for the references documented from people's practices (Tables 3, 4 and 5). As per Ayurveda, *Aaptopdesha* is given a higher priority value than others, but it also includes principles of how to add more knowledge to the system. This incorporates other means of verification, such as direct observation or

Pratyaksham, *Anumaan* or logical inference, and Yukti, i.e., interrogation or logical experiment, to name the major ones. The limits of each method have also been defined, just as *Pratyaksham* is considered limited because the knowable outside the purview of direct perception are innumerable (*Pratyksham hi alpam nanalpam apratyksham)*.

Similarly, other AYUSH systems like Siddha, Homeopathy, Unani, Yoga & Naturopathy have their own logic and theoretical framework. Here we have depended for all on the classical and contemporary texts available for these systems as reference for validation. This is one of the ways in which validation has been done in TM/AYUSH; and within the available time and resources, quick referencing from the available texts was considered the most feasible way for this study from which we can get a rough assessment of the rationality of AYUSH prescriptions and community knowledge.

It is also important to keep in mind that due to inadequate study inputs during most of the 'institutionalised AYUSH courses', many doctors are not practicing with conviction and confidence in their own system. Though the classical text *Sushrut Sutrasthana* 3/56 defines:

"At the completion of regular studies the physician should consistently always be engaged in mastering the art of good communication, contemplating the deeper meanings of science, the art of practical application, sustained research and study and then gain professional success."

Thus, the involvement of AYUSH fraternity in such kind of epistemologically sensitive and scientific research is to be further probed if they are to deliver practical solutions for improving health of the community in the present times.

Similarly, the medicinal plants, home remedies and food items with medicinal properties by the households at first hand, stand validated as per AYUSH reference, *but these practices are not claimed to be self-sufficient as treatment modalities*. It is, in fact, a matter of further research and investigation owing to such bulk of data obtained across states by the households which had direct reference in the AYUSH texts (largely Ayurveda, Siddha and Unani).

Insights from the Validation Process

The validation process provided insights into the worldview, sources of knowledge, and ways of learning and epistemology of AYUSH. What was found completely different

from modern medicine was the understanding that there could be no category as 'invalid' knowledge and practice. For instance, one reference in the classical text of Ayurveda - the *Charak Samhita* (*Sutrasthana* 1/120-122) says:

औषधीर्नामरूपाम्यां जानते ह्यजापा बने । अविपाश्रैव गोपाश्र ये चान्ये वनवासिनः ।। १२०

न नामज्ञानमात्रेण रूपज्ञानेन वा पुनः । औषधीनां परां प्राप्तिं कष्चिद्वेदितुमर्हति ।। १२१

योगवित्त्वप्यरूपज्ञस्तासां तत्त्वविदुच्यते । किं पुनर्यो विजानीयादोशधीः सर्वथा भिशक् ।। १२२

योगमासां तु यो विधाद्देशकालोपादितम् । पुरुषं पुरुषं वीस्य स ज्ञेयो भिषगुत्तमः ।। १२३

चं.सू.

The goatherds, shepherds, cowherds and other forest dwellers know the medicinal herbs in the forest by their name and form. No one can know the best application (of these herbs) merely by knowing the name or by knowledge of the form (i.e. how the herb looks like). One who knows the (correct) application, even though ignorant of the shape/form (of the herb), is said to be one who knows the essential thing; what to speak of a physician who would know the herbs in their totality (shape and all). But he is considered as the best of physicians who would know the (correct) use of these (herbs) as effected by place and time and in consideration of individual temperaments.

The use of any plant or food item is thought to arise from the experience of its benefit by someone, and so if it is not in the standard texts, the practice/knowledge can only be documented and not rejected. It would be incorporated into the codified system only after verification by principles of the specific system.

It highlighted the fact that the local health traditions are ecosystem and community specific, yet they are closely allied to the codified systems of AYUSH, forming the folk roots of AYUSH.

It provides a glimpse of AYUSH as a science, which is not a long lost static traditional knowledge but a dynamic ongoing parallel medical system still in use among the Indian households.

It also throws light on the relevance of community knowledge which is an accumulation of experiential knowledge coming from diverse sources and systems. This also demonstrates the relevance of mechanisms of exchange and mutual learning aimed at complementing each other between the diverse forms of parallel knowledge, which today co-exist without interaction.

It provides a background for further research and investigation for the AYUSH fraternity to build the system on the basis of demands of people and strengthening their knowledge for maximum use in the contemporary context. This also has policy implications for developing health service structures. It suggests that people's knowledge and practice can be the starting point for planning and strengthening health care and that the research in AYUSH should cater to validating and strengthening this knowledge in development of the system and taking it forward.

KEY FINDINGS I

Prescribers' Practices

1. High use of own system for diagnosis and prescribing in 6 districts/states.
   Mix of own system and Allopathy in 8 districts/states.
   Only Allopathy in the study district of Jammu, Jammu & Kashmir.
2. The AYUSH prescriptions were more 'rational' than the Allopathic since :
   i. AYUSH prescriptions contained no injectables while they were present in 26% of Allopathic prescriptions, being largely irrational as OPD regimens.
   ii. AYUSH prescriptions for diarrhoeal disease were found valid by AYUSH references, while the Allopathic prescriptions contained antibiotics and injectables in a very high proportion of diarrhoeal disease which is not a rational practice by Allopathic guidelines.
3. Cross-referral and combination therapy were being practiced by providers of both streams, but they are not formally recorded.

Providers' Perceptions

1. A high proportion of Allopathic and AYUSH doctors, as well as ASHAs and ANMs, expressed appreciation of LHTs, especially home remedies and use of local herbs.
2. They gave recommendations for strengthening of AYUSH services and use of LHT that includes managerial issues as well as training of personnel and raising community awareness.

Community Perceptions and Utilisation of AYUSH

1. Utilisation of AYUSH services in the last three months was high, i.e., 30-98% in 11 states, and below 30% in 5 states.
2. Reasons quoted for utilising AYUSH were generally those found in the anthropological literature like 'past experience of effectiveness', 'failure of Allopathic treatment', 'complete/holistic nature of cure', 'no side effects' and 'easy availability'.
3. AYUSH was found to be in use for common everyday acute problems as well as chronic problems.
4. Perceived limitations of AYUSH listed by the community were – 'ineffective in emergencies', 'major injuries', 'surgical cases', 'time consuming', and 'lack of availability of good medicines' and 'lack of qualified doctors'.

Community Perceptions and Use of LHT

1. The household awareness about medicinal plants and medicinal value of food items was found to be almost universal (with only Kerala and Karnataka sharing 50% awareness).
2. All the ASHAs interviewed in 10 states were aware of local medicinal plants, whereas only 12% in Kerala and 50-90% in the remaining 7 states had this awareness.
3. Use of home remedies for various kinds of health problems (except major injuries) was found to be quite high across the states. Similarly, use of home remedies for malnutrition, convalescence and mother and child care were found to be high across states.
4. Use of informal providers (LHT) was also found to be high not only in the High Focus states, but also in states like Tamil Nadu and Kerala, where these were used for snake bites and poisonous bites. Dais were used extensively across the states during the antenatal and post-natal period, though their use for deliveries was considerably low in the Non-High Focus states.

KEY FINDINGS 2

Validation of Provider and Community Knowledge by AYUSH Principles and References

Prescriptions of Government AYUSH Doctors

Over 75% prescriptions of AYUSH were found to be valid by AYUSH references and principles.

- Ayurveda doctors across 8 states
- Siddha doctors in Tamil Nadu
- Homeopathy doctors in 12 states
- Unani doctors in Andhra Pradesh and Delhi

All the above doctors were prescribing their packaged AYUSH medicines as per the system's rationale, and most of them used mixed terms and methods of diagnosis including both Allopathy and their system's terminologies.

In Jammu & Kashmir, AYUSH doctors were prescribing Allopathic medicines only.

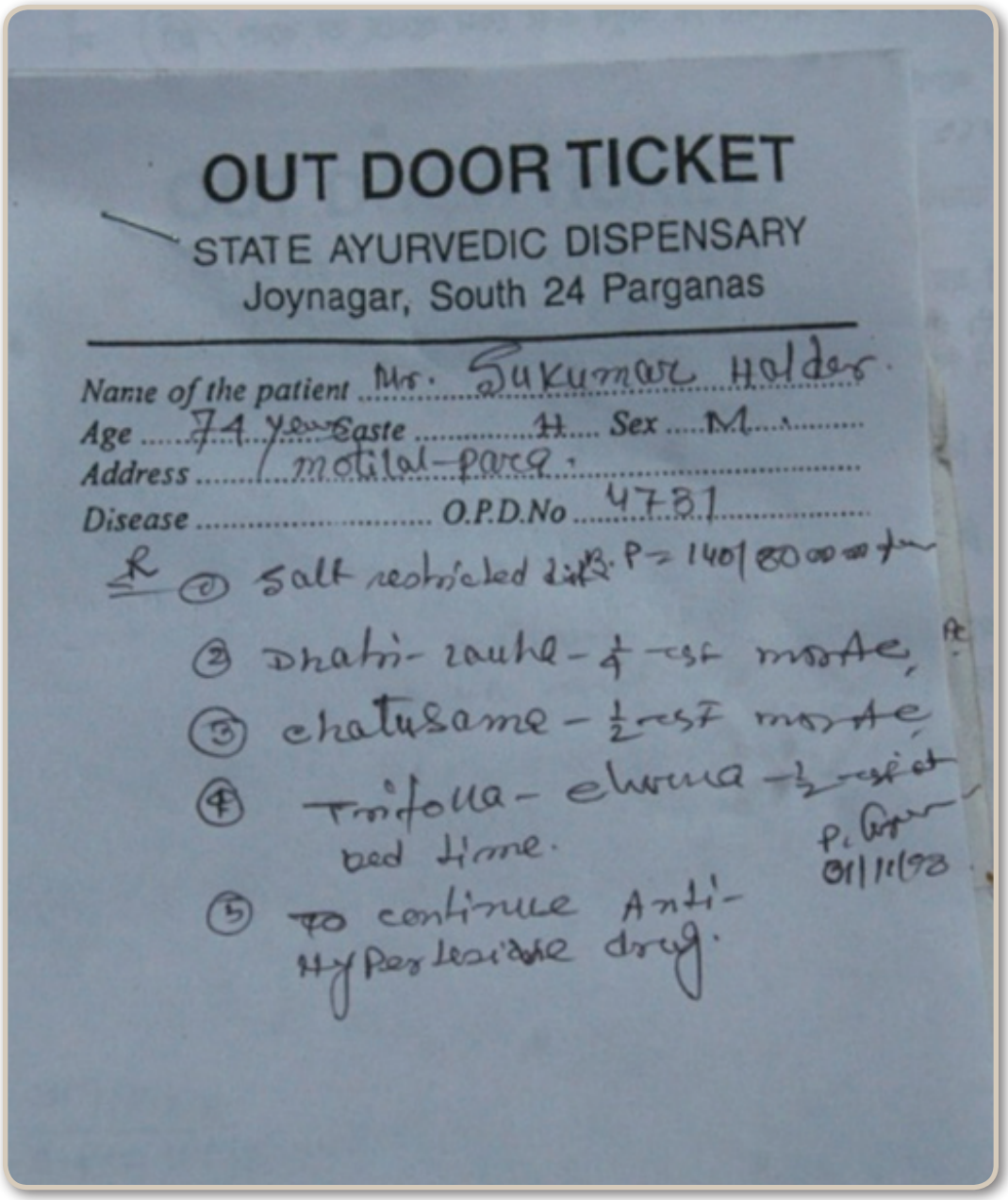
Local Community Knowledge and Practices

The medicinal plants and the food items, as well as the home remedies for various health problems, malnutrition, convalescence and mother and child care mentioned by the households, were found valid (over 70%) across the states.

Key Insights From Validation

- The validation exercise highlights the clear linkage between the knowledge of LHT and AYUSH codified texts.
- It demonstrates the possibility of validating the knowledge of LHT and AYUSH by their system's principles and parameters.

It highlights policy implications for developing a health service system where peoples' knowledge and practice can be the starting point for planning health care, with strong support of validation by AYUSH principles. Linkages of LHT with the AYUSH services would be mutually beneficial, providing indications for development of the systems as well.



OUT DOOR TICKET

STATE AYURVEDIC DISPENSARY
Joynagar, South 24 Parganas

Name of the patient Mr. Sukumar Halder.
Age 74 years Caste H Sex M
Address motilal-para.
Disease O.P.D.No 4781

℞ ① Salt restricted diet. B.P = 140/80 mm Hg

② Dhatri-rauha - ¼ cup mane,

③ chatusama - ½ cup mane

④ Triphala - churna - ½ tsp at bed time.

⑤ To continue Anti-Hypertensive drug.

P. Roy
01/11/98

OPD Ticket Showing Ayurveda Prescription of a Patient

IV

Discussion and Recommendations for Policy and Planning

IMPLICATIONS OF THE FINDINGS

The findings of this study provide an overview of the status of AYUSH services in the public system in 2007-08-09, the demand for services by the community as reflected in their contemporary use of AYUSH and LHT, as well as the providers' and community perceptions and knowledge. It specifically examines the co-located AYUSH services under the NRHM strategy of 'mainstreaming AYUSH and revitalising LHT'. The study captures the variation in the AYUSH services across the states, even while it finds strong common patterns across the country. Further, the findings raise policy issues about the approaches for 'architectural correction of the health services' as a central mandate of the NRHM, indicating the resources for building upon to strengthen the AYUSH systems and their services.

A major finding has been the high utilisation and valid knowledge of LHT and AYUSH that are an integral part of the lives of large sections of the population across the states even in the present time. In one-third of the 18 states covered by the study, 60-90% households reported utilisation of AYUSH services in the past three months; in another one-third states, they reported 30-60%; and in the rest of the states, less than 30% households reported use of AYUSH facilities in the last three months. The household and exit interviews showed utilisation and awareness from all socio-economic sections, both sexes and young, middle-aged and elderly persons, but does not examine the differential utilisation between them. Among the stand-alone facilities and state level OPD attendance data, there were corroborative figures, ranging from 8-78 AOP/f/d in the stand-alone institutions (almost half had below 20 AOP/f/d, another half 20-60 and one state, i.e., Tamil Nadu, had over 70 AOP/f/d). Among the co-located facilities, the patient load was less, ranging across states from 1-75 AOP/f/d. Over 80% households reported use of LHT for some health reason or the other in all states. Awareness of medicinal plants was found in over 90% of households in all states. This finding corroborates international public health studies and anthropological studies in India (Bodeker and Chaudhary, 2002) but is not reflected in the national surveys on health related behaviours such as the NFHS and the NSSO.

Another important finding is the rational prescribing practice of a majority of AYUSH practitioners within the public system, validated by the principles and texts of the AYUSH systems. In the stand-alone facilities, only their own system was in use. In the co-located services, AYUSH doctors were found to prescribe only their own system's regimen in 6 states, a combination of AYUSH and Allopathic practice by AYUSH

providers was found in 8 states and exclusive use of Allopathy by them in 1 state. Of the AYUSH prescriptions, only 10-20% prescriptions were found to be outside the AYUSH references in most of the states. In Kerala, only 5% prescriptions contained medicines outside the AYUSH validation since all were in stand-alone institutions. However, it was 100% in one state, i.e., Jammu & Kashmir, where all were practicing Allopathy as no AYUSH medicines were being supplied. Many AYUSH doctors, especially in the High Focus states, have to practice Allopathy when posted in health centres where there is no Allopathic doctor or no AYUSH medicines, or where they are entrusted with operationalising NHPs as part of their duties. However, a large section would be happy to practice their own science, given adequate support, medicines, and an equal status.

A third finding is the positive perception about AYUSH of 70% Allopathic doctors and 55% for LHT, and the practice of informal cross-referral to other 'pathies' by many of them.

All these three reflect a strong 'demand' for AYUSH and LHT as systems valued for themselves and not merely as substitutes for Allopathy. The NRHM's strategy of 'mainstreaming AYUSH and revitalising LHT' must respond to this demand adequately, in the light of its mandate for an 'architectural correction' of the health service system, given its emphasis on community processes and community participation, on decentralised action and local flexibility.

The socialisation in family and community of a majority of ANMs, ASHAs and doctors had given them awareness and knowledge about LHT and AYUSH, but their professional training and formal disciplines tend to alienate them from this cultural mooring and local ecology. The existing knowledge base of the LHT and their practitioners, must be incorporated into the health system in ways that promote their rational use and the further growth of these knowledge systems, as appropriate for the present times.

While the OPD attendance of public facilities was found to be closely associated with the quality of AYUSH services in the state, household level reporting of utilisation varied, since people used services of the private sector as well. Thereby, coverage and quality are both of crucial significance.

The quality of AYUSH services was found to be very good in only two states and leaves much to be done in all others. Though quality was better for the stand-alone

institutions as compared to the co-located in all states, the co-located services were good in states where they had been functioning for some time, hence there is the expectation that improvements will be seen in the coming years in all states. However, much support and inputs will be required for the same to materialise and the services to reach their optimal levels of functioning.

Our recommendations are multi-pronged, with two major dimensions. One deals with the governance issues and paradigm adopted for planning of health services such that the community practices that are validated for their correctness by any 'pathy', including AYUSH and LHT, are given central consideration. The second deals with operational strategies and activities for strengthening the quality and functioning of the AYUSH services and promoting LHT. The second may be considered independent of the first, though they are mutually supportive.

The following is, therefore, a discussion of (A) Governance issues, and (B) Coverage and Quality issues, followed by recommendation on both for strengthening the AYUSH services and LHT.

GOVERNANCE ISSUES

Historical Bias Against AYUSH Systems

The AYUSH systems are part of the knowledge and practice that was marginalised during the colonial period as modern medicine entered and became the dominant form of official health care. Their services developed within the public system under a politically decided policy of pluralism within the health services.

However, the paradigmatic dominance of modern science and technology was also part of the policy perspective at the time of Independence. This has been in evidence over all the Five Year Plans, only 3% or less of the total health budget being allocated to AYUSH. This has remained so even after formation of a full-fledged Department of AYUSH and in the current 11th Five Year Plan it is 2.7%, the least among all the departments of the Ministry of Health & Family Welfare (Table 28). Some expenditure on AYUSH comes from other departments, such as on salaries of co-located AYUSH providers from the NRHM budget, so it may increase to a total of about 3% of the central health budget.

TABLE 28: IIth Plan Allocations (2007-12)		
S. No.	**Departments in the MoH&FW**	**(Rs. in crores)**
1.	Dept. of H&FW	1, 31,650.92 (90.3%)
2.	Dept. of AYUSH	3,988.00 (2.7%)
3.	Dept. of Health Research	4,496.08 (3.0%)
4.	NACO	5,728.00 (4.0%)
	Total	**1, 45,863.00 (100%)**

Source: Planning Commission, XIth Plan, GOI

Impact of Political and Cultural Context on Development of AYUSH Services

The status of AYUSH services in the public system across the states prior to NRHM reveals the divergences in policy perspectives based on the political and cultural context of each state. While in all states the financial allocation was markedly higher for Allopathy, in three of our study states, the coverage of AYUSH service institutions was higher than of Allopathic Institutions. These three states were Kerala, West Bengal and Tripura, all being states with a political left leadership in government for long periods. This can be interpreted to show that they tended to adopt policies in response to the needs and demands from the ground more than other states. Ayurveda, Homeopathy and Unani are the systems whose services have been developed in these states.

It is also relevant to note the finding that in Tripura and West Bengal, the coverage of Allopathic services is low and the quality of dispensaries not good, while Kerala has well-developed Allopathic and AYUSH health services in the public system. This is in conformity with the general finding that the High Focus states, with lower economic development and finances for social development, have lower quality of services. The cultural roots of Ayurveda in Kerala are also much deeper than those of Homeopathy, which is the predominant co-located system in West Bengal, or Homeopathy and Ayurveda in Tripura. In Jammu & Kashmir, the Jammu division stand-alone services were mainly of Ayurveda, of the Kashmir division primarily of Unani, and in Ladakh division it was the Tibetan system of Sowa-Rigpa (or Amchi medicine as it is popularly know). In Tamil Nadu, Siddha services predominate even though those of all others (except Sowa-Rigpa) also exist.

Administrative Structures

Since the AYUSH services have come up in an environment where the dominance of modern medicine was complete within the public system, a strong administrative component is necessary to strengthen the services to bring them to their full potential.

Two states that have a strong administrative leadership for AYUSH, i.e., Tamil Nadu and Andhra Pradesh (having a full Secretary or Commissioner, respectively), demonstrate the importance of this for making the required implementation possible. However, low level of AYUSH institutional coverage in these states relative to many others, and the differences in coverage and quality of services between the two states, reveal that this measure alone is not the only influence and will not be enough to turn the tide. The overall functioning of the general health services and the general administration in the state, as well as the role of the privatisation process, affect the operationalisation of such strategies in significant ways.

Orissa, that developed a separate directorate of ISM&H in 1972, much before it came about at the centre, is also way ahead in development of its AYUSH services relative to the other states at the same level of socio-economic development. Kerala stands apart in coverage and quality. Therefore, we examine these four states in greater detail.

Lessons from the Case Studies of Kerala, Tami Nadu, Orissa and Andhra Pradesh

Separate administrative and technical control independent of the Allopathic services seems most conducive for development of AYUSH services, as the example of Kerala and Orissa demonstrates. At their levels of socioe-conomic development, they have the best coverage-cum-quality of AYUSH services. Both have well-developed directorates in the state, with technical leadership at the helm. This indicates the value given to the AYUSH systems relative to Allopathy by the health administration. Kerala has developed all AYUSH services in independent institutions, not adopting co-location even under NRHM. Administrative independence is not enough as the examples of Tamil Nadu and Andhra Pradesh demonstrate where, despite independent administrative charge, Tamil Nadu has low coverage and Andhra Pradesh has poor coverage and quality.

Kerala has the best-developed coverage and quality of AYUSH services. It has a strong community reliance on Ayurvedic services and the politico-administrative systems

have given priority attention to health services – both Allopathic and AYUSH. They responded to the culturally rooted need by building a strong base of stand-alone AYUSH services. While there is a common administrative head, in terms of the Secretary - Health & Family Welfare, there are three independent directorates – for Ayurvedic services, Homeopathy services and AYUSH medical colleges. Technical persons head the directorates, and there are only stand-alone services, thereby giving them technical leadership and supervision that is stronger than in any other state.

Tamil Nadu is in a better financial situation than Kerala, and has a separate directorate of AYUSH headed by an independent Commissioner, as well as has the best administrative culture in the country. Yet it has poorer coverage of AYUSH services than Kerala, reflecting official health policy-maker's bias towards modern medicine. Tamil Nadu has one Allopathic institution per 21 thousand population, with one AYUSH institution per 39 thousand population. Kerala has one Allopathic institution per 33 thousand population, with one AYUSH institution per 18 thousand population. Kerala has given independent status to the AYUSH doctors, Tamil Nadu has AYUSH doctors in subordinate status to Allopaths in the co-located services. There is a strong demand for AYUSH services from the community, especially for Siddha services, and so the policy makers had responded by co-locating AYUSH services in DHs and PHCs even prior to NRHM, which did not require much budgetary allocation and yet fulfilled some demand for services. Its administrative aptitude generated effective supervisory and drug procurement mechanisms that created good quality of the AYUSH services, as it did of the Allopathic services.

OPD attendance per facility per day is of similar order in both states indicating a higher overall utilisation in Kerala. In Tamil Nadu the providers and patients both see the overcrowding in OPDs as a problem and have suggested increasing the number of AYUSH doctors per facility or opening new facilities. Therefore, increasing coverage of AYUSH services remains an issue for Tamil Nadu. It has to be noted that in both these states that have the highest utilisation of figures, coverage and quality of the Allopathic services is also good and MBBS doctors are by and large in position. This allows for developing the AYUSH services without pressure on the AYUSH providers to substitute for the Allopaths.

Orissa has the best AYUSH services by coverage and quality among the High Focus states with a low financial status. It started their development as a policy decision, with a separate directorate being set up as early as 1972. While its coverage of stand-alone

institutions remained lower than of Allopathy, it enhanced co-location to the extent that the relative coverage was reversed. Since coverage of Allopathic services in the public system has also been low, and so has private sector development, this reflects a low development rate overall, not a bias against AYUSH. Given the constraint of lack of Allopathic doctors in the rural services, the state has deployed AYUSH doctors under NRHM in large numbers, many serving at the PHC (New) where there is no other doctor. However, in the absence of other doctors, they often have to prescribe Allopathic medicines and the quality of AYUSH services suffers. Lack of adequate resources appears to be the primary constraint here in developing quality of services.

Andhra Pradesh has poor coverage and quality of AYUSH services along with a similar situation of Allopathic services, despite a better financial situation than Orissa (and many of the other states). It, thereby, reflects the state policy of promoting the private sector in health services and a lack of interest in doing so within the public system. This poor development has been despite a separate directorate of ISM&H with an independent Secretary, i.e., a strong administrative leadership vis-à-vis other components of the health services. It is, therefore, a lack of interest rather than administrative clout that has resettled in the lag in AYUSH service development in the state.

Thus, the lessons for coverage and quality of AYUSH services appear to be the following:

While independent administrative control for AYUSH services at the senior-most level leads to better administration and quality of services, it does not necessarily translate into better coverage. Coverage appears to be influenced by policy approaches related to both, the bias towards private sector versus public sector development and towards modern medicine versus ISM&H. Coverage by AYUSH services in public systems is good either where AYUSH is inherently valued and public Allopathic services are also well-developed as in Kerala, or where they are viewed as a way of using AYUSH providers for provision of Allopathic services to substitute for Allopaths as in Orissa, Uttarakhand and Jammu & Kashmir. Quality at dispensary level is dependent on the financial situation of the state, the political, administrative and technical support given to AYUSH services, and their links to socio-cultural demand.

Therefore, while it will be desirable to create separate directorates and secretary/ commissioners of AYUSH in each state, this step must be backed by an understanding of the potential of these systems to contribute to fulfilling health needs.

Therefore, a primary pre-requisite for ensuring 'mainstreaming' of AYUSH in the public system appears to be the sensitisation of policy makers and administrators to the significance and role of these systems in health care.

It may be more cost-effective to co-locate services rather than set up independent new facilities as Kerala has done. It is also more user friendly to have all services under one roof. The long-term goal of integrative medicine may also be better served by co-location. However, as various states demonstrate, for this strategy to translate into strengthening of the AYUSH systems and provision of quality AYUSH service, requires that there be a socio-cultural and policy environment that recognises the inherent value of AYUSH services in their own right. Tamil Nadu is a clear example of this situation, where even while working under the charge of Allopaths at the facility level, the AYUSH providers treat patients exclusively through their system and quality is ensured through good administrative processes and technical supervision. High utilisation of services indicates high community demand for services and a relatively high patient satisfaction.

In the states with poor coverage of Allopathic institutions, or lack of Allopathic doctors in them, a higher coverage with co-located services may only mean a substitution of Allopaths by the AYUSH doctors, as in several PHCs of Orissa (and in Jammu & Kashmir and Uttarakhand), which have the best AYUSH coverage and quality among the High Focus states.

In most High Focus states, despite having independent directorates, the quality of AYUSH services takes a back seat. It is precisely in these states that LHT and AYUSH could have ensured universal access to primary health care in the most cost-effective way. Instead, their legitimacy has been undermined by poor quality services, as well as by the modern development discourse that is reflected in the community perceptions and responses. The lack of importance given to AYUSH within the health department has been remarked upon in the Ferguson evaluation, where the centrally sponsored schemes were evidently delayed because of this (Ferguson & Co., 2007).

Paradigms for Planning

The needs of each state appear to be different for strengthening AYUSH services because of the status of these services at the beginning of this decade and the significantly different context in each state. The universal strategy of co-location was thereby rejected by the state of Kerala. The state of Orissa, too, may have done better

if it had planned on its own on how to make best use of the potential of AYUSH. Chhattisgarh's creative initiatives in this direction on its own demonstrate the possibilities (NHSRC, 2009).

The question this study raises for governance is what paradigm of planning is to be adopted for health systems development; one that is bottom-up as responsive to the needs and aspirations of the people in rural areas, or is it to be top-down, structured by institutional feasibility, technocratic perspectives, and the dominant international urbanised paradigms. The level of utilisation and demand for AYUSH services, as well as use of LHT and awareness of home remedies, suggests that a bottom-up approach would require these to be made the focal starting points for planning Primary Health Care services. This implies an architectural correction in the proportion of support given to Allopathic and AYUSH services, budgetary and otherwise.

Supervisory Structures

The supervisory structure of the AYUSH services in the stand-alone facilities is almost non-functional because of poor infrastructural support to State and District level AYUSH functionaries in most states, high vacancies at district level, and a work culture of low functionality that has developed over the years.

For the co-located services, there is no functional link developed with the department of AYUSH at state or district levels. This leaves the co-located services under the administrative control of the facility in-charge with no technical supervision or support. In Tamil Nadu, where the technical supervision is also institutionalised for the co-located services prior to NRHM, the quality of services is evidence of the importance of this measure.

COVERAGE AND QUALITY OF AYUSH SERVICES

Number and Type of Facilities – Stand-alone and Co-located

There is a wide network of stand-alone AYUSH facilities in most states, ranging from 1 institution per 17 thousand persons in Uttarakhand to a low of 1 for over 1 lakh in Jharkhand and Bihar. With co-location, the ratio of service institutions to population improved to 1:12 thousand in Uttarakhand, and 1:14 thousand in Orissa (from 1:33 thousand) to 1:60 thousand in Andhra Pradesh (where the stand-alone ratio was 1:76 thousand).

In the states of West Bengal and Tamil Nadu, where large-scale co-location existed even before NRHM, the result of the NRHM strategy has been addition of co-location facilities at the PHC and CHC levels. Earlier, the focus was on district and sub-district hospitals.

Relative to Allopathic facilities, the total AYUSH services still remain low in most states even after co-location. The exceptions are Kerala, Tripura and West Bengal, where the AYUSH service institutions are more in number than the Allopathic. In Orissa, the number of AYUSH service institutions has become more than that of Allopathy (excluding SCs which are not comparable since they are not meant to have doctors providing services) after co-location under NRHM, as has the ratio of doctors in the same proportion.

Among the High Focus states, being hill states, the North East states (except Tripura and Assam), Jammu & Kashmir and Uttarakhand had the best coverage by Allopathic institutions. However, they have very varied coverage by AYUSH services; Uttarakhand, Tripura and Jammu & Kashmir, having good coverage, and Manipur, Assam, Nagaland and Sikkim having poor coverage. Among the non-hill states, Bihar and Jharkhand have poor coverage of both Allopathic and AYUSH services. Orissa is the exception with good coverage of both. Among the Non-High Focus states, except for Punjab and Tamil Nadu, all others have lower institutional coverage of Allopathy, with Kerala as the exception for AYUSH services.

Quality of AYUSH Services – Stand-alone and Co-located

The quality of AYUSH services was assessed based on a set of parameters covering infrastructure, human resources, supplies, record-keeping and other inputs. While the quality varied across states, in almost all states the quality of infrastructure, presence of human resources, supply of medicines, and records were found to be unsatisfactory. A grade was composed for the quality of facilities in each state, by combining the indicators of all these parameters. The criteria for grading were minimalist and thereby very generous grades were obtained. They were relative grades rather than reflecting the desirable standards of quality, the objective being a more comparative rather than absolute analysis.

Among the stand-alone facilities, in 8 states they were graded 'fair', in 2 'good', and in 3 'very good'. Among the co-located, 7 were graded 'poor', 6 'fair' and 2 'good'. Thus, the quality of services was found to be better in the stand-alone than the co-located, the

gradient across states being similar for both. Among the High Focus states, in two the stand-alone are 'good', while among the Non-High Focus, two are 'very good'. All others were graded 'fair'. Of the co-located, none are 'very good', being 'good' in two Non-High Focus states, 'fair' in three and 'poor' in two. They were not even graded 'good' in any of the High Focus states, being graded from 'fair' to 'poor' and 'very poor'.

Human Resources

The ratio of number of AYUSH doctors to AYUSH institutions reveals the position of vacant posts and lack of doctors and paramedics in the public system in atleast 5 states - Bihar, Jharkhand, Manipur, Tripura and Punjab. With co-location, under NRHM, the doctor : population ratio has improved considerably. Jammu & Kashmir and Orissa have among the best figures for presence of AYUSH doctors in the public system: population ratio after co-location, at approximately 1:15 thousand. Bihar, with no co-location, has the worst at over 1:4 lakh.

However, across states, despite co-location, the AYUSH doctors continue to be 2 to 15 times less than the Allopaths. Orissa is an exception since it now has more AYUSH doctors than Allopaths in the public system.

Salary Structure

There is parity in salary structure between the AYUSH and Allopathic doctors in 10 states and markedly lower in 6 states – these being Nagaland, Andhra Pradesh, Haryana, Punjab, Karnataka and West Bengal. Data was unavailable for 2 states.

The status of AYUSH doctors relative to the Allopaths can be seen in the co-located services by differential designations and the ascribed roles for them.

Designation

In the co-located services in Haryana and Tamil Nadu, the AYUSH doctors are designated as Assistant MOs (Medical Officers) irrespective of their level of seniority. They do not become in charge of facilities if an Allopath is also posted at the same facility.

In all other states, the designation is MO, but the charge remains with the Allopaths.

Roles and Responsibilities of AYUSH Doctors

Primarily, OPD services seem to be the major activity of AYUSH doctors in co-located services. Where there is no other doctor, they practice both Allopathy and

AYUSH. This is specially marked at the PHC level in most states. In CHCs and District Hospitals, they practice their own system of medicine most of the time. In some states, such as Manipur and Orissa, they also conduct deliveries at PHCs where there is no Allopathic MO. There is no outreach activity and no clear role definition in implementing the NHPs. In some states there are a few mobile clinics and health melas where the AYUSH doctors participate. They may also be involved in some training activity for RCH care and AYUSH components for the ANMs and ASHAs.

Validation of the Prescriptions of AYUSH Doctors

80% of the AYUSH doctors' prescriptions were validated by AYUSH text references and principles in all the states where prescriptions were recorded, i.e., 11 of 18 states surveyed. About 20% were outside the texts, Kerala findings showing only 5% outside. Jammu & Kashmir showed a 100% outside because all AYUSH doctors practiced Allopathy since no AYUSH medicines were being supplied, and the expectation in the service was that they practice only Allopathy.

Infrastructure & Logistics

Among the stand-alone institutions, the hospitals generally had good buildings with reasonable maintenance; however, the dispensaries were in comparatively poorer shape in all states, some still running from semi-pucca or kaccha buildings even in the Non-High Focus states. Cleanliness was generally found to be lacking in most institutions, especially in the toilets and the vacant space in the compound. West Bengal had pucca dispensaries with satisfactory maintenance. Water supply and electricity were generally erratic, with no back up of tanks or generators. Vacant space around the compound was universally found in the facilities covered across states except Delhi, though it lay unutilised for herbal gardens or quarters for the staff.

Among the co-located facilities, the District Hospitals had separate space for the AYUSH OPD in all states, the CHCs had separate space only in Orissa, Manipur and Sikkim, and in no state in the PHCs. Signages were generally not adequate. While water supply and electricity were generally erratic, there was back up of tanks and generators for the whole institution that benefited the AYUSH services as well. Most had some vacant compound but no herbal gardens.

Thus, on an average, all the states could just qualify marginally for marks on the parameter of infrastructure.

Drug Supply

The supply of AYUSH medicines was stated to be inadequate by the providers and users, and the packaging and drug dispensing has been reported as inconvenient to the patients.

Supplies were generally better at the stand-alone than the co-located services. The PHCs in particular had poor supply; a large number of those studied not yet having begun to get AYUSH medicines.

Diagnostics

Diagnostic facilities are available at the co-located institutions, but only at very few stand-alone AYUSH hospitals, and none at the stand-alone dispensaries.

Record-Keeping of AYUSH Services

The facilities profiled in the study had records of OPD attendance, but did not have well maintained utilisation data by age, sex as well as the profile of presenting complaints. There was also a mix of terminologies of diseases quoted both from the AYUSH system as well as modern medicine diagnostic terms; e.g., arthritis is also mentioned as "*vata vyadhi*". Information about referral of patients was not covered anywhere, whether of cross-referral within a co-located institution, or to other institutions. The services provided by these institutions in NHPs, especially National Vector Borne Disease Control Programme (NVBDCP) (e.g., Chikungunya), are not properly recorded. Where recorded, the reporting mechanism still needs to be put in place.

However, a comparison of the facility level OPD utilisation data with the state level aggregated data showed that the state records had lower figures and, therefore, were definitely not inflated, though there was likelihood of under-reporting due to incomplete/irregular reporting by facilities and districts.

The web-based HMIS of the general health service, provides data on the co-located services only. There, too, data is available for state and district levels, providing only the OPD attendance. In many states it was obvious that the aggregated data was based on incomplete reports with only some districts and facilities in them sending in their data.

RECOMMENDATIONS

A FRAMEWORK FOR ARCHITECTURAL CORRECTION OF THE INDIAN HEALTH SERVICE SYSTEM

Recommendations for Strengthening AYUSH and LHT through Governance

Financing of AYUSH Services

1. The imbalance in financial allocations must be corrected, with increase in financing for AYUSH and LHT, to match with the demand and utilisation. This is necessary to improve coverage as well as quality of AYUSH services and of initiatives to revitalise LHT. A comparable number of service delivery institutions and medical colleges exist between Allopathy and AYUSH in the public system, so how can the AYUSH services be expected to function well or with confidence with less than 3% of the budget while the Allopathic services get 90%.
2. This will require a proactive effort to sensitise the policy makers to the value of the AYUSH systems and their services, as well as of the LHT.

Increasing Coverage by Number of Institutions Providing AYUSH Services

3. More facilities may be required in districts and blocks where they are lacking, and more personnel may be sanctioned at facilities where the load is high. Setting guidelines for norms by population coverage and accessibility would be useful. In states such as Tamil Nadu and Kerala, the functioning of existing services is high, but the coverage requires to be increased if wider access is to be ensured. At present, a larger segment of the population has to resort to the private sector to fulfil its demand for AYUSH services.

Administrative Structures

4. It is recommended that each state should have a separate Commissioner or Secretary to energise the implementation of measures, strengthen quality of services, and improve coverage. This could provide strong administrative support to the stand-alone as well as co-located services, and leadership that can garner adequate resources for growth and development of the AYUSH services.
5. Strengthening management support at state and district levels would facilitate the upgradation process and functioning of the institutions.

Supervisory Structures

6. There is an urgent need to strengthen and make functional the supervisory structures of the AYUSH services in order to improve the quality of the facilities and their functioning. This would require concerted efforts in strengthening the infrastructure at district levels, filling vacant posts of District AYUSH Officers and providing them support staff and better transport allowance.
7. Simultaneously there should be reorientation of the District Officers and AYUSH MOs to make them more confident in management and innovation in relating to responsibilities of providing good quality health care.
8. Building in accountability structures for the quality of services as well as building the confidence of the AYUSH practitioners will be necessary to achieve the mainstreaming that NRHM visualises.
9. Both stand-alone and co-located facilities should have a common supervisory mechanism.

Technical Support Structures

10. A well demarcated structure is required for the technical personnel to play their role as part of the department within an interdisciplinary team that contributes to the biological, social, cultural and political understanding linked to AYUSH and LHT. Such resource groups or task forces are required at the centre for specific thematic areas (such as for AYUSH in public health, contributions of AYUSH to RCH, and to NCDs).
11. A technical unit should be located in each state at the SHRC/SIHFW for innovations in rejuvenation of functioning of the AYUSH services.
12. District Resource Centres for LHT should be created for promotion of local health traditions and the natural resources required by them in each district. These must develop with strong functional linkages with the AYUSH department as well as public health, social science and social work departments, reputed civil society organisations in the area, as well as associations of traditional healers.
13. 'Bridging research' is recommended for developing a shared understanding drawing upon perspectives and insights from various disciplines and systems, between the AYUSH and Allopathic physicians as well as clinicians and public health.

14. If decentralised planning and implementation with community involvement is to be achieved in accordance with the spirit of NRHM, community needs in terms of AYUSH and LHT are required to be incorporated in planning. In fact, if the bottom-up paradigm of planning is to be adopted, then these have to be the starting point for consideration of people's health care, and 'architectural correction' of the health care system as a whole should be designed with this perspective. A framework for such an approach is outlined below:

    i. Each district must plan beginning from its epidemiological data on morbidity and mortality, and from information about the prevailing health seeking behaviours of all sections of the local people, including use of LHT, AYUSH and Allopathy. Documentation and validation of these should be an ongoing task at the district and state levels.

    ii. The documentation of health seeking behaviours should be an activity required of the AYUSH doctor at the PHC and CHC. The local traditional practitioners, the panchayat and the VHSC should be associated with the activity.

    iii. The documentation could be collated at district level as community knowledge, the traditional practitioners' practices being certified by the panchayat as locally beneficial knowledge.

    iv. The documentation should be followed by validation, based on the locally prevalent systematised traditional medicine by the AYUSH doctors at district level and then promoted for use by the community as well as put to use at the health centres. This would not only revitalise the LHT but also contribute to strengthening the knowledge base of AYUSH and promote its non-commercial practice using local herbs.

    v. The IPHS requirement of a herbal garden in each SC and PHC provides the opportunity to facilitate linkage between the cultivation of medicinal herbs and plants and their local use, involving the local traditional practitioners for this activity and linking it with the AYUSH doctor of the co-located facility. This is recommended as one of the community-linked processes that the NRHM must operationalise. The panchayat and the VHSC should be associated with this activity as well.

vi. Use of the LHT and AYUSH for MCH, NCDs and any other conditions found suitable must be identified and promoted for self-care, home-based care and institutional care, as appropriate. Each state should generate 'multi-pathy' Standard Guidelines for Treatment for all health care providers (including the doctors of Allopathy and AYUSH, ANMs and ASHAs), stating the role of AYUSH and LHT in primary care and the points of cross-referral. This requires assessment of cost-effectiveness of optional regimens from home remedies to AYUSH to Allopathy at primary, secondary and tertiary levels.

vii. Campaigns initiated by the Department of AYUSH, such as for MCH in Homeopathy, Geriatric services and the Kshaar Sutra for ano-rectal disorders currently being undertaken by selected stand-alone Ayurveda institutions, should be taken up at the co-located services as well.

viii. The AYUSH graduates who receive clinical training in conducting normal deliveries could provide MCH services (including deliveries) in the stand-alone institutions. They could involve the local dais as support in the deliveries, as well as for ANC and PNC.

ix. The use of AYUSH and LHT in epidemic situations (as already undertaken for Chikungunya and dengue in some states) needs to be studied and incorporated into public health practice in other states.

x. These steps would give the 'mainstreaming of AYUSH' strategy its content so that it does not merely become the 'mainstreaming of AYUSH providers'.

xi. Use of the HMIS for regular monitoring of implementation of plans and quality of services, identifying gaps and thereby strengthening inputs would then improve quality as well.

Factoring in the health care needs that can thus be provided by LHT and AYUSH would reduce the load on Allopathic services as well. As it becomes effective, this would also decrease the need for secondary and tertiary care, thereby creating the possibility of sustainable and comprehensive health care services. Further planning of services should then optimise the workload and role of the HR of both Allopathy and AYUSH, and thereby plan for increase in coverage by institutions as well as the HR recruitments in the institutions. This would be the most cost-effective and accessible primary level care.

Recommendations for Strengthening AYUSH Services Through Management

The findings show that much requires to be done to improve the quality of services in almost all states, for which the following management related recommendations are being made:

To Strengthen Co-located Services

Infrastructure and Supplies

1. The co-located services must be provided separate space for running the OPD, with signages that announce the AYUSH service outside the facility as well as its location inside. As per the NRHM provisions, only the salary of the co-located doctors and paramedics is given by the NRHM pool, the Department of AYUSH being required to provide the medicines and the building of a separate room. It would be advisable to review this policy and let the building be the responsibility of the NRHM, since extension of building of the CHCs and PHCs for Allopathic services is provided for by it.
2. Cultivation of herbal gardens as per IPHS, and their linking with the VHSC and the co-located AYUSH provider, is recommended as outlined above.
3. Wherever possible, residential quarters should be built for the service providers, especially where indoor services are being provided.
4. Medicine supply must be improved to ensure adequacy and the supply of appropriate medicines as per the patient profile at the facility.
5. Promotion of herbal gardens and local pharmacies at village or block level could provide medicines not only for the institution, but also for self-care and home-based care.
6. The packaging also needs to be more user friendly and it should be ecology friendly as well.

Record-Keeping, Reporting and HMIS

7. Recording of OPD and IPD data to be strengthened, with documentation of the diagnosis/presenting problem of patients coming to the AYUSH providers.
8. Complete reporting of all services provided by the AYUSH doctors, including the OPD and the NHPs, must be done separately from the Allopathic doctors in the institution so that their role and workload can be identified clearly.

9. There should be a referral column in the OPD reporting formats and an indicator to report cross-referrals of AYUSH and Allopathy. Prescription audits could be regularly undertaken to document combined use of AYUSH and Allopathy as well as to assess the rationality of prescribing practices. Establishing mechanism to record and report existing practice is important to facilitate better professional cross-referral and inter-system linkages.
10. Indicators should be devised such that they can be incorporated in the overall HMIS reporting. However, an issue to be resolved in order to enable this common reporting will be about the terminology of diagnoses by the AYUSH systems other than Homeopathy.

Role Definition and Terms of Reference

11. There need to be clear guidelines about the role of AYUSH doctors. It is recommended that they primarily practice their own system. MCH care must be emphasised for this. Many AYUSH providers are also trained in assisting normal deliveries as part of their graduate education, hence can be allowed to assist institutional deliveries.
12. Training of ASHAs and ANMs in local herbal remedies and in specific AYUSH medicines is another important task for them.
13. They should also be members of the Rogi Kalyan Samiti of the institution, and of the DHs.

In-service Trainings and Inter-'Pathy' Sensitisation: Cross-Referral/Combined Therapies/NHPs

14. All AYUSH providers should be sensitised to the strengths of all the other systems, especially to the use of drugless therapies.
15. This sensitisation should be done with the Allopathic doctors and paramedics as well. While our data shows that cross-referral is being practiced informally, this practice needs to be regularised and strengthened.
16. This would not only strengthen their practice with increased effectiveness from combined therapy, but also facilitate cross-referral for the benefit of patients. Good documentation of the cross-referral being practiced, as recommended for the HMIS, and examining its outcomes would help in developing integration of the systems for the community's benefit.

17. Skilled birth attendant and NHP trainings are needed for AYUSH doctors performing the tasks of conducting normal deliveries and implementing the NHPs, respectively, as required at the co-located institutions.
18. Orientation will be required if they also have to perform administrative and planning roles.

Legal Support

19. Legal provisions are needed for AYUSH doctors assisting normal deliveries and providing emergency Allopathic care when no Allopath is available.

To Strengthen Stand-alone Services

20. Upgrading infrastructure and ensuring adequacy of drug supplies are important for the first level of quality improvement.
21. Linking with LHT, such as by cultivation of herbal gardens in the compound, and using the services of dais, as well as providing outreach services to the community, would bring the AYUSH doctors in more organic linkage with the community and help in improving their interaction with and knowledge about the local community and its practices.
22. Addition of services, such as conducting normal deliveries and other speciality services of AYUSH, would enhance the value of the services to the community. Other reproductive and child health related services must also be provided. Involving the dai in assisting these services would be useful.
23. Referral mechanisms should be established with specialised services of AYUSH and with Allopathic doctors.

To Revitalise the LHT

24. Massive documentation and validation of the local heath practices by the AYUSH context specific epistemology and the linkage between the two to be undertaken by the district and state level bodies for promotion and use. The framework for this has been outlined above in 'A'.
25. A continuing use of traditional birth attendants/dais for conducting deliveries, and even more so for problems during the antenatal and post-natal periods, was found in most states, despite the Janani Suraksha Yojna (JSY) and the incentive money for institutional delivery. In states such as Bihar, Jharkhand, Jammu & Kashmir and Orissa, 20-26% of households reported deliveries in the last 3 years that had

been assisted by a traditional birth attendant or dai. In Tamil Nadu and Kerala it was zero, and for the rest it was somewhere in between. A higher percentage, 59%, reported use of the dai services in the antenatal period, even the Non-High Focus states reporting from 12-55%, and even higher in the High Focus states. In the post-natal period, 52% reported some care from the dai, 10-45% among the Non-High Focus and 45-95% among the High Focus states. Therefore, involving them in the health service delivery with provision of some incentives would be meaningful to keep their beneficial knowledge and practices alive. The linkage between the knowledge of dais and of the AYUSH system needs to be examined for mutual strengthening of both.

26. Sensitisation of all health care providers to the relevance of the LHT as accessible, simple, affordable, efficacious methods of preventing ill-health, promoting health and treating diseases is required.
27. Promotion of home herbal gardens would be meaningful. Given that there is a high level of knowledge in the communities about local medicinal plants and foods, easy availability of the raw materials would facilitate use of this knowledge and enhance it. Linking cultivation of herbal gardens in the village with micro-finance self-help groups and the VHSCs could make it sustainable by linking to economic activity as well, to generate collective resources.

AYUSH Education and Inter-disciplinary Linkages for Research

28. Continuing education is required to keep upgrading the knowledge and skills of the AYUSH providers in their own systems.
29. It is crucial that they gain confidence in their own system and its principles, both through their undergraduate education and through the CMEs. AYUSH doctors doing good and innovative practice, within their system or integrating with other systems, should be identified to be the trainers or role models to learn from.
30. ***National health surveys, such as the NFHS and the NSSO*** rounds that focus on health, must give serious attention to the use of LHT and AYUSH services. Their data collection tools and analytical frame must clearly capture the role being played by these systems in terms of people's use of them in different social strata, as well as the source of health care across the continuum from home to institutions at various levels.
31. Focus on streamlining of AYUSH research so as to get quality output of scientific evidence based on principles of AYUSH should be undertaken for each district so

that local ecology, cultural and social context is catered to. Practice-based evidence generation from real life settings is as logical as laboratory-based evidence of biomedicine for facilitating 'mainstreaming AYUSH' and working on the above recommendations. When more epistemologically sensitive epidemiological methods become available, the complementarity of all forms of research may be worked out and the community and laboratory research brought together into an integral whole.

32. NRHM should initiate institutionalisation of such creative futuristic research in collaboration with the Department of AYUSH. This is where the future of health care development lies if it is to be affordable and ecologically sustainable.

STATE SPECIFIC PRIORITY RECOMMENDATIONS

Within the framework of the policy recommendations given above, each state would have a different priority focus with reference to its current status and particular history of development of AYUSH services as well as linkages with LHT.

In general, putting in place functional systems for record keeping and reporting, is a priority area for all states. Building linkages of AYUSH services with LHT is a second area that all states need to focus on.

HIGH FOCUS STATES

1. Jammu & Kashmir

Strengthening Co-located Service Delivery

- Since 90% of the PHCs have AYUSH doctors, AYUSH medicine supply to be ensured so that "AYUSH systems are mainstreamed and not only the doctors" in all the regions of the state.
- Terms of Reference of doctors to clearly state practice of their own systems as their primary role, along with additional duties.
- Training of these doctors in NHPs and Basic Emergency Obstetric Care (BEmOC) must be provided as most of the 24*7 PHCs are manned only by AYUSH doctors.
- A legal framework to allow the AYUSH doctors to perform the functions assigned to them by the state.
- In the CHCs and DHs, specialised AYUSH services must be provided and referrals must be facilitated from the PHCs and dispensaries.
- IEC activities need to be undertaken about AYUSH services in the public system and the strengths that they offer to users.

Strengthening Stand-alone Service Delivery

- The stand-alone AYUSH network of Ayurveda, Unani and Amchi dispensaries in the respective regions of the state must ensure adequate staff with regular reorientation trainings in their own systems to build confidence in service delivery.

- Well-functioning stand-alone institutions with good caseloads may also handle normal deliveries with linkages to dais and adequate referral mechanisms to support RCH services.

Strengthening Supervision and Technical Support

- A separate directorate is in place with State and District AYUSH Officers. There must coordinated action between them and the NRHM structures and functionaries at the State and Districts [State Health Society (SHS), District Health Society (DHS), and State Health System Resource Centre (SHSRC/ SIHFW)].
- Educational and training Institutions for production and capacity building of AYUSH doctors and paramedics must be established in the public sector (none exist at present) to ensure skilled AYUSH work force suited to the local context in the service institutions.
- Modules for sensitising the doctors of Allopathy and paramedics to the strengths of AYUSH and LHT should be prepared and used for in-service trainings.

Strengthening LHT

- District Resource Centres for LHT should be established with linkage to the directorate of AYUSH and AYUSH MOs in the district, as well as ASHAs and ANMs.
- Herbal gardens with locally useful medicinal plants must be cultivated at the PHCs and CHCs using RKS funds, and at stand-alone facilities using centrally sponsored schemes as per the availability of space. Use of the herbal gardens by the co-located AYUSH practitioners at the institution must be encouraged. This may be linked to the State Medicinal Plants Board (SMPB) already existing in the state for cultivation of medicinal plants.

2. Uttarakhand

Strengthening Co-located Service Delivery

- The state has 100% co-location at DHs, 42% at the CHCs, and 48% at the PHCs, but the quality of AYUSH services needs urgent attention. Separate space must be given for OPD, signages must be put up, and adequate AYUSH medicines must be made available.

- Training in NHPs and making 24*7 PHCs functional by providing AYUSH doctors with BEmOC skills would be useful.
- The co-located DHs must ensure quality specialised services with referral linkages from primary and secondary level AYUSH services.
- The state Allopathic dispensaries (SADs) with AYUSH doctors posted should be counted as co-location of systems and AYUSH medicines provided as per the system of the doctor posted there.
- Recruitment of adequate number of AYUSH doctors has to be undertaken. The conditions of work and living, especially in the 'difficult areas', should be made attractive by giving additional allowances, providing residential quarters and making the workplace well equipped.
- Orientation training of Allopathic doctors to AYUSH, and of both AYUSH and Allopathic doctors to LHT, will be useful for strengthening the NRHM initiatives for mainstreaming AYUSH and revitalising LHT.

Utilising Local Natural Resources for Strengthening AYUSH and LHT

- As an **'AYUSH State',** there should not only be economic exploitation of natural resources but also a greater local use of AYUSH and LHT, especially herbal medicines should be actively encouraged. At the SCs too, the ANMs should have some AYUSH medicines, e.g., the use of *Punarnavadi Mandoor* for anaemia. Local herbal remedies should be made known to them and to the ASHAs. The VHSCs can be encouraged to promote their cultivation and use in the village. The IPHS requirement of growing herbal gardens in the compound or surroundings of the PHCs and SCs should be adhered to using RKS funds, and at stand-alone facilities using centrally sponsored schemes, as per the availability of space.
- VHSCs should be encouraged to develop herbal gardens for local use as well as wider supply.
- The CEO of the SMPB, who is also the Director of the Herbal Research and Development Institute, must ensure this linkage of cultivation of medicinal plants with the public health system.
- Mechanisms for the protection of local medicinal plants and herbs as well as their enhancement are urgently required. This is not only as part of a larger environmental protection but also for preservation of the plants and herbs that are cultivated and harvested from the natural forest.

Strengthening Stand-alone Service Delivery

- The quality of stand-alone AYUSH service institutions needs to be improved to meet the demand for AYUSH services. Existing infrastructure is poor, with lack of buildings, equipment, doctors and paramedics. Medicine supplies are either lacking or short.
- The co-location must not happen at the cost of the stand-alone services, and therefore, staff should be relocated only from absolutely unused dispensaries.
- Well-functioning stand-alone institutions with good caseloads may also handle normal deliveries with linkages to dais and adequate referral mechanisms to support RCH services.
- The stand-alone AYUSH network of Ayurveda, Unani and Homeopathic dispensaries in the state must ensure adequate staff with regular reorientation trainings in their own systems to build confidence in service delivery.

Other Key Areas of Intervention

- Better record-keeping and monitoring systems would help in strengthening of AYUSH services. Monitoring indicators for quality of AYUSH services should be evolved and used.
- Setting up of production units (only 3 exist) with good manufacturing practices for AYUSH medicines should be encouraged in the public sector so that better quality medicines are available at low cost and the economic benefit to the state is also maximised.
- Promotion of yoga and use of herbal medicine should be undertaken in schools and with the general public in collaboration with the substantial number of local NGOs active in AYUSH in the state.

3. Orissa

- The state is unique in that despite being a low economy, High Focus state, it has developed a large infrastructure of AYUSH services with a separate directorate since the 1970s. The number of stand-alone institutions and the number of doctors in the public system were high, and now with co-location, the numbers exceed those of Allopathy. However, there is a concern about the decline in quality of the stand-alone institutions and services are yet to achieve adequate standards of quality in the co-located institutions.

Improving the Quality of Large AYUSH Infrastructure

- Need to improve quality of co-located AYUSH services (87% CHCs and almost 100% PHCs). Though the NRHM has done a round of Skilled Birth Attendant (SBA) and Integrated Management of Neonatal and Childhood Illness (IMNCI) trainings for AYUSH doctors, there is a need in the state to make all the co-located facilities using AYUSH doctors properly functional with their roles defined in NHPs, RCH and emergencies. A legal framework needs to be provided accordingly.
- The posts of District Officers must be filled and infrastructure, support staff and transport allowance increased to strengthen supervision. Re-orientation of the officers would be important to ensure supportive supervision to the AYUSH MOs as well as building links with LHT.
- The stand-alone AYUSH network of Ayurveda and Homeopathic hospitals and dispensaries in the state must ensure adequate staff with regular reorientation trainings in their own systems to build confidence in service delivery.
- The state has more AYUSH colleges than Medical Colleges which need to be recognised for a larger role in service provision, such as normal deliveries and speciality clinics.
- Well-functioning stand-alone institutions with good caseloads may also handle normal deliveries with linkages to dais and adequate referral mechanisms to support RCH services.
- Providing adequate support staff and their training by building institutional capacity for training and recruitment mechanisms for AYUSH paramedics.
- The drug supply needs to be augmented beyond what is already being made available. Only three drug production units exist in the public sector.
- Developing better mechanisms of record-keeping and reporting for both stand-alone and co-located AYUSH services to reflect the roles they are playing in the overall health system.

Building LHT Linkages

- The IPHS prescription of cultivating local medicinal plants and herbs in the compound of the PHCs and SCs needs to be implemented. While being useful in strengthening the LHT in the community, this could also be useful in strengthening linkages between the AYUSH practitioners and LHT, and

also nurturing the mainstreaming activity, which is right now just confined to the co-location of AYUSH doctors at public health facilities.

- VHSCs and RKS should be involved in developing the linkage between AYUSH services and LHT.
- District Resource Centres for LHT should be created linked to NRHM and to local practices, especially in the tribal dominated blocks.
- There should be convergence with the activities of SMPB which is under the Department of Environment and Forest in the state.

4. Bihar

Increasing Overall Coverage and Functioning of AYUSH Institutions

- Expansion of number of stand-alone Institutions is needed for architectural correction of the health service structure.
- Co-locations to be expedited since implementation of this component of the Programme Implementation Plans (PIPs) have been delayed. This would help in making the existing urban and rural health infrastructure more functional.
- Separate directorate with District *Desi Chikitsa* Officers are in place. Need to provide them logistical support to strengthen supervisory structures and improve quality.
- These must link with the NRHM structures and functionaries at the State and Districts (SHS, DHS and SHSRC/SIHFW).
- IEC activities about AYUSH services to be strengthened.
- Yoga to be included in the school health programme, with specific allocation of time, within the school curriculum.

Utilising Available AYUSH Human Resources

- Large number of AYUSH educational Institutions in the state (much more than Allopathic including in the private sector) but not enough positions of AYUSH doctors sanctioned to make use of the available human resources. These should be absorbed in the public system at all levels to strengthen the stand-alone and co-located services.
- The AYUSH services may establish linkages to dais for handling normal deliveries and adequate referral mechanisms to support RCH services.

- Training of the co-located doctors in NHPs and BEmOC must be provided with a legal framework for operationising 24*7 PHCs.

Strengthening LHT

- With low institutional infrastructure, more emphasis needs to be given to LHT with adequate documentation and validation. District Resource Centres need to be set up to promote the community knowledge and its use.
- VHSCs should be activated around the cultivation of herbal gardens and their use as per the LHT.
- The herbal resources should be protected and enhanced by cultivation of medicinal plants as per IPHS requirements, linking with the SMPB existing in the state.

Other Key Areas of Intervention

- Drug production units should be set up in the public sector as a health activity and an economic asset.

5. Jharkhand

Expanding AYUSH Infrastructure and Services

- Expediting co-location is necessary at all levels, especially since there is very low coverage by stand-alone Institutions.
- The state has more AYUSH colleges than Allopathic, but the available AYUSH human resources are not being used in the public system. Expansion of services will be able to utilise the AYUSH human resources.
- Absence of drug production units in both the public and private sector is an issue of concern. The state must put its natural resources for medicinal use.
- Trainings of AYUSH doctors at the co-located facilities in NHPs and BEmOC must be provided with a legal framework for operationising 24*7 PHCs.
- IEC activities about AYUSH services to be strengthened.
- Yoga to be included in the school health programme, with specific allocation of time, within the school curriculum.

Building Supervisory Structures

- Separate directorate exists, but District level AYUSH Officers are not in place in the state for supervision and monitoring. As services expand, this will simultaneously have to be addressed.

Establishing Linkages with LHT (with Focus on Tribal Areas)

- District Resource Centres need to be set up to promote the community knowledge and its use, especially in the tribal areas.
- The herbal resources should be protected and enhanced by cultivation of medicinal plants as per IPHS requirements, and linking with the SMPB existing in the state under H&FW Department.
- Training ASHAs and ANMs in AYUSH about the useful LHT.

HIGH FOCUS NORTH EAST STATES

The North East states are the only ones with the AYUSH services administratively under the Directorate of Health Services. As they now strengthen their AYUSH services, separate directorates of AYUSH would be necessary.

Along with this common recommendation for all these states, each has its specificities and priority policy focus, as given below.

6. Assam

Building Administrative and Supervisory Structures for AYUSH

- Despite a strong implementation of the NRHM in the state with several pioneering initiatives, the mainstreaming of AYUSH and revitalising of LHT has been weak and needs urgent attention.
- Only Zonal Officers of Ayurveda as supervisory structures, hence District level will have to be developed simultaneously with expansion of services.

Improving Coverage and Quality of AYUSH Institutions

- Only 30% of the PHCs and 8% of the CHCs were found to be co-located, despite low coverage by stand-alone Institutions; co-location needs to be expedited for expansion of AYUSH services.

- Recruitment of adequate number of AYUSH doctors has to be undertaken and their salaries must be at par with Allopathic doctors.
- Training of these doctors in NHPs and BEmOC must be provided with a legal framework for supporting RCH services.
- More AYUSH colleges (4) than Allopathic exist in the state that cater to the human resource needs of other North East states also, but the state is not making use of them adequately.
- Only one drug production unit in the public sector is an issue of concern and more units need to be set up.
- Owing to the acceptance of Homeopathy in the state, the national campaign on Mother and Child Care should be strongly taken up to support RCH services.
- Orientation training of Allopathic doctors to AYUSH, and of both AYUSH and Allopathic doctors to LHT, will be useful for strengthening the NRHM initiatives for mainstreaming AYUSH and revitalising LHT.

Strengthening LHT

- District Resource Centres for LHT need to be set up to promote the community knowledge and its use.
- SMPB under Department of H&FW should coordinate cultivation of herbal gardens at SCs and PHCs.

7. Manipur

Building Administrative and Supervisory Structures for AYUSH

- At present, only state level Programme Officers for AYUSH. District level supervisory structures need to be set up to ensure supportive supervision to service delivery at both stand-alone and co-located services.

Strengthening Substantial Number of Co-located Facilities

- 100% co-location at the CHCs and PHCs, and 14% at the DHs.
- While the AYUSH doctors are largely in place in the co-located CHCs and PHCs, there is a lack of information to the community about this fact since there are no signages for AYUSH.

- Adequate procurement and supply of AYUSH medicines to be ensured through appropriate mechanism. The lack of medicines narrated by the providers at most facilities and also by patients would be a major factor in deterring use of the public services.
- Co-locations are largely of Homeopathy in the state; the national campaign of Homeopathy for Mother and Child Care should be strongly implemented to support RCH services.
- Developing better mechanisms of record-keeping and reporting for co-located AYUSH services to reflect the roles AYUSH providers are playing in the overall health system would be useful. Training for conducting institutional deliveries as well as for IMNCI is in place, and services such as conducting normal deliveries are being undertaken by AYUSH doctors. However, there is no system of reporting this.
- Measures need to be taken to sensitise doctors of all systems to the strengths of the other systems and encourage rational cross-referral.
- AYUSH doctors to be involved in training of ASHAs and paramedical staff, in administration, monitoring and planning.

Strengthening Stand-alone AYUSH Services

- State may consider expanding stand-alone services based on accessibility and population norms since there is a demand for AYUSH services that is largely being catered to by the private sector.
- Naturopathy services are available in the stand-alone institutions which must be used for providing quality services and generating awareness for maintaining healthy lifestyles.
- Drug production units in the public sector need to be set up to cater to quality AYUSH services.

Strengthening LHT

- Use of LHT through herbal gardens in the facility premises as required by the IPHS should be promoted, especially with the SMPB which is under the Department of H&FW in the state.
- District Resource Centres for LHT should be created linked to NRHM and to local practices.

8. Nagaland

Building Administrative and Supervisory Structures for AYUSH

- Separate directorate needs to be established with district level supervisory structures.
- These should be linked to the local community structures of governance.

Establishing LHT Linkages

- Tribal areas should develop District Resource Centres to link LHT with the public health system.
- SMPB under Directorate of Health must focus on use of medicinal plants.

Expanding Co-located Facilities at the Primary and District Level

- Need to expand AYUSH services at the primary level as well as the DHs, since it was found that there was 100% co-location at the CHCs, but none at PHCs and DHs.
- Co-locations are largely of Homeopathy in the state; possibility of including other AYUSH systems for expansion of services, especially Yoga and Naturopathy, may be explored.
- The AYUSH institutions in the state must ensure adequate staff with regular reorientation trainings in their own systems to build confidence in service delivery.
- AYUSH doctors' salary must be at par with the Allopaths.
- Orientation training of Allopathic doctors to AYUSH, and of both AYUSH and Allopathic doctors to LHT, will be useful for strengthening the NRHM initiatives for mainstreaming AYUSH and revitalising LHT.

Expanding Stand-alone AYUSH Services

- Very few stand-alone institutions; need to expedite plans to set up 200 AYUSH dispensaries as priority action.
- AYUSH colleges would be needed as the services expand.

9. Sikkim

Building Administrative and Supervisory Structures for AYUSH

- State level administrative and supervisory structures need to be strengthened. As AYUSH services expand in the state, separate structures may be considered at various levels.

Expanding Co-located AYUSH Services

- Need for co-location of AYUSH services at all levels, since no stand-alone institutions have been developed by the state and co-location was found at DHs only.
- Role of the AYUSH doctors would need to be clearly defined as providing services of their own system, since the state has no shortage of Allopaths.
- The Allopathic doctors and paramedics need sensitisation to the strengths of AYUSH and LHT so that cross-referral is facilitated.
- Strategies and activities to be adopted for building community awareness about the AYUSH services in the public system and the strengths of AYUSH and LHT.
- AYUSH doctors' salary must be at par with the Allopaths.
- AYUSH medicines should be appropriately and adequately supplied.

Establishing LHT Linkages

- IPHS requirement of cultivation of herbal gardens at PHCs and SCs should be implemented and used for the benefit of the community.
- The VHSCs and RKS must be actively involved in these.
- SMPB under the Department of Forests, Environment and Wildlife needs to be linked to H&FW for making use of the medicinal plants.

10. Tripura

Improving the Quality of Large AYUSH Infrastructure

- Ensuring quality of services is the priority focus area, since there is substantial coverage of co-location institutions (93% in DHs, 54.5% in CHCs, and 85% in the PHCs).
- Terms of Reference of doctors need to be clearly stated as practice of their own systems as primary role, along with additional duties wherever necessary.
- Training of these doctors in NHPs and BEmOC is needed. The legal framework must be provided for the AYUSH practitioners to perform the roles assigned to them by the state.
- The stand-alone AYUSH network of Ayurveda and Homeopathic dispensaries in the state must ensure adequate staff with regular reorientation trainings in their own systems to build confidence in service delivery.

- Need to set up AYUSH colleges and AYUSH paramedic training institutions to cater to the state's requirement.
- School health programmes had some innovations of including yoga, which must be continued and enhanced.

Building Administrative and Supervisory Structures for AYUSH

- Separate directorate needs to be established to ensure administrative inputs for quality services in the state's large AYUSH infrastructure.
- Supervisory structures that exist at district level need to be strengthened with infrastructure, staff and transport allowance.
- Reorientation would be required of the District Ayurveda and Homeopathy Officers to provide strong supportive supervision and coordination of all the AYUSH and LHT activities in the district.
- Drug production units need to be set up in the public sector to supply medicines at low cost.

Strengthening LHT Linkages

- IPHS requirement of cultivation of herbal gardens at PHCs and SCs should be implemented and used for the benefit of community.
- Involving panchayats and VHSCs would also help in community checks and participation.
- SMPB under Forest Department must link with AYUSH services. Using local medicinal plants would be useful for AYUSH and economic benefits to the state.

NON-HIGH FOCUS STATES

11. Andhra Pradesh

Review of the Poor Functionality of the "State Department of AYUSH"

- Separate Department of AYUSH with Secretary and Regional Directors is in position. Functionality of these administrative structures in terms of expanding services and improving their quality is necessary.
- Large infrastructure for AYUSH research, medicinal plants and drug production exists and yet low quality of services (7 research institutions, and

3 drug production units in the public sector). Therefore, a review to improve their functioning and to develop linkages with service delivery institutions is urgently required.

Expanding Quality of AYUSH Services

- Co-location to be expedited as there is no co-location at DHs, and only 23% CHCs and 16% of PHCs are co-located inspite of low stand-alone coverage as well.
- Salary of AYUSH doctors should be increased to levels equal to that of the Allopaths.
- The AYUSH network of Ayurveda, Unani and Homeopathic institutions in the state must ensure adequate staff with regular reorientation trainings in their own systems to build confidence in service delivery.
- Need to set up AYUSH colleges and AYUSH paramedic training institutions to cater to increase in state requirements.

Establishing Linkages with LHT

- District Resource Centres for LHT should be created linked to NRHM and to local practices.
- Aromatic Plants Board under the Department of Medical H&FW should help implement IPHS for herbal gardens in the public health facilities and promote village herbal gardens through the VHSCs.

12. Haryana

Expansion of Co-located Services Needed

- Need to expedite co-location at primary level, since it was found in only 10% DHs, 4% in CHCs and almost none at PHCs.
- Availability of specialised AYUSH services at the DHs along with mechanisms of referral from the dispensaries and primary level institutions must be ensured to establish continuum of care of AYUSH services.
- Salary of AYUSH doctors should be increased to levels equal to that of the Allopaths.
- Sensitising providers as well as the general public to the strengths of AYUSH systems.

- Terms of Reference of doctors to clearly state practice of their own systems as their primary role, along with additional duties, including in the RKS and other decision-making bodies.
- Training of these doctors in NHPs and BEmOC must be provided with legal framework to cater to RCH services.

Strengthening the Quality of Good Network of Stand-alone Dispensaries in the Rural Areas

- Those dispensaries and hospitals with high caseloads can be utilised for normal deliveries with linkage to dais to support RCH services in the state, since there is almost the same number of stand-alone institutions as that of Allopathic (excluding SCs).
- The AYUSH network of Ayurveda, Unani and Homeopathic institutions in the state must ensure adequate staff with regular reorientation trainings in their own systems to build confidence in service delivery.

Improving Supervision and Monitoring

- Separate directorate and District Ayurveda Officers must coordinate and supervise AYUSH activities in the state of both stand-alone and co-located services.
- The data recording, reporting and collation of data at the facility, district and state level needs to be strengthened.
- Monitoring indicators for building ***AYUSH HMIS*** may be initiated on a pilot basis which may later be incorporated in the overall state HMIS. Need to develop these indicators for providing information about the role AYUSH providers are playing in the overall public health system.
- Since there is no drug production unit in the public sector, mechanisms to regulate private drug production are needed for ensuring quality of drugs.

Establishing Linkages with LHT

- SMPB under the Department of Forest must link with AYUSH Directorate to help implement IPHS for herbal gardens in the public health facilities.
- District Resource Centres for LHT should be created linked to NRHM and to local practices.
- ASHA training to include a strong component of AYUSH and LHT.

13. Punjab

Improving Coverage and Quality of AYUSH Services

- Need to strengthen AYUSH at primary level as priority, since co-location is at 56% DHs, none at CHCs, and at 44% PHCs.
- Training of the AYUSH doctors at the co-located facilities in NHPs and BEmOC must be provided in keeping with the legal framework that already exists in the state.
- Average stand-alone coverage with good network of AYUSH specialised services like "Panchkarma" exists at the co-located district level and so the state must assure referral from primary level for maintaining continuum of care for AYUSH.
- Presently only one drug production unit in the public sector; needs to be augmented to cater to demand of expanding services.
- The state must ensure adequate staff in the AYUSH hospitals and dispensaries, with regular reorientation trainings in their own systems to build confidence in service delivery.

Strengthening Supervision and Monitoring

- Separate Department of ISM&H with District level Officers in Ayurveda, Unani and Homeopathy must be given administrative support in planning, monitoring and collaboration with NRHM structures.
- Data recording and reporting of all duties performed by the AYUSH doctors must be set up from facility to district and state level.
- Monitoring indicators for building ***AYUSH HMIS*** may be initiated on a pilot basis. Need to develop these indicators in providing information about the role AYUSH is playing in the overall public health system.

Initiating Formal Cross-Referral and Developing Standard Treatment Protocols for AYUSH on NCDs

- Sensitisation training to strengths of all systems is required for Allopathic doctors, ANMs and ASHAs for supporting cross-referral and rational cross-practice that has legal status by state legislation.
- Standard Guidelines for Treatment need to be developed that provide a rational use of all knowledge systems, covering from home remedies to various AYUSH and Allopathic regimens at primary, secondary and tertiary levels.

Building Linkages with LHT

- District Resource Centres for LHT should be created linked to NRHM and to local practices.
- ASHA training to include a strong component of AYUSH and LHT, could be linked with cultivation of local medicinal plants by the VHSC and self-help groups.
- SMPB under the ISM & Horticulture Department to help implement IPHS for herbal gardens in the public health facilities and at village level.

14. West Bengal

Improving Quality and Services of Large Number of AYUSH Institutions

- Need to improve quality of services, since there is substantial stand-alone coverage and co-location at 51% DHs, 60% CHCs, and 45% PHCs.
- Better drug supply mechanisms need to be built with setting up of drug production units in the public sector since only one exists at present.
- More IP facilities of AYUSH speciality services to be provided especially at the district level for referral.
- AYUSH doctor's salary must be increased, since currently they are the lowest among all the states studied.
- RKS formed in AYUSH colleges and hospitals must be promptly used to improve quality of service delivery to users.
- Need to have better mechanisms of record-keeping and reporting to bring out the contribution of AYUSH in overall health system of the state and to build an HMIS in AYUSH that covers the departmental, co-located and gram panchayat services.
- The large number of AYUSH colleges in the state (more than Medical Colleges), must provide quality education to AYUSH doctors to instil confidence in their own system. A review of their functioning and of the curriculum would be useful. Linking them with public service delivery in rural facilities would be mutually strengthening.

Initiating Formal Cross-Referral and Exploring the Possibilities of Integrative Medicine

- Assess effectiveness of acupuncture services (co-located at all DHs) and of Homeopathy to use for replication and strengthening.

- Sensitisation of Allopathic doctors to AYUSH and LHT along with introducing a referral column in the reporting formats would promote rational cross-referral.
- Building treatment protocols with contribution of all available systems and self-care, especially in NCDs, would be useful.

Establish Linkages with LHT

- Well-functioning stand-alone institutions with good caseloads may also handle normal deliveries with linkages to dais (substantial in number in the state) and adequate referral mechanisms.
- District Resource Centres for LHT should be created linked to NRHM and to local practices.
- ASHA training to include a strong component of AYUSH and LHT.
- SMPB should help implement IPHS for herbal gardens in the public health facilities and at village level.

15. Karnataka

Expansion of AYUSH Services

- Need to expedite co-location as only 22% co-locations at the PHCs inspite of only moderate coverage of stand-alone institutions.
- Role definition of AYUSH doctors at the co-located institutions is a must as they are posted against the vacancies of MBBS doctors with expectation to practice Allopathy ony.
- Training of the AYUSH doctors at the co-located facilities in NHPs and BEmOC must be provided with legal framework to support RCH services.
- Salary of AYUSH doctors should be at par with the Allopathic doctors.
- Continuous re-orientation trainings should be provided to AYUSH doctors in order to instil confidence in their own system.
- Only one drug production unit exists in the public sector; this needs to be augmented to ensure low cost quality medicines.
- Deputy Directors and District AYUSH Officers need support to strengthen their supervisory role.

Improving Quality of Large Number of AYUSH Educational Institutions

- Quality of education needs priority attention owing to the presence of large number of AYUSH colleges in the state. Effective use of this human resource must be made in the public health system of the state to improve services.

Revitalising LHT

- Karnataka Medicinal Plants Authority (KaMPA) under Conservator of Forest should link with H&FW Department to develop herbal gardens as per IPHS.
- Reputed NGOs in the state for LHT should be involved to work in collaboration to develop modules of training for ASHAs and ANMs on AYUSH and LHT.
- District Resource Centres for LHT may be set up in collaboration with NGOs as well as NRHM structures.

16. Tamil Nadu

Expanding Coverage and Quality of AYUSH Services

- Need to increase number of AYUSH institutions to meet the demand of high OPD load at stand-alone and co-located institutions. Considering the high demand of Siddha and Homeopathy, services may be expanded to all PHCs, since it was found that there was 100% co-location at DHs and sub-district hospitals, but only at 40% PHCs.
- More facilities may be required in districts and blocks where they are lacking and more personnel including paramedics and doctors may be sanctioned at facilities where the load is high.
- Strengthen NHP related responsibilities of AYUSH doctors through clear role definition, training and reporting of performance.
- Give equal administrative status with Allopathic doctors based on seniority.
- Inspite of being the only state with 11 drug production units in the public sector, quality and inadequacy of drug supply is an issue of concern that needs urgent attention.

Building an Integrated *AYUSH HMIS*

- Mainstreaming indicators must be developed to monitor AYUSH services, and improve reporting and record-keeping.

Establishing Linkages with LHT

- Linking AYUSH services with LHT will mutually strengthen both.
- District Resource Centres for LHT may be set up with linkages to NRHM structures.
- SMPB must cater to building herbal gardens in the public facilities as per IPHS and in villages through self-help groups and VHSCs.

Building Foundations of Integrative Medicine and 'Multi-Pathy' Treatment Protocols at All Levels for NCDs

- Need to build in mechanisms of cross-referral between Allopathy and AYUSH by sensitising them with training modules on AYUSH and LHT as well as dissemination of research findings.
- Developing Standard Guidelines for Treatment based on each system's (Allopathy, Siddha and Homeopathy) strengths with focus on RCH and NCDs.

17. Kerala

Making Use of the Substantial Stand-alone AYUSH Services to their Full Potential

- Substantial stand-alone infrastructure exists in the states, but rationalisation as per population and accessibility norms is a priority area of intervention.
- The data recording, reporting and collation of data at facility, district and state level (which is currently almost non-existent inspite of good coverage and utilisation) must be put in place to capture the role of AYUSH services in the state.
- Monitoring indicators for building ***AYUSH HMIS*** may be initiated on a pilot basis which may later be incorporated in the overall state HMIS. Need to develop these indicators in providing information about the role AYUSH is playing in the overall public health system. Kerala is the best state to lead in this owing to strong stand-alone system with high utilisation of services.
- Presently only 2 drug production units in the public sector inspite of such a large AYUSH infrastructure; this needs attention in order to ensure low cost and high quality supplies.

- Utilisation of AYUSH in NCDs and chronic diseases is well-established and needs to be utilised for building Standard Guidelines for the continuum of treatment from home remedies to primary, secondary and tertiary levels of AYUSH, particularly of Ayurveda and Homeopathy.
- Role of Homeopathy in certain epidemic diseases (such as Chikungunya) in the public health system should be reviewed, with its process and outcomes to be documented for analysis of usefulness and wider application.
- Availability of specialised treatments of AYUSH as well as primary OPD care at dispensaries must be used to develop treatment protocols for all levels of care in Ayurveda and Homeopathy in collaboration with research institutions and reputed NGOs in the AYUSH sector.

Initiating Formal Cross-Referral and Developing Primary to Tertiary Level Treatment Protocols for AYUSH on NCDs

- Kerala has no co-location of AYUSH and Allopathic services in the public system. While this does have a rational basis in the specific context of the state, what needs to be examined is the potential for evolving a system of cross-referral in the state. Would co-location promote such an outcome, or would it be possible to bring about a practice of cross-referral based on the strengths and limitations of each system even without co-location? An operations research exercise may be useful in developing an optimal system for maximum benefit to the community and overall improvement in its health status.
- There is clearly an appreciation of the complementarity of the other systems of medicine among both Allopathic doctors and AYUSH doctors in the public services. They are also advising patients to use the other systems. However, this cross-referral is being done verbally and not getting documented or formally recognised in any way. To begin with, introducing referral columns in the prescription forms at the facilities and their reporting to the higher levels may be useful.
- Dissemination of the research findings in Traditional and Integrative Medicine would be useful in sensitising providers to the strengths of other systems.

Revitalising LHT

- Whereas Kerala is strong in the formal AYUSH systems, its local health traditions are rapidly eroding owing to over-medicalised and commercialised

care in both the AYUSH and Allopathic sectors. Use of raw herbs and the principles behind such practices are getting lost, and must be revived by sensitising both the AYUSH practitioners and the general public.

- District Resource Centres for LHT should be created linked to NRHM, the panchayats and the Directorate of Ayurveda.
- The activities of the SMPB related to medicinal plants should be under the control of the ISM Directorate under H&FW, instead of various other Ministries which are looking after them, to regulate AYUSH Pharmaceutical Industry (primarily catering to the private sector and exports).

18. Delhi

Expanding Coverage and Quality of AYUSH Services

- Since there is high patient load, there is need to increase both stand-alone and co-located services. Only 43% DHs and 48% dispensaries/health centres are co-located, and there is low coverage by stand-alone institutions.
- Coordination of stand-alone and co-located AYUSH services across the Delhi government and multiple local bodies is essential for a rational planning of services.
- Separate directorates exist within the Department of H&FW, Assistant Directors directly supervise the AYUSH Medical Officers, but interactions with NRHM structures need to be enhanced significantly.
- Almost same number of AYUSH educational Institutions as of Allopathy exist in the public system which should be linked to the public services for mutual strengthening.
- Training capacities for AYUSH paramedics need to be developed.

Building Foundations of Integrative Medicine for Catering to Urban Health Needs

- There is clearly an appreciation of the complementarity of the other systems of medicine among both Allopathic doctors and AYUSH doctors in the public services. They are also advising patients to use the other systems. However, this cross-referral is being done verbally and not getting documented or formally recognised in any way. To begin with, introducing referral columns in the

prescription forms at the facilities and their reporting to the higher levels may be useful.

- Specialised treatments of both AYUSH and Allopathy are available within the public system, which must be used to strengthen centres of excellence for providing tertiary level care and building a model for the country that optimises the use of all knowledge systems.
- Dissemination of the research findings in Integrative Medicine would be useful in sensitising providers to the strengths of other systems as well as the general public.
- Utilisation of AYUSH in NCDs and chronic diseases is well-established and needs to be incorporated in the Standard Guidelines for Treatment that cover the continuum of care from home remedies and self-care to services of AYUSH and Allopathy at all levels.

Building an Integrated *AYUSH HMIS*

- The data recording, reporting and collation of data from the AYUSH services at the facility, district and state level must be strengthened.
- Monitoring indicators for building HMIS may be initiated on a pilot basis, which may later be incorporated in the overall state HMIS. Need to develop these indicators in providing information about the role AYUSH is playing in the overall public health system in both the stand-alone and co-located facilities.

Establishing Linkages with LHT

- SMPB under the Directorate of ISM should link with research and educational institutions for developing herbal gardens and educating the children and local residents about their use in the kitchen gardens.
- Linking promotion of LHT with school health programmes would regenerate the LHT in the future generation and help promote AYUSH services.

Annexures

ANNEXURE I

TOOLS USED FOR DATA COLLECTION (SCHEDULES AND CHECKLISTS)

A Study of the Status and Role of AYUSH under NRHM

Introductory note and informed consent:

This study is being undertaken to obtain basic information regarding the awareness, availability, utilisation and quality of AYUSH systems of medicine in Government Health Services and Local Health Traditions prevalent in the community. This is to help in strengthening the AYUSH services and revitalising Local Health Traditions, so as to provide better access to health services at primary level. We would be grateful to you for sparing some time to answer our questions and help us understand how the AYUSH systems and the Local health traditions are useful as well as can be strengthened to ensure better health care for all. Please feel assured that the information you give will be kept confidential and used only for the purposes of this study. No respondents will be quoted by name unless you want us to do so.

Do you agree to participate in the study? Yes No

I have given full information about the study and obtained the above response from the respondent.

Investigator's signature

Schedule (i)

Data required at the State level

	Institutions		Ayur-veda	Yoga	Natur-opathy	Unani	Siddha/ Amchi	Home-opathy	Allo-pathic with AYUSH integra-tion	Allo-pathic
1. Type & No. of Institutions	Hospitals									
	CHC									
	PHC									
	Dispensaries									
	Dispensaries vacant due to relocations									NA
	Sub-Centres									
	Herbariums									NA
	Manu-facturing Units	Govt.								
		Pvt.								
2. No. of Beds Available										
3. No. of Doctors/ Registered Practitioners	Sanctioned									
	Available									
4. Utilisation (In last year)	No. of OPD at-tendance									
	No. of IPD admissions									

5. Budgetary Provisions		State AYUSH Department	Central AYUSH Department	State H&FW Department	Central H & FW Department
	General				
	NRHM				
6. Future Develop-mental Activities	Under Imple-menta-tion				
	Under Planning				

7. General Governing / Controlling system for AYUSH	At State Level		In Existence			Functional Control		
	Department of AYUSH							
	Directorate of AYUSH							
	State Health Society (NRHM)							
	State Council		Research Council					
			Regulatory Council					
	State Programme Management Unit (NRHM)							
	Others							
	At District Level		In Existence			Functional Control		
	District Health Society (NRHM) District Programme Management Unit (NRHM)							
	Village Health and Sanitation Committee (NRHM)							
	Others							
	At Institutional Level							
	Rogi Kalyan Samiti (NRHM)							
	Others							
8. Major Private Institutions	Institutions by Systems of Medicine	Ayurveda	Yoga	Naturopathy	Unani	Siddha/ Amchi	Homeopathy	Allopathic with AYUSH Integration
	Hospitals							
	Clinics							
	Speciality Centres							
	Others							

9. What are the types of Local Health Traditions prevalent in the State?	Folk Healers	Faith Healers	Others
10 (a). Is there any NGO/programme that is promoting LHT in this area?			
10 (b). If yes, give details of contact and the nature of work			
11. Suggestions of State Level Officers for strengthening services of	AYUSH		
	LHT		
	NRHM		
12. Recommendations/Remarks by the Survey Team			

DOCUMENTS/DATA IMPORTANT TO COLLECT

- District-wise list of AYUSH and Integrated Institutions at the State level, including their staff position and OPD attendance & IPD admissions data if available for the period of 2003-04 to 2006-07.
- Any special initiatives for AYUSH /LHT/Medicinal Plants:
  - Plans and Programme documents - Research studies (ongoing & published)
  - Evaluation reports
- ASHA training modules.
- Annual reports of the reference period from the Department of Health & Family Welfare and AYUSH.
- NRHM initiatives for mainstreaming of AYUSH and revitalisation of Local Health Traditions.
- Legal provisions related to AYUSH in the state/Centre
  - Clinical services & cross practice
  - Institutions setting up
  - Insurance
  - Research
  - Drugs

Schedule (ii)

Data required at the District Level

	Institutions		Ayur-veda	Yoga	Natur-opathy	Unani	Siddha/ Amchi	Home-opathy	Allopathic with AYUSH integ-ration	Allo-pathic
1. Type & No. of Insti-tutions	Hospitals									
	CHC									
	PHC									
	Dispensaries									
	Dispensaries vacant due to relocations									NA
	Sub-Centres									
	Herbariums									NA
	Manuf-acturing Units	Govt.								
		Pvt.								
2. No. of Beds Available										
3. No. of Doctors/ Registered Practi-tioners	Sanctioned									
	Available									
4. Utilisation (In last year)	No. of OPD attendance									
	No. of IPD admissions									

5. Budgetary Provisions		State AYUSH Department	Central AYUSH Department	State H&FW Department	Central H&FW Department
	General				
	NRHM				
6. Future Develop-mental Activities	Under Implemen-tation				
	Under Planning				

7. General Governing / Controlling system for AYUSH	At District Level	In Existence			Functional Control			
	District Health Society (NRHM) District Programme Management Unit (NRHM)							
	Village Health and Sanitation Committee (NRHM)							
	Others							
	At Institutional Level							
	Rogi Kalyan Samiti (NRHM)							
	Others							
8. Major Private Institutions	Systems of Medicine	Ayurveda	Yoga	Natur-opathy	Unani	Siddha/ Amchi	Homeopathy	Allopathic with AYUSH Integration
	Hospitals							
	Clinics							
	Speciality Centres							
	Others							
9. What are the types of Local Health Traditions prevalent in the State?	Folk Healers			Faith Healers			Others	
10 (a). Is there any NGO/programme that is promoting LHT in this area?								
10 (b). If yes, give details of contact and the nature of work								
11. Suggestions of State Level Officers for strengthening services of	AYUSH							
	LHT							
	NRHM							
12. Recommendations/Remarks by the Survey Team								

* IMPORTANT TO COLLECT

- List of Public health institutions providing AYUSH services alone/with Integration, including OPD attendance & IPD admissions data if available for the period of 2003-04 to 2006-07.
- List of NGOs/Private institutions dealing with AYUSH and LHT.
- Any special initiatives for AYUSH/LHT/Medicinal Plants:
- NRHM initiatives for mainstreaming of AYUSH and revitalisation of Local Health Traditions.

Schedule (iii)

SCHEDULE FOR HEAD OF AYUSH INSTITUTION OR ALLOPATHIC INSTITUTION WITH INTEGRATION OF AYUSH

All the information in this Proforma will be strictly confidential.

NOTE: Only AYUSH facilities and those facilities are to be sampled where AYUSH system(s) are integrated with Allopathy. Before starting interview, please check with head of the facility if AYUSH systems are integrated or not.

1. A. Identification code of Institution (should correspond with the No. written at the beginning of the schedule)

B. Team code | | | | | | | |

2. Type of facility and systems available:

(i) Name and address of the facility:

Contact telephone:

(ii) AYUSH systems available within the premises of the facility:

Circle the code of appropriate type	
AYUSH Only	
AYUSH Hospital	a
AYUSH Dispensary	b
Any other	c
AYUSH with Integration	
District Hospital	01
Medical College Hospital	02
Sub-divisional Hospital	03
Community Health Centre/ Rural Hospital	04
Cottage Hospital	05
PHC – Block	06
– Additional	07
Area Hospital	08
Satellite Hospital	09
Any other (SPECIFY)	10

3. Respondent's detail

3.1 Designation of Respondent: .....
3.2 Respondent name: .....
3.3 Age .....
3.4 Gender: M / F
3.5 Caste: Gen. OBC SC ST Other
3.6 Religion: Buddhist Christian Hindu Jain Muslim Parsee Sikh Other
3.7 Place of Schooling: Rural Urban
3.8 Place of Medical education: Metropol. Town Rural
3.9 Professional qualifications (M.B.B.S., M.D. (specialisation), B.A.M.S., B.U.M.S., etc.):
3.10 Membership of professional associations:
3.11 Details of in-service training, if any
3.12 If respondent is an Allopath: Have you received any training in AYUSH system? Yes No
If yes, which system? (Please name the system)
3.13 Have you received any training in alternative medicine? Yes No
If yes, please name the system (Reiki, Acupuncture, etc.)

4. Work experience (in years)

4.1 Years in current service (Years and months)
4.2 Since when in present institution
4.3 Permanent recruitment or on contract
4.4 Nature of work: (clinical/administrative/research/other)
4.5 Any previous or concurrent work experience [Like routine work plus research, teaching, and professional writing]
4.6 Any association with Social welfare bodies, NGOs, or associations for promotion of good health, ethical practices, medico-legal issues, etc:

STAFFING

5. Staff Position (Details of name, designation, qualification etc. may be filled in attached Annexure-I)

Sl. No.	Category of staff	Number of posts			If Vacant, since when *(IN MONTHS)*		
		Sanctioned	Filled	Available at the facility	I	II	III
1.	Doctor in-charge						
2.	Gynaecologist & Obstetrician						
3.	Pediatrician						
4.	Anaesthesiologist						
5.	Specialist in RTI/STI (STD Officer)						
6.	Medical Specialist						
7.	Surgeon						
8.	General duty doctors:						
	Male						
	Female						
9.	**AYUSH DOCTORS**						
	Male						
	Female						
10.	**Staff for conducting delivery trained under Allopathic system:**						
	(a) Staff Nurse						
	(b) ANM						
11.	**Staff for conducting delivery trained under AYUSH/LHT/etc.**						
	Staff Nurse						
	(b) ANM						
	(c) Trained dai						
	(d) Traditional mid-wife						
12.	Paramedical staff (Pharmacist, compounder, lab technician, lab assistant, radiographer, etc.)						
13.	Paramedical staff under AYUSH (Pharmacist, compounder, nursing assistant)						
14.	Of all the above those under NRHM						

Summary of Questions 5.1 to 5.13 [Must be filled in the presence of respondent]

Type of professional	Numbers
Total number of Allopathic doctors	
Total number of AYUSH doctors	
Total number of Allopathic paramedic	
Total number of AYUSH paramedic	

UTILISATION OF FACILITIES

6. Utilisation of facilities [Total patients of all systems]

Year	Male	Female	Children	Total
2003-04				
2004-05				
2005-06				
2006-07				
2007-08				
Total				

7. Utilisation by systems [Carefully note patients treated under various systems]

	2003-04	2004-05	2005-06	2006-07	2007-08	Total
Allopathy						
Ayurveda						
Yoga						
Naturopathy						
Unani						
Siddha						
Homeopathy						
Amchi						
Others						
Total						

8. Number of Indoor and outdoor patients

ALLOPATHY	Male	Female	Children	Total
OPD				
Indoor Patient				
Total				
AYUSH	Male	Female	Children	Total
OPD				
Indoor Patient				
Total				

9. Utilisation by Age Group

Systems	Age groups									
	Infant		Children (1-14)		Adults		Elderly		Total	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Allopathy										
Ayurveda										
Yoga										
Naturopathy										
Unani										
Siddha										
Homeopathy										
Amchi										
Others										
Total										

10. Utilisation by Diseases

10.1 Type of diseases/conditions generally dealt with at the institution.

Age Group	Diseases Commonly Treated at this Institution
Children	
Adult Male	
Adult Female	
Elderly	

1.2 Which of the above diseases are exclusively dealt with under Allopathic system?

Age Group	Diseases Exclusively Treated under Allopathic System
Children	
Adult Male	
Adult Female	
Elderly	

1.1 Which diseases are commonly dealt with under AYUSH systems?

Age Group	Diseases Commonly dealt with under AYUSH Systems
Children	
Adult Male	
Adult Female	
Elderly	

10.4 Which diseases/conditions are commonly dealt with by combination of Allopathic and AYUSH or alternative therapies?

Age Group	Diseases Commonly Dealt with Under Combination of Allopathic System with AYUSH
Children	
Adult Male	
Adult Female	
Elderly	

11. Referral Systems [Cross-system and within-system referrals]

11.1 Are cases from Allopathic system referred to AYUSH systems in your institution? Diseases/ailments:
Yes No
If yes, please name the diseases for which cases are referred

11.2 Are cases from AYUSH systems referred to Allopathic systems? Diseases/ailments:
Yes No
If yes, please name the diseases for which cases are referred

11.3 Are cases from one AYUSH system referred to another? Diseases/ailments:
Yes No

If yes, please name the diseases for which cases are referred

12. In the absence of an Allopathic doctor, is there any provision for an AYUSH doctor to perform the duties? Yes No
If yes, what is it? [Please obtain copies of Government order, rules, etc.]

13. If any Allopathic post is vacant, does the system allow a substitute for vacant posts? Yes No
If answer is yes, then ask:

14. Does the system allow placement of an AYUSH doctor against the Allopathic doctor's post? Yes No

15. If AYUSH doctor is transferred from AYUSH facility to CHC/PHC, does it weaken the AYUSH facility from where AYUSH doctor is ferred? Yes No

16. How is the shortage filled?

17. What are the legal provisions in your state with regard to practice of different systems?

18. What diagnostic facilities are available in the institution?

19. What do you do for the diagnostic facilities not available at the institution?

20. NRHM

20.1 Broadly speaking, which elements are being implemented under the NRHM?

		In General	For Mainstreaming of AYUSH	Revitalising of Local Health Traditions
i.	In your institution/facility			
ii.	In your district but not your facility			
iii.	In the state but not in your district			

20.2 Broadly, what is the level of **awareness** in regard to provisions of NRHM?

		In General (Please enter as appropriate: Low, medium, high)	For Mainstreaming of AYUSH (Please enter as appropriate: Low, medium, high)	For Revitalising Local Health Traditions (LHT) (Please enter as appropriate: low, medium, high)
i.	Functionaries of NRHM (MD-NRHM, SPMU, DPMU, etc.)			
ii.	Functionaries of your facility			
iii.	Public in general			
iv.	Patients			

20.3 Is the AYUSH Doctor a member of your Rogi Kalyan Samiti? Yes No

21. ASHA

21.1 What sorts of AYUSH components are included for ASHA under NRHM?

i.	Content of training imparted to ASHA in regard to AYUSH systems?	
ii.	Who imparts this training?	
iii.	What is the duration of training on this component?	
iv.	Any hands-on practical component in the training?	

22. Is there a need for training of personnel employed at Hospital/CHC/PHC for:

22.1	Productive implementation of AYUSH If yes, specify personnel and type of training:	
22.2	Revitalisation of LHT? If yes, specify personnel and type of training:	

23. Need for ADDITIONAL facility

	Additional facilities, equipment, physical facilities, stocks required to be created for better implementation of NRHM:	Specialty clinic	Equipment	Stock of medicine	IEC	Man-power	Any other
23.1	Allopathy						
23.2	AYUSH						

24. BUDGET

	Annual Budget for Institution under Survey	
i.	MODERN MEDICINE	Plan: Non Plan:
ii.	AYUSH systems	Plan: Non Plan:

iii.	Are there any user charges? If yes, for what (tick a-e): If yes, obtain the rate list of all charges.	a) Registration b) Consultation c) Diagnostic tests d) Medicines e) Others (specify)
iv.	How much of the RKS funds have been spent on AYUSH? If any, for what?	

25. MEDICINES

(a)	Are the medicines supplied adequate?			
	Allopathic Medicines	Yes	No	
	AYUSH Medicines	Yes	No	
(b)	Additional medical supplies required If any?			
	Allopathic Medicines	Yes	No	
	AYUSH Medicines	Yes	No	
(c)	Which are the medicines that remain unused (i.e. irrational supply)?			
	Allopathic Medicines			
	AYUSH Medicines			
(d)	In your institution which AYUSH medicines are in high demand?			
(e)	What are the sources of medicines?			
	Allopathic Medicines	Never Sometimes Often	Yes No	
	AYUSH Medicines			
(f)	How frequently do you experience stock-out (shortage) of medicines?			
	Allopathic Medicines	Never	Sometimes	Often
	AYUSH Medicines	Never	Sometimes	Often
(g)	Do you purchase any locally?			
	Allopathic Medicine	Yes	No	
	AYUSH Medicines	Yes	No	
(h)	Is the quality of medicines supplied satisfactory?			
	Allopathic Medicines	Yes	No	
	AYUSH Medicines	Yes	No	

26. Availability of other Health Facilities

Name Other Health Facilities Available within 10 kms of the Area of Survey			
	NGO Sector	**Public Sector**	**Private Sector**
Modern Medicine			
AYUSH Medicines			

27. LHT

	Type of Traditional/Local Health Practices/ Folk Healers/Faith Healers prevalent in the area	Describe those practices in your area	What is your view about them?
i.	Type of practices: Home remedies Folk Healing practices Faith Healing practices Others		
ii.	Who practices these? Home remedies Folk Healing practices Faith Healing practices Others		
iii.	What are the legal provisions for folk healers in your state?		

28. SUPPORT FOR LHT

Is there any need for support to Local health traditions? YES No If yes, what would be desirable in terms of the following?	
i.	Documentation and research
ii.	Herbariums
iii.	Training: LHT practitioners NRHM Institution staff of AYUSH stream Institution staff of Allopathic stream Paramedical staff
iv.	Education of public
v.	Cooperation of PHC/Govt. Doctors
vi.	Any other

29.Please could you state the problems you are facing in running this hospital?

[The series in Question 29 should preferably be filled by the doctor/respondent himself/herself]

29.1 In respect of integration of Allopathic system with AYUSH

29.2 Facilities for doctors [Please state separately for AYUSH]

29.3 Equipment [Please state separately for AYUSH]

29.4 Medicines [Please state separately for AYUSH]

29.5 Training of ASHA under NRHM

29.6 In general the concept of NRHM and mainstreaming of AYUSH

THANK YOU FOR YOUR COOPERATION

End time…… Date ……/……/2008 Signature of Supervisor……..…..……..…

Signature of Respondent……..…… Time …… Date……/……/2008

Annexure - I

Name	Designation	Qualification	Total Service Period	Tenure at the present Organisation

Schedule (iv)

Schedule for Allopathic Doctors in Institution with Integration of AYUSH

To be administered only to Allopathic Doctors at DH/CHC/PHC

NOTE: Only those facilities are to be sampled where AYUSH system(s) are integrated with Allopathy. Before starting interview, please check with head of the facility if AYUSH systems are integrated or not.

1. **A. Identification code of Institution (should correspond with the no. written at the beginning of the schedule)**

B. Team code | | | | | | | |

2. **Type of facility and systems available:**

(i) Name and address of the facility:

Contact telephone:

(ii) AYUSH systems available within the premises of the facility:

Circle the code of appropriate type

AYUSH Only	
AYUSH Hospital	a
AYUSH Dispensary	b
Any other	c
AYUSH with Integration	
District Hospital	01
Medical College Hospital	02
Sub-divisional Hospital	03
Community Health Centre/ Rural Hospital	04
Cottage Hospital	05
PHC – Block	06
– Additional	07
Area Hospital	08
Satellite Hospital	09
Any other (SPECIFY)	10

3. **Respondent's detail**

3.1 Designation of Respondent: .....

3.2 Respondent name: .....

3.3 Age .....

3.4 Gender: M / F

3.5 Caste: Gen. OBC SC ST Other

3.6 Religion: Buddhist Christian Hindu Jain Muslim Parsee Sikh Other

3.7 Place of Schooling: Rural Urban

3.8 Place of Medical education: Metropol. Town Rural

3.9 Professional qualifications (M.B.B.S., M.D. (specialisation), B.A.M.S., B.U.M.S., etc.):

3.10 Membership of professional associations:

3.11 Details of in-service training, if any

3.12 If respondent is an Allopath: Have you received any training in AYUSH system? Yes No
If yes, which system? (Please name the system)

3.13 Have you received any training in alternative medicine? Yes No
If yes, please name the system (Reiki, Acupuncture, etc.)

4. **Work experience (in years)**

4.1 Years in current service (Years and months)

4.2 Since when in present institution

4.3 Permanent recruitment or on contract

4.4 Nature of work: (clinical/administrative/research/other)

4.5 Any previous or concurrent work experience [Like routine work plus research, teaching, and professional writing]

4.6 Any association with Social welfare bodies, NGOs, or associations for promotion of good health, ethical practices, medico-legal issues, etc:

5. Utilisation by Diseases

5.1 Type of diseases/conditions generally dealt with at the institution.

Age Group	Diseases Commonly Treated at this Institution
Infant	
Children (1 -14)	
Adult Male	
Adult Female	
Elderly	

5.2 Which of the above diseases can only be dealt with under Allopathic system?

Age Group	Diseases that Can Only be Treated under Allopathic System
Infant	
Children (1 -14)	
Adult Male	
Adult Female	
Elderly	

5.3 Which diseases are commonly dealt with under AYUSH systems?

Age Group	Diseases Commonly Dealt with under AYUSH Systems
Infant	
Children (1 -14)	
Adult Male	
Adult Female	
Elderly	

1.4 Which diseases are dealt with by combining Allopathy with AYUSH or other complementary medicine?

Age group	Diseases Commonly Dealt with under Combination of Allopathic System with AYUSH
Infant	
Children (1 -14)	
Adult male	
Adult Female	
Elderly	

(a) Do you prescribe any alternative or AYUSH treatment to patients?

(b) Do you use any alternative or AYUSH treatment yourself or for your family?

OPINION

6. (a) Do you think AYUSH systems are now redundant? Yes No Can't say

(b) If yes, specify

(c) If no, list in the table below, the therapies which you think are: (i) Useful (ii) Useless (iii) Harmful

Code: 1 – Ayurveda 2 – Yoga 3 – Naturopathy 4 – Unani

5 – Siddha 6 – Homeopathy 7 – *Amchi* 8 – Others

AYUSH Systems				
Health Problems	**Useful**	**Useless**	**Harmful**	**Can't say**
Common cold				
Pneumonia				
Asthma				
TB				
Diarrhoea				
Typhoid/Enteric Fever				
Malaria				
PUO (Pyrexia of Unknown Origin)				
Jaundice				
Diabetes				
Fistula/Piles				
Chronic Headache				
Chronic Joint pain				
Memory loss				
General debility				
Chronic Constipation				
Mental Illness				
White discharge				
Anaemia				
Menstrual problems				
Malnutrition				
Insect bites				
Worm infestation				
Minor injuries				
Major injuries				
Any other				

7. Referral systems

	Type of diseases/conditions/generally dealt at the institution & existing referral system	
7.1	Do you use any home remedies for yourself & family members?	
7.2	Do you prescribe home remedies to patients?	
7.3	Do you refer patients to an AYUSH practitioner?	
7.4	Do AYUSH practitioners refer cases to you?	
7.5	Do you interact with AYUSH practitioners informally?	
7.6	Do you interact with AYUSH practitioners for treatment modality, i.e., to discuss a particular case or a health problem for better patient management?	

8. LHT

	Type of traditional/local health practices/folk healers/faith healers prevalent in the area	Describe the practices/ who practice them	Your views about them
i.	Type of practices: Home remedies Folk Healing (naturalistic) Faith Healing Others		
ii.	Who practices them? Home remedies Folk Healing (naturalistic) Faith Healing Others		

9. Support for LHT

	Is there any need for support to local health traditions? YES NO If yes, state what would be desirable among the following?	
	Area of Desirability	**Exactly what is required?**
i.	Documentation and research	
ii.	Herbariums	
iii.	Training : LHT practitioners NRHM Institution staff of AYUSH stream Institution staff of Allopathic stream Paramedical staff	
iv.	Cooperation of doctors/system	
v.	Any other	

10. What other suggestions would you give for strengthening health care:
(i) in your institution (ii) in your district

THANK YOU FOR YOUR COOPERATION AND TIME

End time…… Date ……/……/2008 Signature of Supervisor……..…..……..…

Signature of Respondent……..…… Time …… Date……/……/2008

Telephone number of Respondent:

Contact address:

Schedule (v)

Schedule for AYUSH Service Providers (AYUSH Doctors, AYUSH Paramedics, ANMs)

All the information in this Proforma will be strictly confidential.

NOTE: Only those facilities are to be sampled where only AYUSH services are provided or AYUSH system(s) are integrated with Allopathy. Before starting interview, please check with head of the facility if AYUSH systems are integrated or not.

1. A. Identification code of Institution (should correspond with the no. written at the beginning of the schedule)

B. AYUSH Provider number | | | | | | | |

C. Team code | | |

2. Type of facility and systems available:

(i) Name and address of the facility:

Contact telephone:

(ii) AYUSH systems available within the premises of the facility:

Circle the code of appropriate type	
AYUSH Only	
AYUSH Hospital	a
AYUSH Dispensary	b
Any other	c
AYUSH with Integration	
District Hospital	01
Medical College Hospital	02
Sub-divisional Hospital	03
Community Health Centre/ Rural Hospital	04
Cottage Hospital	05
PHC – Block	06
– Additional	07
Area Hospital	08
Satellite Hospital	09
Any other (SPECIFY)	10

3. Respondent's detail

3.1 Designation of Respondent: .....

3.2 Respondent name: .....

3.3 Age .....

3.4 Gender: M / F

3.5 Caste: Gen. OBC SC ST Other

3.6 Religion: Buddhist Christian Hindu Jain Muslim Parsee Sikh Other

3.7 Place of Schooling: Rural Urban

3.8 Place of Medical education: Metropol. Town Rural

3.9 Professional qualifications (M.B.B.S., M.D. (specialisation), B.A.M.S., B.U.M.S., etc.):

3.10 Membership of professional associations:

3.11 Details of in-service training, if any

3.12 If respondent is an Allopath: Have you received any training in AYUSH system? Yes No
If yes, which system? (Please name the system)

3.13 Have you received any training in alternative medicine? Yes No
If yes, please name the system (Reiki, Acupuncture, etc.)

4. Work experience (in years)

4.1 Years in current service (Years and months)

4.2 Since when in present institution

4.3 Permanent recruitment or on contract

4.4 Nature of work: (clinical/administrative/research/other)

4.5 Any previous or concurrent work experience [Like routine work plus research, teaching, and professional writing]

4.6 Any association with Social welfare bodies, NGOs, or associations for promotion of good health, ethical practices, medico-legal issues, etc:

UTILISATION OF FACILITIES

5. Utilisation of facilities [ALL SYSTEMS OF AYUSH]

Year	Male	Female	Children	Total
2003-04				
2004-05				
2005-06				
2006-07				
2007-08				
Total				

6. Utilisation by systems

	2003-04	2004-05	2005-06	2006-07	2007-08	Total
Ayurveda						
Yoga						
Naturopathy						
Unani						
Siddha						
Homeopathy						
Amchi						
Others						
Total						

7. Number of Indoor and outdoor patients (One day data, for the last day for which it is available)

AYUSH	Male	Female	Children	Total
OPD				
Indoor Patient				
Total				

8. Utilisation by Age group (One day data for the last day for which it is available)

AYUSH Systems	Age Groups									
	Infant		Children (1-14)		Adults		Elderly		Total	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Ayurveda										
Yoga										
Naturopathy										
Unani										
Siddha										
Homeopathy										
Amchi										
Others										

9. Utilisation by Diseases

1.1 In your facility, which diseases/conditions are exclusively dealt with under Allopathic system?

Age Group	Diseases Exclusively Treated under Allopathic System
Children	
Adult Male	
Adult Female	
Elderly	

1.1 Which diseases/conditions are commonly dealt with under AYUSH systems?

Age Group	Diseases Commonly Dealt with under AYUSH Systems
Children	
Adult Male	
Adult Female	
Elderly	

1.1 Which diseases/conditions are commonly dealt with by combination of Allopathic and AYUSH or alternative therapies?

Age Group	Diseases Commonly Dealt with under Combination of Allopathic System with AYUSH
Children	
Adult Male	
Adult Female	
Elderly	

10. Any change in no. of Patients utilising your facility? : Yes No

If yes,

(a) What is the change?

OPD: Increase Decrease

Indoor: Increase Decrease

(b) Period of change

(c) Possible reason

11.What problems do you face in your work? (let respondent answer first)

After noting respondent's spontaneous answers, ask about these pointers: Acceptance by general patients/practitioners/ administrative/personnel/funds/space/medication/equipment/any other (state).

Details with suggestions:

12. What problems are faced by patients in using your services?

13.(a) What kinds of therapy do you use with your patients for the following problems? (Allopathic/AYUSH only and within these which one(s)/combination/other)

Ailments	AYUSH Only	AYUSH + Allopathic Combination	Allopathy Only
Common cold			
Pneumonia			
Asthma			
TB			
Diarrhoea			
Typhoid/Enteric Fever			
Malaria			
PUO (Pyrexia of Unknown Origin)			
Jaundice			
Diabetes			
Fistula/Piles			
Chronic Headache			
Chronic Joint pain			
Memory loss			
General debility			
Chronic Constipation			
Mental Illness			
White discharge			
Anaemia			
Menstrual problems			
Malnutrition			
Insect bites			
Worm infestation			
Minor injuries			
Major injuries			
Any other			

(b) Do you also use drugless therapy? If yes, which ones?

14. What traditional methods of diagnosis do you use?

15. What modern methods of diagnosis do you use?

16. For which diseases do you refer patients you are unable to treat and to whom? Give examples (name etc.)

Codes for column 2:

1 – Ayurveda 2 – Yoga 3 – Naturopathy 4 – Unani 5 – Siddha 6 – Homeopathy
7 – *Amchi* 8 – Others 9 – Allopathic 10 – Traditional Health Practitioners 11 – Faith Healers

Name of Disease/ Condition	Referral to Other AYUSH/ Allopathic/Traditional Health Practitioners (Gunis)/Faith Healers/ Religious Practices	Always Refer = 1 Sometimes = 2	At which stage do you refer – duration of treatment, condition of patient, any other	For what purpose	If you do not refer any conditions to Allopathy, why not?
Column 1	Column 2	Column 3	Column 4	Column 5	Column 6

17. MEDICINES

(a)	Are the medicines supplied adequate?				
	Allopathic Medicines	Yes		No	
	AYUSH Medicines	Yes		No	
(b)	Additional medical supplies required, If any ?				
	Allopathic medicines	Yes		No	
	AYUSH medicines	Yes		No	
(c)	Which are the medicines that remain unused (i.e., irrational supply)?				
	Allopathic Medicines				
	AYUSH Medicines				
(d)	In your institution which AYUSH medicines are in high demand?				
(e)	What are the sources of medicines?				
	Allopathic Medicines				
	AYUSH Medicines				
(f)	How frequently do you experience stock-out (shortage) of medicines?				
	Allopathic Medicines	Never	Sometimes	Often	
	AYUSH Medicines	Never	Sometimes	Often	
(g)	Do you purchase any locally?				
	Allopathic Medicines	Yes	No	No	No
	AYUSH Medicines	Yes		No	
(h)	Is the quality of medicines supplied satisfactory?				
	Allopathic Medicines	Yes	No	No	
	AYUSH Medicines	Yes		No	

18. (a) Are you using raw herbs? Yes No

(b) Are you preparing formulation from raw herbs in the institution? Yes No

19. What methods of disease prevention do you advise/use with your patients?

20. What professional interaction do you have with Allopathic doctors?

(t) In your institution

(u) Outside your institution

(v) Do Allopathic doctors refer patients to you?

(w) If yes, from where and for which conditions?

21. Are you a member of any of the following (circle the one) :

(a) Rogi Kalyan Samiti [RKS]

(b) District Health Society

(c) State Health Society

(d) Village Health & Sanitation Committee [VHSC]

LOCAL HEALTH TRADITIONS

22. **What are some of the important forms of local health practices in your area?**

23. **Do you use or advise your patients about them? If yes, which ones?**

24. **Is there any programme or organisation that is promoting local health traditions, herbal medicine, etc., in this area? If yes, give details for contacting and the nature of work.**

25. **Please provide us with contact details of the professional association you belong to:**

26. **What are some of the major activities undertaken by them?**

27. **Are you a member of any social welfare, NGO, or any institution that is probing into medical ethics, medico-legal cases, or generally any organisation that seeks to provide better healthcare?** Yes No

    If yes, could you please tell us which ones?

28. **What suggestions would you give for strengthening the services of your institution?**

THANK YOU FOR YOUR COOPERATION AND TIME

End time…… Date ……/……/2008 Signature of Supervisor……..…..……..…

Signature of Respondent……..…….. Time …… Date……/……/2008

Schedule (vi)

Details of the ASHA:

1. **Identification code of Institution (should correspond with the no. written at the beginning of the schedule)**
2. **Designation of the respondent:**

BACKGROUND OF RESPONDENT

3. **Name and address of respondent:**

Age:

Mobile/telephone number:

3.1 Marital Status:	(1) Married (2) Unmarried (3) Separated (4) Divorced (5) Widow (6) Others (Specify)		
3.2 Age:	Respondent	Spouse	
		Respondent	Spouse
3.3 What is your level of literacy /education? Of your husband?	Illiterate =1 Barely literate=2 Primary=3 Middle =4 H-School= 5 College= 6 Technical= 7 Others= 8		
3.4 What has been your main Occupation?	Housewife =0 Skilled Labour =1 Unskilled labour =2 Govt.Service=3 Self-employed =4 Others (specify)=5		
3.5 What are the main source(s) of livelihood of your household?	Housewife=0 Skilled Labour =1 Unskilled labour=2 Govt.Service=3 Self-employed =4 Others (specify)=5		
3.6 What is your Religion?	Hindu=1 Muslim =2 Christian =3 Sikh =4 Other (specify) =5		
3.7 What is your caste?	General=1 SC=2 ST=3 OBC=4 Others=5		
3.8 Type of Family	Nuclear Family =1 Joint Family=2		

3.9 Members in the household?	Male	Female
Adult		
Children		
Total		

4. Standard of living index

4.1 Type of House		Kaccha = 0 Semi-Pucca = 2 Pucca = 4		
4.2 Do you own the house?		Yes = 2 No = 0		
4.3 Separate room for cooking		Yes = 1 No = 0		
4.4 What is the main source of drinking water?		Own piped water = 2; Own well = 2; Own hand pump = 2; Own Tank = 2; Public hand pump = 1; Public tap = 1; Any other public source = 1; Other's well = 0; Any other sources= 0		
4.5 Do you have toilet facility of your own?		Own flush toilet = 4; Public or shared flush toilet or own pit toilet = 2; Shared or public pit toilet = 1; No facility = 0		
4.6 Lighting source		Electricity = 2; Kerosene , gas, oil= 1; Others = 0		
4.7 Main fuel for cooking		Electricity, LPG , Biogas = 2; Coal/coke/kerosene/lignite) = 1; Others = 0		
4.8 Ownership of Agricultural Land		5 acres or more=4; 2.0-4.9 acres=3; Less than 2 acres or acreage not known=2; No agricultural land=0		
4.9 Ownership of irrigated land		At least some irrigated land = 2; No irrigated land = 0		
4.10 Ownership of livestock		Owns livestock = 2; Does not own livestock = 0		
4.11 Ownership of durable goods	Car or tractor=4; Moped, scooter, motorcycle=3; telephone, refrigerator, colour TV=2	Bicycle, electric fan, radio transistor, sewing machine, B&W TV, water pump, bullock cart/thresher = 2	Mattress, chair, pressure cooker, bed/cot, table, clock or watch = 1	Total score
Grand Total				

5. Distance of basic facilities from respondent's home (note both the distance in ilometres as well as time taken for return trip)

Facility	Distance (in kms)	Time for return trip (in minutes) (Give usual mode of travel)
Nearest doctor/healer/nurse		
AYUSH Dispensary		
AYUSH Hospital		
Sub-Centre		
PHC		
CHC		
District Hospital		
Anganwadi		
Panchayat Bhavan		

Use of LHT and AYUSH

6. **What are the tasks you commonly perform as an ASHA?**

7. **What are some of the important forms of local health traditions in your area?**

   Traditional Health Practitioners

   Home remedies

   Folk healers

   Faith healers

8. **Do you use home remedies, or go to Folk Healers or AYUSH doctors:**

   a) For yourself and your family? Yes No

   b) People in the village? Yes No

9. **If yes in 8, which ones and for what?**

Problem	Home Remedies	Folk Healers	Faith Healers	AYUSH Doctors

10. **Is there any programme or organisation that is promoting local health traditions, herbal medicine, etc., in this area? If yes, give details for contacting and the nature of work.**

11. **Can you name/recognise 3 plants growing in this area which have medicinal uses?**

Sl. No.	Name of Plant	Medicinal Uses
1.		
2.		
3.		

12. **Training**

   a) How many rounds of training have you attended?

   b) How many days per round of training have you attended?

   c) What subjects were covered in:

   Round 1

   Round 2

   Round 3

   Round 4

   d) Were you taught anything about:

	Yes /No	If yes – brief details of what was taught
i. Home remedies		
ii. Herbal remedies		
iii. AYUSH		

13. ASHA Kit

Were you given a kit? Yes No

If yes

i. After which round of training did you receive the kit?

ii. What all does it contain?

iii. Does it have any AYUSH medicines? Yes No

iv. If yes in (iii), what are these?

v. What are they used for?

vi. Are the medicines supplied to you of good quality? Yes No Can't say

vii. Is the quantity of medicines supplied sufficient?

Quantity of Allopathic medicines Yes No

Quantity of AYUSH medicines Yes No

viii. Do you face stock-out? Frequently Occasionally Never

ix If not sufficient, why?

Estimation of workload and problems faced

14. Average number of

a) Houses visited/day

b) Pregnant women visited/day

c) Total villagers attended/day

15. Common presenting problems of persons who come to you with illnesses?

Age Group	Male		Female	
	Problem	Suggestion given	Problem	Suggestion given
Infant				
Children (1-6)				
Adolescents				
Pregnant women				
Lactating mothers				
Adults (other than above)				
Elderly				

16. What problems do you face in your work? (Let respondent answer first)

After the spontaneous answer has been noted, use these pointers: Acceptance by villagers/Govt. Health functionaries / funds/unable to fulfil villager's expectations/Health service systems' expectations medication/equipment /any other:

Details:

17. What problems are faced by villagers in using your services?

18. a) Is there a VHSC in your village? Yes No

b) **Who are its members?**

c) **Are any activities related to AYUSH or LHT undertaken by it?**

19. a) **Is a Monthly Health and Nutrition Day organised in your village?** Yes No

b) **Does the AYUSH doctor attend it?**

20. **Do you suggest disease prevention methods to user groups?** Yes No

21. **What is your advice for malnourished children?**

22. **What is your advice for anaemia in women?**

23. **What methods of disease prevention do you advise your patients?**

24. **Are there any AYUSH services in government health facilities in your area?**

25. (i) **For which diseases do you refer patients you are unable to treat and to whom? Give examples (name, etc.)**

(ii) **Do you always refer/sometimes refer?**

Name of disease/ condition	Referral to AYUSH/ Allopathic/LHT/ voluntary orgn.	Always refer/ sometimes	At which stage do you refer-duration of treatment, condition of patient, any other	For what purpose	If you do not refer any conditions to Allopathy, why not?

26. **Give contact details of any professional association you belong to:**

27. **What are some of the major activities undertaken by them?**

28. **What suggestions would you like to give for improving health care for the people in your village?**

THANK YOU FOR YOUR COOPERATION AND TIME

End time…… Date ……/……/2008 Signature of Supervisor……..…..……..…

Signature of Respondent……..…… Time …… Date……/……/2008

Schedule (vii)

1. A. Identification code of Institution | | | | | |

B. Patient code | | |

BACKGROUND OF RESPONDENT

2. Name and address of respondent:

Age:

Sex:

2.1 What has been your main occupation	Housewife = 0; Skilled Labour = 1; Unskilled labour = 2; Govt.Service = 3; Self-employed = 4; Others (specify) = 5	Respondent	Spouse
2.2 What is the main source(s) of livelihood in your household?	Housewife = 0; Skilled Labour = 1; Unskilled labour = 2; Govt.Service = 3; Self-employed = 4; Others (specify) = 5		
2.3 What is your Religion?	Hindu=1; Muslim=2; Christian =3; Sikh= 4; Other(specify) =5		
2.4 What is your caste?	General=1; SC=2; ST=3; OBC=4; Others=5		

3. For what problem(s) had you come?

4. Since when are you/your patient (in case the ill person is below 14 or is too ill to answer) suffering from these problems?

5. Since when are you receiving treatment at this Centre/Hospital?

If the centre is co-located, then ask Questions 6, 7, 8.

6. Are there AYUSH doctors also at this Centre?

7. Which system of treatment are you following?

8. i) Did any one ask you to go for AYUSH treatment? Yes No

ii) If yes, who did so?

If AYUSH, ask Questions 9-15, else go to Question 16.

9. Did any doctor refer you to AYUSH treatment?

If yes, who referred you?

a) Allopathic Doctor

b) Another AYUSH doctor

c) Someone else

d) Own decision

10. If on your own, why did you make the choice?

11. If some one else, what was the reason given by them for recommending?

12. How did the doctor examine you? Give details below:

Physical examination Diagnostic tests Others

13. **What tests have been done at this Centre/hospital for diagnosis of your ailment?**

14. **Whether any tests were prescribed from outside also?** Yes No

    If so, which one(s)?

15. **Have you ever been referred by a doctor of one system to a doctor of another system?**

    Yes No

16. **Have you consulted any AYUSH doctors before coming to this facility or together with the treatment from here?** Yes No

17. a) **Before coming to doctors for treatment did you try any home remedy also?** Yes No

    b) **If yes, are you continuing it?** Yes No

18. **From where did you learn of this remedy?**

Write down the prescription received at the institution, after taking the patients permission

Problem	Diagnosis	Tests Prescribed	Treatment Prescribed		
			Oral	Injectable	Surgery

Perception of user

19. **Did you feel relaxed with the doctor?** Yes No

20. **Did the doctor hear your medical complaints patiently?** Yes No

21. **Do you feel that the doctor is knowledgeable?** Yes No

22. **Did the doctor explain you your ailments with reasons?** Yes No

23. **Did the doctor tell you possible solutions/treatments to your problem?** Yes No

    If yes, what?

    If yes, did he say that other/better solutions/treatments are available? Yes No

    If yes, what?

24. **Did he direct you to a particular pharmacy?** Yes No

25. **Did he direct you to get tests done at a certain place?** Yes No

26. **Did he behave with you as you would expect?** Yes No

27. **Does he behave with others just as he behaved with you?**

28. **Did any other health worker behave with you in discriminatory manner or misbehave with you?**

29. **Did you pay for the following? If yes, how much (for each category separately)?**

    a) Registration b) Consultation c) Diagnostic/Tests d) Medicines e) Other

30. a) **How do you view the services of this facility?** Good Satisfactory Unsatisfactory Poor

    b) **How do you view the AYUSH facility?** Good Satisfactory Unsatisfactory Poor

31. Is there any health facility (AYUSH) in your vicinity or close to this institution which you think is better than this? Yes No

If yes, why are you not visiting that health facility?

32. What suggestions would you like to give for improving the health care services?

i) The services in general

ii) The AYUSH services

iii) The Allopathic services

THANK YOU FOR YOUR COOPERATION AND TIME

End time…… Date ……/……/2008 Signature of Investigator……..…..……..…

Signature of Supervisor……..…….. Time …… Date……/……/2008

Schedule (vii) *Contd.*

A. Identification code (should correspond with the no. written at the beginning of the schedule)

B. Household code

Before starting the interview: (a) Explain the purpose of the interview which is to elicit the views and usage pattern of home remedies, LHT, AYUSH systems and Allopathic system, (b) Identify the head of household (who should be the main respondent), and (c) Ensure that the interview takes place when family, friends and neighbours are present.

Awareness and use of common medicinal plants and herbs

1. What medicinal plants grow in your area and what are their uses?

Medicinal plants	Naturally grow in this area	We cultivate them	Community cultivates them

2. Which common food items have special medicinal properties?

Food items	Special Medicinal Properties

3. Any comments, remarks, story, anecdote, please note here, and tape record if possible.

Local Health Traditions

4. Is there any health problem for which you use home remedies/Folk Healers' treatment/Faith Healers' treatment?

Type of LHT	Yes	No
Traditional Health Practitioners		
Home remedies		
Folk Healers		
Faith Healers		

5. Who are the local healers in your area? (Please tell their names)

Traditional Practitioners	Folk Healers	Faith Healers	Others

Common use of home remedies

6. What home remedies do you use for the following?

Illnesses/ Ailments	In Infant	In Children (1-14)	In Adult Male	In Adult Female	In Elderly	Source of knowledge	Preventive Measures Adopted
Cough & cold							
Diarrhoea							
Fever							
Jaundice							
Diabetes							
Fistula/Piles							
Chronic Headache							
Chronic Joint pain							
Memory loss							
General debility							
Chronic Constipation							
Mental Illness							
White discharge							
Anaemia Anaemia							
Menstrual problems Menstrual problems							
Malnutrition							
Insect bites							
Worm infestation							
Minor injuries							
Major injuries							

Perceived changes in health

7. How do you think the health status has changed in your village over the past 2 generations - i.e., between the time of your parents and now of your children's generation?

8. What has caused the changes?

9. What are the essential factors in the prevention of illnesses?

10. What are the essential factors in maintaining good health?

11. We would like to document which traditional methods of maintaining good health are still in use, and how have these changed. Please tell us what traditional methods are still in use, which ones have changed, and why?

User Groups	Still in Use	Changes in Practice	Any Particular Reason for Change?
Infants			
Children (1-14)			
Adult Men			
Adult Women			
Elderly (60 & above)			

12. Malnutrition

a) What do you do at home for combating malnutrition in the following?

Newborn & infant	
Children (1-14)	
Adolescent girls	
Pregnant women	
Nursing mothers	
Elderly (60 & above)	

13. Convalescence

What do you do at home for weakness due to an illness in the following?

Infant	
Children (1-14)	
Adult Male	
Adult Female	
Elderly (60 & above)	

Healthy pregnancy and safe delivery

14. What home remedies do you normally use for healthy pregnancy?

15. What home remedies do you normally use for safe delivery?

16. How many deliveries took place in your household in last 3 years?

Sl. No.	Month and Year	Place of Delivery	Who Conducted	Outcome of Delivery (Live/Still/Complications)
1.				
2.				
3.				

17. Do you take help of traditional dais for antenatal care (pre-delivery care)? Yes No

18. Do you take help of traditional dais for post-natal care (post-delivery care)? Yes No

19. What home remedies do you take for healthy lactation?

20. What do you do for keeping the baby healthy?

Awareness of Epidemic diseases and prevention

21. (i) Which diseases erupted in epidemic proportion in the recent past?

(ii) What did you do as a preventive measure?

(iii) What home remedies do you use when ill with these diseases?

22. Is there any health condition for which you do NOT use home/folk/AYUSH remedies?

23. What other home remedies do you know and use?

AYUSH

24. Where do you get services of Ayurveda, Yoga, Naturopathy, Unani, Siddha, Homeopathy or *Amchi* in your area?

25. Do you use AYUSH services for any problem? Yes/No

26. (a) If yes, for what problems do you use them?

Pattern of use of AYUSH for treatment of specific ailments

Disease	Which system is used (code)	Source of medicine (code)	Facility used (code)	At what stage do you go for AYUSH treatment (code)
(Column 1)	(Column 2)	(Column 3)	(Column 4)	(Column 5)
Cough & cold				
Diarrhoea				
Fever				
Jaundice				
Diabetes				
Fistula/Piles				
Chronic Headache				
Chronic Joint pain				
Memory loss				
General debility				
Chronic Constipation				
Mental Illness				
White discharge				
Anaemia				
Menstrual problems				
Malnutrition				
Insect bites				
Worm infestation				
Minor injuries				
Major injuries				

Codes for Column 2	Codes for Column 3	Codes for Column 4		Codes for Column 5
1 – Ayurveda 2 – Yoga 3 – Naturopathy 4 – Unani 5 – Siddha 6 – Homeopathy 7 – *Amchi* 8 – Others	1 – From the institution 2 – From the practitioner 3 – From the market 4 – From another practitioner	**AYUSH Only**		1 –From the beginning 2 – After a few days of no treatment 3 – After a few days of LHT 4 – After Allopathic treatment 5 – In combination 6 – Others
		AYUSH Hospitala	a	
		AYUSH Dispensary	b	
		Any other	c	
		AYUSH with Integration		
		District Hospital	01	
		Medical College Hospital	02	
		Sub-divisional Hospital	03	
		Community Health Centre/ Rural Hospital	04	
		Cottage Hospital	05	
		PHC - Block	06	
		-Additional	07	
		Area Hospital	08	
		Satellite Hospital	09	
		Any other ***(SPECIFY)***	10	

26. (b) For prevention of which diseases/health problems do you use AYUSH systems?

Systems	Infant		Children (1-14)		Adults		Elderly	
	Male	Female	Male	Female	Male	Female	Male	Female
Ayurveda								
Yoga								
Naturopathy								
Unani								
Siddha								
Homeopathy								
Amchi								
Others								

27. Convenience and usage

27.1 Is an AYUSH facility located close to your home/convenient to reach?	Yes	No
27.2 Do you use the facility?	Yes	No
27.3 Do you use the facility as the first consultation centre?	Yes	No
27.4 Is it more convenient to reach Allopathic facility?	Yes	No
27.5 Would you prefer to use AYUSH facility if conveniently located?	Yes	No

28. Accessibility and Responsiveness

28.1 Are AYUSH professionals available at odd hours?	Yes	No
If yes, do they come to your home at odd hours?	Yes	No

28.2 Are Allopathic doctors/nurses available at odd hours? Yes No

If yes, do they come to your house if required? Yes No

To be administered to those who have used AYUSH facility within the last 3 months

29. Have you recently visited any AYUSH facility? Yes No

30. What was the purpose? (Name the disease /condition please)

31. Did the dispensary provide you with required medicines?

32. Were you asked to purchase medicines from shop/pharmacy?

Ease of obtaining information

33. Did the doctor provide all information regarding your disease? Yes No

34. Did the doctor offer you choice of treatment methods available for your ailments? Yes No

35. Did the doctors/health workers refer you to anyone else? Yes No

36. If yes, to whom?

Opinion

37. i) What do you think are the advantages of home remedies?

ii) What do you think are the advantages of AYUSH systems?

iii) What are their limitations?

38. i) For which ailments do you think doctors' treatment is better than traditional/home remedies?

ii) What are the limitations of Allopathy/Doctors' Treatment?

39. i) Do you think having an AYUSH practitioner in the PHC/CHC will be useful? Yes No

Why?

ii) If yes, which system of AYUSH should be in PHC/CHC?

40. Does the ASHA/ANM/AWW in your area advise any home remedies or *jadi booti*?

ASHA	Yes/No
ANM	Yes/No
AWW	Yes/No

41. Do you think they should?

42. a) Is there a VHSC (Village Health and Sanitation Committee) in your village?

b) What is your involvement in that?

BACKGROUND OF RESPONDENT

43. a) Respondent:

Marital Status	(1) Married (2) Unmarried (3) Separated (4) Divorced (5) Widow (6) Others (Specify).....	
Name	**Respondent**	**Husband/Wife**
Age		

		Respondent	Husband/wife
What is your level of literacy/ education? Of your spouse?	Illiterate=1 Barely literate=2 Primary =3 Middle =4 H-School=5 College=6 Technical=7 Others=8		
What has been your main occupation	Housewife=0 Skilled Labour =1 Unskilled Labour=2 Govt.Service=3 Self-employed=4 Others (specify) =5		
What is the main source(s) of livelihood of your household?	Housewife=0 Skilled Labour=1 Unskilled Labour=2 Govt.Service=3 Self-employed=4 Others (specify)=5		
What is your Religion?	Hindu=1 Muslim =2 Christian =3 Sikh =4 Other (specify)=5		
What is your caste?	General=1 SC=2 ST=3 OBC=4 Others=5		
Type of Family	Nuclear Family=1 Joint Family =2		

How Many Children in the Household?	0-6 Months	6-36 Months	3-6 Years	6-12 Years	Adolescent
Male					
Female					

b) Standard of living index

Type of House		Kaccha= 0 Semi-Pucca = 2 Pucca =4		
Do you own the house?		Yes = 2 No = 0		
Separate room for cooking		Yes = 1 No = 0		
What is the main source of drinking water?		Own piped water=2; Own well=2; Own hand pump=2; Own Tank=2; Public hand pump=1; Public tap=1; Any other public source=1, Other's well= 0; Any other sources=0		
Do you have toilet facility of your own?		Own flush toilet=4; Public or shared flush toilet or own pit toilet=2; Shared or public pit toilet=1; No facility=0		
Lighting source		Electricity=2; Kerosene, gas, oil=1; Others=0		
Main fuel for cooking		Electricity, LPG , Biogas=2; Coal/coke/kerosene/lignite=1; Others=0		
Ownership of Agricultural Land		5 acres or more=4; 2.0-4.9 acres =3; Less than 2 acres or acreage not know =2; No agricultural land=0		
Ownership of irrigated land		At least some irrigated land=2; No irrigated land=0		
Ownership of livestock		Owns livestock=2; Does not own livestock=0		
Ownership of durable goods	Car or tractor = 4; Moped, scooter, motorcycle 3; Telephone, refrigerator, colour TV = 2	Bicycle, electric fan, radio transistor, sewing machine, B&W TV, water pump, bullock cart/thresher=2	Mattress, chair, pressure cooker, bed/cot, table, clock or watch=1	
Grand total				

44. Distance of basic facilities from respondent's home

(Note both the distance in kms as well as time taken for return trip)

Facility	Distance (In kms)	Time for Return Trip (In Minutes)
AYUSH Dispensary		
AYUSH Hospital		
Sub-Centre		
PHC		
CHC		
Nearest doctor/healer/nurse		
Pharmacy/dawakhana		
PDS (Ration shop)		
Kirana shop		
Source of water		
Anganwadi		
Panchayat Bhavan		

45. Any suggestions for strengthening the AYUSH services and LHT?

THANK YOU. YOUR COOPERATION HAS BEEN MOST HELPFUL

Could you please place your signature here:……..

End time…… Date ……/……/2008 Signature of Interviewer……..…..……..…

Signature of Supervisor……..…… Time …… Date……/……/2008

Signature of Editor……..Time……..Date……/…../2008

Group Discussion

[To be audio recorded]

Although the Governments (State and Central) have been concerned with providing affordable and accessible healthcare services to the people, it appears that the views of most important stakeholder, the people, have generally been ignored.

The researchers during development of questionnaire schedules felt that certain information is required, for which the most appropriate method would be GD.

These are:

What healthcare system is preferred for promotion of health and prevention of illnesses?

- What is the relative importance under different situations of home remedies, AYUSH systems and Allopathic system in their daily life?
- What are preferred remedial strategies in cases of commonly occurring ailments for different age groups?

  Under which conditions one system is rejected in favour of other?

The three main focus areas are :

(a) Promotion of health

(b) Prevention of illnesses

(c) Treatment of diseases

Within each strategy the researchers want to know which systems are considered to be most effective and why? What are the determinants of specific choices? Since these issues are expected to be influenced by many factors including availability, accessibility, cost-effectiveness, and socio-economic background of households/communities, it was felt that GD would be the best method to elicit the required information to complement more specific information collected from structured schedules.

Selection of group: The group should be selected from the village where households have been interviewed. It should include three elderly males, three elderly females, one/two local social workers, four young persons (20-25) (2 male and 2 female), and at least two young parents (husband and wife). Thus, the group would have minimum 15-16 members.

Questions/Key issues to be covered in the discussion

1. What are the main concerns for improving the health of your community?
2. Do you think that health promotion should be a priority? Or should it be prevention of illnesses? Or both? Do you think "health promotion" is basically different from "prevention of illnesses"?
3. What strategies are adopted in your community for health promotion? For infants, for pregnant women, for nursing mothers, for the elderly?
4. What strategies are adopted for prevention of illnesses?

   For infants, for pregnant women, for nursing mothers, for the elderly? (Please focus on these four age groups in terms of local health traditions)
5. Which system does your community prefer for treatment of illnesses? LHT, AYUSH or Allopathy?
6. Any particular reason why?
7. What is the community's preference for treatment of various diseases of

   Infants, Adolescent girls, Pregnant women, Elderly (60 &above)
8. In case of following conditions what would be your preferred system of treatment and where do you go as last resort?

[Record the discussion that occurs in the group for each. Finally, record the general opinion in the group in the table below. In case no consensus is reached till the end, please record all opinions.]

Code: Home remedy = 1; Folk Healers = 2; Faith Healers = 3; Traditional practitioners = 4; AYUSH = 5; Allopathy = 6.

Diseases	First Preference/Why?	Second Preference/Why?	Last Resort/Why?
Infants			
Children (1-14)			
Cough & cold			
Diarrhoea			
Fever			
Women			
White discharge			
Anaemia			
Menstrual problems			
Elderly			
Chronic joint pain			
Memory loss			
General debility			
General			
Jaundice			
Diabetes			
Fistula/piles			
Chronic headache			
Chronic constipation			
Malnutrition			
Insect bites			
Worm infestations			
Minor injuries			
Major injuries			
Mental illness			

THANK YOU. YOUR COOPERATION HAS BEEN MOST HELPFUL

Could you please place your signature here:…….

End time…… Date ……/……/2008 Signature of Interviewer……..…..……..…

Signature of Supervisor……..……. Time …… Date……/……/2008

Signature of Editor……..Time……..Date……/…../2008

Format for Listing of Participants

S.No.	Name of Participant	Age	Sex	Caste

OBSERVATION CHECKLIST

For Service Institutions - AYUSH/Allopathic with AYUSH Integration DH/CHC/PHC/SC/Dispensaries

Location

State: .....

District: .....

Name of Block .....

Name & Address of the Institution .....

Distance from the pucca road:

Distance from the nearest Bus Stand:

Location relative to the coverage area:

- Equal access in all directions
- Skewed location

Location Code : Rural = 1 Urban =2

Since when this Institution is functioning (Year):

Since when this institution is functioning in this Building (Year):

Name of the Officer in-charge .....

Designation of the Officer in-charge .....

* To be used for the Dispensaries and the Sub-Centres, omitting the indoors data.

I	**INFRASTRUCTURE**		
I.I	Building		
Q1.1a	Ownership of Building	Rented Owned Rent free/Donated	I 2 3
Q1.1b	Type of Structure (Observe)	Pucca Semi-pucca Kaccha	I 2 3
Q1.1c	Is compound Wall/Fence Available	All around Partial No	I 2 3
Q1.1 d	Vacant area within the compound	Yes No	I 2
Q1.1e	Maintenance	Once in a year Once in 3 years Never done so far New building less than 2 years old	I 2 3 4
1.2	**Other facilities in the building**		
Q1.2a	Main Source of Water Supply	None 0 Tap Tube well/Hand Pump/Bore Well Well Others	 I 2 3 4
Q1.2b	Whether Overhead Tank and Pump exist	Yes No	I 2
Q1.2c	If yes in Q1.2b, Is the pump in working condition	Yes No	I 2
Q1.2d	Availability of Electricity	Yes No	I 2
Q1.2e	Regularity of Electric Supply	Continuous Not Continuous	I 2
Q1.2f	Is Electric Generator available	Yes No	I 2
Q1.2g	Availability of Telephone Facility	Yes No	I 2
Q1.2h	Availability of Toilet Facility	Yes No	I 2
Q1.2i	Type of Sewerage	Soak pit Connected to Municipal Sewerage No Sewerage Facility	I 2 3

Q1.2j	Disposal of Waste Material	Bury in a pit 1 Thrown in common/Public disposal pit 2 Thrown outside Hospital Compound 3 Thrown inside Hospital Compound 4
Q1.2k	Cleanliness (Observe and Classify as Good-1, Satisfactory-2, Unsatisfactory-3)	(i) OPD ☐ (ii) Rooms ☐ (iii) Wards ☐ (iv) Toilets ☐ (v) Hospital Premises ☐ (vi) Surrounding ☐ (Space outside the hospital) (vii) Building ☐

2. Availability of doctors and staff in the institution (as on date of survey)						
Sl. No.	**Category**		**Available During Survey**	**Number Posted**	**Shortfall (Col. 4- Col. 3)**	**Total No. of months for which all the staff mentioned in Col. 5 were not in position during last year**
1	**2**		**3**	**4**	**5**	**6**
1	Medical Officer	AYUSH				
		Allopathic				
2	Sister					
3	Staff Nurse					
4	Pharmacist	AYUSH				
		Allopathic				
	ANM					
	MPW					
	Any other paramedic	AYUSH				
		Allopathic				
	Cook					
	Dhobi					
	Others					

3. Equipments & other infrastructure facilities		
Q3.1	Whether Staff quarters Available	Yes 1 No 2
Q3.2	No. of Quarters	
Q3.3	Is any Vehicle Available	Yes 1 No 2
Q3.4	If yes in 3.3, is the Vehicle in working condition	Yes 1 No 2
Q3.5	Total No. of Indoor Departments	

Q3.5a	Name of the Department	1 ..... 2 ..... 3 ..... 4 .....
Q3.6	Total No. of Departments in O.P.D.	
Q3.6a	Name of the Departments	1 ..... 2 ..... 3 ..... 4 .....
For Co-located Institutions		
Q.3.6 b	Space for AYUSH OPD	Yes 1 No 2
	Is there a separate room?	Yes 1 No 2
	What is the approx. size of the room?	
	Is the room located at a central place or a secluded area?	
	Is there a Signboard(s) for the AYUSH services?	Yes No
	Where is the signboard placed?	
	What is the size of the signboard?	
	Is the message visible?	
	Any indoor space for AYUSH patients?	Yes No
	No. of beds	
	Any observable difference from the Allopathic	

Q3.7	Total No. of Beds in the Hospital	
Q3.8	Does the Hospital have a Medical Record Section	Yes 1 No 2
Q3.9	If Q3.8 = yes, whether Maintenance and Availability of Records is	Allopathic departments Very Good 1 Satisfactory 2 Not Maintained Properly 3 AYUSH departments Very Good 1 Satisfactory 2 Not Maintained Properly 3
Q3.10	Total No. of Rooms	
Q3.11	Total No. of Wards	
Q3.12	Whether the paid nursing home facilities are available	For Allopathic patients Yes 1 No 2 For AYUSH patients Yes 1 No 2
Q3.13	Whether the following testing facilities are available	
Q3.13a	X-ray Machine	Yes 1 No 2
Q3.13b	Bio-chemical/pathological Laboratory	Yes 1 No 2

Q3.14 Availability of Following

Sl. No.	Items	Available as per Norms Yes=1 No=2	Available as per norms Yes=1 No = 2
a	Beds	AYUSH	ALLOPATHIC
b	Mattresses		
c	Pillows		
d	Bed sheets		
e	Delivery Tables		
f	Examination Tables		
g	Others (Specify)		

Q.4 SUPPLY OF MEDICINES

Sufficient = 1, Insufficient = 2, Not available at all = 3

Q4.1	Availability of Medicines for common ailment		
Q4.2	Availability of specialised medicine for serious ailment		
	Distance (code) of nearest druggist/ chemist where medicines are available (km): <1km 1 2 km 2 >2 km 3		

5. PERFORMANCE

5.1 Month-wise No. of patients OPD attending during the last year for which data is available. (Specify the period and xerox record)

TOTAL (AYUSH + Allopathic in Co-located)

Sl No.	Month	Adult (12+)		Children (<12)		Total	
		Male	Female	Male	Female	Male	Female
1.	APR						
2.	MAY						
3.	JUNE						
4.	JULY						
5.	AUG						
6.	SEPT						
7.	OCT						
8.	NOV						
9.	DEC						
10.	JAN						
11.	FEB						
12.	MAR						
Total							

5.2 Month-wise No. of Indoor Patients Admitted during the last year for which data is available (Specify the period and xerox record)

Only AYUSH

Sl No.	Month	Adult (12+)		Children (<12)		Total	
		Male	Female	Male	Female	Male	Female
1.	APR						
2.	MAY						
3.	JUNE						
4.	JULY						
5.	AUG						
6.	SEPT						
7.	OCT						
8.	NOV						
9.	DEC						
10.	JAN						
11.	FEB						
12.	MAR						
Total							

5.3 Major five reasons for which patients were frequently admitted to the facility during the last year, if available or last month

AYUSH

Sl No.	Reasons	
	Male	Female
1.		
2.		
3.		
4.		
5.		

Allopathic

Sl No.	Reasons	
	Male	Female
1.		
2.		
3.		
4.		
5.		

Name and Codes of Ailments:

Gastro intestinal disorders	1
Liver disorder	2
Respiratory diseases	3
Kidney/urinary diseases	4
Infectious disease	5
Heart diseases	6
Cancer	7
Skin diseases	8
Arthritis	9
Piles	10
Fistula	11
Psychosomatic diseases	12
Gynaecological Disorders	13
Old age related problems	14
Diseases of Children	15
Pregnancy /Delivery related problem	16
Gynaecological Problem	17
Other (Specify)	18

5.4 No. of OPD Patients on the day of survey. AYUSH OPD if available separately, otherwise whatever available.

5.5 Any reasons for unusual rate of attendance on that day?

5.6 Total No. of indoor patients availing the following facilities during the last year available

Sl No.	Ariticles 1. Name of Facility	No. of Patients
1.	Labour Room	
2.	Operation Theatres	
3.	*Panchkarma*	

6. Suggestion for improvement of AYUSH facilities in the Institution

Supply of medicine	1	
Manpower	2	
Financial aspects	3	
Infrastructure including space and Testing facilities	4	
Publicity	5	
Any others	6	

*Take minimum 4 photos per institution: Surroundings.Building from inside.Inside of the building, OPD Ward.

*Collect the Xerox copy of the OPD/IPD data for the last financial year available or last month of the present year.

ANNEXURE 2

VALIDATION SAMPLE: TAMIL NADU AND ORISSA

Tamil Nadu: Validation Data

Prescriptions of Siddha and Homeopathy Doctors in Tamil Nadu (Salem District)

TABLE (I): Validation Summary of Prescriptions			
Prescriptions type	**Validation categories**	**Count**	**Percentage**
Siddha	V1-V5	56	77.77%
	V6	16	22.22%
Homeopathy	100% using Homeopathic Medicines, but potencies and frequency not mentioned properly.		

Refer Validation Methodology: Chapter I page no. 19 and 20

TABLE (II): Sample prescription of Siddha Doctors					
Presenting complaints of the patients interviewed	**Diagnosis by AYUSH doctors***	**Tests pre-scribed**	**Medicines prescribed by the AYUSH Doctors***	**Whether given inject able/ Surgical treatment**	**Validation**
Back pain	Thandaka Vatham (Lumbar spondylitis)	Nil	Silasathu parpam[V1], Kukkil parpam[V1], Ashwagandhi Lehyam[V1]	Nil	V1=3
			Amukkara choornam[V6] , Sigappu kukkil thylam[V6]		*V6=2*
Burning urination	Siruneer Kaduppu	Nil	Nandukkal parpam [V1.] Thriphala choornam [V1], Padikara parpam [V1.]	Nil	*V1=3*
			Neermulli kudineer [V6]		*V6=1*
Difficulty in breathing	Iraippunoi (Asthma)	Nil	Adhathodai kasayam [V1] , Pavala parpam [V1.] Suvasa kudori mathirai [V1]	Nil	V1=3
			Moongilathy choornam [V6.] Karpoorathy choornam [V6]		*V6=2*
Bleeding during defecation	Moolam (Piles)	Nil	Thriphala choornam [V1.] Nathai parpam [V1], Amaiodu parpam [V1]	Nil	V1=3

Itching in various parts of the body	Kanakadi (Urticaria), Psoriasis (Kalanzaga-padai), Ovvammai (allergy)	Nil	Parangi pattai choornam [VI.] Velvanga parpam[VI], Sivanar amirtham [VI] Palagarai parpam [VI],	Nil	VI=4
			Arungan thylam [V6.] Vetpalai thylam [V6] (CCRAS Patent)		*V6=2*
White discharge	Vellai-paduthal PID?	Nil	Annabedhi chenthooram [VI.]Kukkil Parpam [VI.] Linga chenthooram [VI] Silasathu parpam [VI.] Thriphala choornam [VI.] Veenpoosani Lehyam [VI.]	Nil	VI=6
Burning sensation in stomach / stomach pain	Gunmam	Nil	Elathy chooranam [VI.] Nellikkai lehyam [VI.] Sangu parpam [VI.] Thiriphala chooranam [VI]	Nil	VI=4
			Kavikkal choornam [V6.]		*V6=1*
Joint pain/knee pain/ hip pain	Keel Vaayu	Nil	Amukkara chooranam [VI.] Linga chenthooram [VI.] Arumuga chenthooram [VI]	Nil	VI=3
Head ache	Thalai vali	Nil	Thirikadugu chooranam [VI.] Pavala parpam [VI.] Sivanaar amirtham [VI]	Nil	VI=3
Constipation	Malakattu	Nil	Nilavaagai chooranam [V6.]	Nil	*V6=1*
Cough & cold	Kaba Erumal	Nil	Adathodai decoction [VI], Kasthuri karrupu [VI]Pavala parpam [VI.] Sivanaar amirtham [VI.]Thalisathi chooranam [VI] Vasantha kasumagara mathirai [VI]	Nil	VI=6
			Thalisathi vadagam [V6]		*V6=1*
Rise in body temperature	Suram (Fever)	Nil	Linga chenthooram [VI.] Chandamarutha chent-hooram [VI], Thirikadugu chooranam [VI.]	Nil	VI=3
Loose motions	Seethakal-ichal/ Kazhichal	Nil	Thayirchundi chooranam [VI.] Amaiodu parpam [VI.] Nathai parpam [VI] Sundaivatral chooranam [VI.]	Nil	VI=4
			Padigalinga thuvar [V6.]		*V6=1*
Vomiting	Vanthi	Nil	Santhasanthrodhayamathi-rai[VI],	Nil	VI=1
			Saathi sampeera kulambu [V6]		*V6=1*
Giddiness	Paandu	Nil	Thiriphala chooranam [VI.] Aya chenthooram [VI.] Nellik-kali lehyam [VI]	Nil	VI=3
			Kadukkai mathirai [V6.]		*V6=1* (Siddha line)

Lower abdomen pain	Siruneer Erichal	Nil	Elathy chooranam [V1], Kavikkal chooranam,[V1] Nandukkal parpam [V1] Padikara parpam [V1], Sangu parpam [V1], Thiriphala chooranam – For Ext. use. [V1]	Nil	V1=3
			Neermulli kudineer [V6.]		*V6=1* (Siddha line)
Diabetes mellitus	Mathumegam	Nil	Mathumega chooranam [V6], (Siddha line)	Nil	*V6=1* (Siddha line)
Mouth Ulcer	Vaai pun	Nil	Thiriphala chooranam – For Ext. Use [V1] , Padikaara parpam [V1],	Nil	V1=2
			Manathakkaali chooranam [V6], (Siddha line)		V6=1
Falling hair	Puluvettu	Nil	Amukkara chooranam [V1.]	Ni	V1=1
			Aruganpul thylum [V6]		V6=1

Refer Validation Methodology: Chapter I page no. 19 and 20

TABLE (III): Prescriptions of Homeopathic Doctors

Presenting complaints of the patients interviewed	Diagnosis by AYUSH doctors*	Tests prescribed	Medicines prescribed by the AYUSH Doctors	Injectable /Surgical treatment	Validation
Itching in groin region-	Tinea Cruris	Blood test	Natrum sulph 200, Sepia 200, Selenium 200	Nil	Though medicines can be used in the symptoms mentioned but symptoms are incomplete to validate prescription and according to homoeopathic principles single prescription is advisable. Potencies could have been indicated along with frequency of repetition.
White discharge-	Leucorrhoea	Vaginal smear	Natrum mur, Ova tosta-6x, Puls. 200,	Nil	
Giddiness-	Hypertension	BP check up	Homeo medicines	Nil	Medicine prescribed are not mentioned hence validation is not possible
Knee joint pain-	Arthritis	Blood, urine	Homeo medicines	Nil	

Refer Validation Methodology: Chapter I page no. 19 and 20

Validation of the Medicinal Plants mentioned by the Households (Salem District)

TABLE (IV): Validation Summary of Medicinal Plants:

Validation categories	Count	Percentage
V3	49	98%
V6	0	0%
Unclear for validation	1	2%

Refer Validation Methodology: Chapter I page no.19 and 20

TABLE (V): Validation of Medicinal Plants mentioned by the Households			
Serial no.	**Medicinal plants as named by the household respondent**	**Botanical names (as validated by AYUSH experts)**	**Validation of the medicinal plants**
1	Tulsi[V3]	*Ocimum sanctum*	All plants named by the household were validated as per the category which is a recent Siddha compilation from the classical Siddha texts. The corresponding botanical names were also verified out of which only one was not clear enough to find a corresponding Botanical name. Total Validation categories V3=49 (as per Siddha texts)
2	Thuthuralai[V3]	*Solanum trilobatum*	
3	Vasambu [V3]	*Alpinia officinarum*	
4	Keelaneeli [V3]	*Phylatyhus amarus*	
5	Maruthani [V3]	*Lawsonia inermis*	
6	Aavaarai [V3]	*Casia auriculata*	
7	Arugampal [V3]	*Cynodon dactylon*	
8	Manthakkali [V3]	*Solanum nigrum*	
9	Poonangani keerai [V3]	*Alternanthera sessilis*	
10	Adhathoda [V3]	*Adathoda vasica*	
11	Aduthindapalai[V3]	*Aristolochia bracteolate*	
12	Bhrima thandu [V3]	*Argemone Mexicana*	
13	Elumichai [V3]	*Citrus limon*	
14	Erukku [V3]	*Calotropis gigantean*	
15	Kandakathari[V3]	*Solanum xanthocarpum*	
16	Karikasalan kani green[V3]	*Eclipta prostate*	
18	Karpoorathy [V3]	*Cinnamomum camphora*	
19	Karuveppilai [V3]	*Murraya koenigii*	
20	Kattralai [V3]	*Aloe barbedensis*	
21	Kinatradi poondu[V3]	*Tridax procumbens*	
22	Kovai [V3]	*Coccinia grandis*	
23	Kuppaimeni[V3]	*Acalypha indica*	
24	Mathulai [V3]	*Punica granatum*	
25	Milagu [V3]	*Piper nigrum*	
26	Manjal [V3]	*Curcuma longa*	
27	Murungai [V3]	*Moringa oleifera*	
29	Neeli [V3]	*Indigofera tinctoria*	
30	Nelikkai [V3]	*Emblica officinalis*	
31	Nerungil [V3]	*Tribulus terrestris*	
32	Nannari [V3]	*Hemidesmus indicus*	
34	Naval [V3]	*Eugenia jambolana*	
35	Papaali [V3]	*Carica papaya* -	

36	Pavakkai [V3]	*Momordica charantia*	
37	Pirandai [V3]	*Cissus quadrangularis*	
38	Poduthalia [V3]	*Lippie nodiflora*	
39	Poondu [V3]	*Allium sativum*	
40	Arugampal [V3]	*Not clear*	
41	Puthina [V3]	*Mentha spicata*	
42	Sombu [V3]	*Cyminum cuminum*	
43	Seemaiakathi [V3]	*Lycopersicum esculentum*	
44	Seenthil kodi [V3]	*Tinospora cordifolia*	
45	Thippili [V3]	*Piper longum*	
46	Thuthi [V3]	*Abutilon indicum*	
47	Thuvarai [V3]	Phaseolus vulgaris	
48	Vembu [V3]	*Azadirachta indica*	
49	Yallavai (vallarai) [V3]	*Centella asiatica*	
50	Vellarugu [V3]	*Enicostemma axillare*	

Refer Validation Methodology: Chapter I page no. 19 and 20

TABLE (VI): Validation Summary of Medicinal plants Mentioned by the Village Health Nurses

Validation categories	Count	Percentage
V1-V5	V3=9	64.28%
V6	0	0%
Non response	5	35.71%

Refer Validation Methodology: Chapter I page no. 19&20

TABLE (VII): Validation of the Medicinal plants with their uses as perceived by the VHNs

Name of the medicinal plant as told by the VHNs	Botanical name (as validated by experts)	Perceived medicinal properties by the VHNs	Validation
Thulasi [V3]	*Ocimum sanctum*	Worm infection[V3], strength[V3]	V3=14 for the name of plants mentioned by the VHNs in local language. V3=9 for the perceived medicinal properties of these plants by the VHNs. Non response =5 for the perceived medicinal properties.
Keelaneli [V3]	*Phylanthus amarus*	Cold ,cough [V3]	
Kovai [V3]	*Coccinia indica*	Diabetes [V3]	
Navaal [V3]	*Eugenia jambolana*	Memory gain [V3]	
Bilteralmony [V3]		Cold, cough [V3]	
Elumichai [V3]	*Citrus lemon*	Blood for eye sight [V3]	
Kuppaikeerai [V3]	*Acalypha indica*	Increases iron content in blood [V6]	
Manjal [V3]	*Curcuma longa*	Non response	

Neem [V3]	*Azadirachta indica*	Jaundice [V3]	
Poonamgani keevai [V3]	*Alternantheaa sessilis*	Non response	
Thippili[V3]	*Piper longum*	Non response	
Thuthuvalai [V3]	*Solanum trilobatum*	Non response	
Vaithayam [V3]	*Trigonella foenum*	Non response	
Valavai (vallarai) [V3]	*Centella asiatica*	Cough [V3]	

TABLE (VII): Validation Summary of the Perceptions of the Household on Food items and their special medicinal properties

Validation categories	Count	Percentage
V1-V5	V2=1,V3=17	78.26%
V6	V6=2	8.6%
Unclear /Non response	3	13.04%

Refer Validation Methodology: Chapter I page no. 19 &20

TABLE (VIII): Validation of the Perceptions of the Household on Food items and their special medicinal properties

Sl. No	Food Items (as mentioned by the households)	Perceived Medicinal Properties	Validation
1.	Pepper Rasam/Kolambu	Asthma [V3] Cold &cough [V3] Digestion [V3]	Total Number of Validation categories= V2= 1 , V3= 17, V6=2 The medicinal properties of almost all quoted food items were validated though 2 were not specified for their use .It was interesting to see that for one food item more than one medicinal property was also mentioned by the households.
2.	Nandu (Crab) Rasam/Kulambu	Cold &cough [V3] Arthritis [V3]	
3.	Ragi (a coarse millet) Kanji	Rich in carbohydrates [V6] Gives strength [V3] Good for diabetic patient [V3]	
4.	Kambu (Pearl Millet) and preparations	Nutritional value [V3] Cools the body [V3]	
5.	Green Leafy vegetables	Increases iron content [V6] Clears the stomach [V2]	
6.	Manathakkali Preparation (Solanum nigrum Linne	Good for stomach ulcer [V3]	
7.	Rice Kitchdi	Stimulates appetite [V3]	
8.	Chutney made from Pirandai (a shrub: cissus qusdraugularis)	Good for Digestion [V3]	
9.	Chutney made from Pudina leaves	Good for Digestion [V3]	
10.	Cooked Samai (a variety of)rice	Increases body weight [V3]	
11.	Sundhaivathal	For worm [V3]	
12.	Thuthurali rasam (rasam made from a shrub: three lobed night shade	Cold & cough [V3]	
13.	Valai Thandu (the internalspadix of a plantain tree)	Best for kidney stone [V3]	
14.	KarunaiKizhangu (Dracontium Linne, its bulb)	No use specified	
15.	Valaipoo (flower of the plantain tree)	No use specified	
	Non-response		

TABLE (IX): Validation summary of home remedies mentioned by the Households under following heads			
Categories of conditions for which home remedies were asked	**Validation categories**	**Count**	**Percentage**
20 types of Health conditions	V1-V5	110	91.6%
	V6	10	9.09%
Malnutrion and Convalescence	V1-V5	39	95.1%
	V6	2	4.8%
Mother and child care	V1-V5	41	93%
	V6	3	7%

TABLE (X) A: Validation of home remedies mentioned by the Households under following heads		
Disease	**Home remedies used for 20 Types of Health Conditions**	**Validation**
Cough & cold	(Pepper 1/2 teaspoon + palm jaggery)V3,(Melanga Rasam, mustard fried + honey, tulsi juice)V3(cooked vallarai leaf) V3(Betel leaf+ kumkuma mixed juice) V3, (cow's milk + turmeric powder) V3, (karimanjal kombu –smoke)V3, (Karpoorathy leaves juice) V3, (milagu Rasam,)V3,(thuthuvalai Rasam,V3, (thuthuvalai juice + tulsi juice) V3(Coconut coir burnt & the smoke inhaled) V3,(Karpoorathy vali leaves) V3, (murungai leaf + lime stone) V3 ,(Tulsi juice + honey), V3 ,(turmeric powder with milk and pepper powder)V3, (Adathodai leaf juice) V3V3(musumusukkai leaves juice),	Total validation in all age groups: V3=17
Diarrhea	(Arrowroot kanji) V3, (masikkai, vasamjou and honey) V3(,(pavalam mali leaves with water boiled)V3,(pomegranate outer skin dried and powder with hutter) V3,(sapota fruit)V3(Arrowroot kanji,)V3(drinking tea)V3, (mango seed with luke-warm water)V3	V3=8
Fever	(Arisi + jeeragam kanji)V3 (keduges decoction)V3(tender fruit of sapporta grinded with butter milk)V3Nilavembu leave + pepper decoction)V3	V3=4 NC=1
Jaundice	(Keelaneeli, mooring) V3 (sangupoo leaves) V3	:V3=2
Diabetes	(naval fruit)V3, (avarambu,)V3 (kovaikai)V3, (pavakai)V3, (venthaiya green)V3 (kattukodi)V3, , (naval seed powder + water taken every day)V3,	V3=8
Fistula/ Piles	(Kuppaimeni + cow's milk)V3, (thuthignee)V3(Chukku + lime stone powder burnt the remaining ash)V3, , (nayaruvi leaf+ghee)V3,turtleement – nc (Acavanthus aspra fried with cow's butter)V3,(kuppaimeni + cow's milk)V3, (nayaruvi leaf+ghee)v3, (onion fried with Ricinus commumis to be taken)V3,	V3=8 NC=Not Clear=1
Chronic Headache	(Chukku coffee, steam inhalation-) V2 ((leucas aspara juice, oil boiled & cooled, pepper remove outer coat soaked in motheri milk,) steam inhalation V3 /V2	V3=1, V2=2,
Chronic Joint Pain	(Coconut oil+camphor local applied,mudakaruthan)V3, (ricinus communis applied)V3	V3=2,
Memory Loss	(Ladies finger)V3, (vallarai grain) V3	V3=2
General debility	(Karuveppilai thuvaiyal for an age group) V3	V3=1
Chronic Constipation	(Castor oil) V3(Banana, Erukkampal) V3(Amanakku oil)V3, (banana)V3, (castor oil boiled + tamarind to be added)V3,(dry grapes hot water) V3(castor oil at bed time) V3 /V2	V3=6,V2=1

Mental Illness	(Pumpkin white variety)V3(Cissus quadrangularis) V3(Vallarai + sugar candies)V3	V3=3
White discharge	(Venpusuni juice) V3Duttaloi curol - nc ,(tender leaves of mango tree)V3(pumpkin white variety taken as pooriyal with meals)V3(buffalo curd mixed, hibiscus, slanur - nc,	V3=5NC=2
Anemia	(Dates)V3, (green vegetables)V6, (karuvepillai thuvaiyal murugai keerai, ellu mayur, mimosa pudica + seeragam + onion, thuthi leaf+_lime stone paste)V2, (vallaikai burnt+buffalo curd mixed and administer)V3, (venthaiyam)V3(Athi fruit increase iron content in blood)V6, (green vegetables)V6, (nathai suri leaves, vantheyam & glass of water,)V3 /V2	V3=8,V2=2 V6=4
Menstrual Problems	(Tuthi bleeding)V3 (Maavilangu, acalypha indica,)V3 (vanthaiyam)V3	V3=3,
Malnutrition	(Gingly oil + rice boiled filtered oil)V3/V2Sathu maavu,)V3 (vellam) V3 /V2	V3=5 also by V2
Insect bites	(Onion)V3 /V2(Acanranthus aspera leaves grinded in to paste)V3, (asofectidia rubbed wth water with mild heat apply)V3, (cut onion, lime stone application)V3 (Acalypha indica + salt mixed and applied)V3, (calotropic gigantia, milk, lime stone application, lime stone powder + castor oil milk)V3, (valatiahai juice)V3	V3=9
Worm infestation	(Tender leaves of neem +garlic +pepper)V2(Parakai, poorial kutty kulambu, pooritha perungaiyam + palm jaggery is best)dewwor ?V3(Bitter gourd cooked in any form, garlic fried twith caster oil internally for 2 day)V3	V3=3, V2=1
Minor Injuries	(Camphor dissolves with turmeric powder)V3(Keenathadi poodu)V3(Tridax procumbens)v3 , (pailadi poondu, tumeric powder) V3(Arivalmani poondu over the injury site stops bleed)V3, (juice of tridax procumbens stops)V3, (Pailadi poondu, Ricinus communis + coconut oil,	V3=7
Major Injuries	(Keenathadi poodu (Tridax procumbens)V3,(Lime stone powder dissolved with water)V2(Butter with lime stone grinded and mixed with applied)V2, (Ricinis communis) grinded mixed with coconut oil v3	:V3=3, V2=2

TABLE (X) B: Validation of the Home Remedies mentioned by the Households for Combating Malnutrition

Categories of people	Home Remedies	Validation
Newborn & Infants	Breast Milk V2Honey V3 Palm Jaggery V3 Karpoorathy candy V3	Total no. of validations V2=1,V3=3
Nursing Mothers	Vegetables including Veg soup V3 Boiled Tubers V3 Boiled eggs V3 Meat/Mutton V3 Cereals (including sprouts V3 Milk V3 Pulses V3Fruits/fruit juices V3 Fish V3 Dates V3Palm Jaggery V3Green Vegetables V3Milk & Milk Products V3Dates & almond V3Fish V3Fruit/Fruit juices V3Jaggery V3	V3=17
Children(1-14)		
Pregnant women		
Elderly (60& above)		

Refer Validation Methodology: Chapter I page no. 19 and 20

TABLE (X) C: Validation for the Home Remedies mentioned by the Households for Convalescence		
Categories of people	**Home Remedies**	**Validations**
Infants	Breast Milk [V3]Honey [V3]Pulses [V3]Fruits [V3]	Total no. of validations V3=4
Male Children (1-14) Female Children (1-14 years) Adult-Male Adult Female Elderly	Fruits/fruit juice [V3]Meat [V3]Cereals/sprouted grains/pulses/semi solid food from cereals [V3]Dates [V3] Ragi Kanji [V3]Boiled egg [V3]Milk &Milk Products [V3]Palm Jaggery [V3]Green Vegetables/ vegetable soup [V6]Barley kanji [V3]Sprouted grain [V3]Tender coconut [V3]Honey[V3] Boiled eggs[V3]	Total no. of validations V3=14 V6=2

TABLE (X) D: Validation of the Home remedies mentioned by the Households for Mother & Child Care	
Home remedies for Healthy pregnancy	**Validation**
Lifestyle related	Total no. of validations V3=2 V2=3 V6= 1
1. To do routine work till 7th month to enable the pregnant woman to have a normal delivery V2	
Local application	
2. Applcation of oil over lower abdomen to reduce pain and facilitate delivery (castor oil)V3 and V2 3. Gingely oil, black jeera	
5. Keelanelli root (Phyllanthus Niruri) tied to left foot toe for safe delivery V3/ V2	
Others	
6. TT injection V6	
7. Nothing special	
Home Remedies Used For Safe delivery	**Validation**
Local Application	Total no. of validations V3=7 V2=7
1. Application of gingerly oil over the umbilical region / abdomen for safe delivery V2 / V3	
2. Application of castor oil over the lower abdomen can help in having normal delivery V2 / V3	
3. Application of cumin seed oil over the lower abdomen V2 / V3	
4. Black Cumin seeds (Karum Jeeragam) mixed with Castor oil locally on the stomach can lead to normal delivery V2/ V3	
5. Keelanelli root (Phyllanthus Niruri) tied to left foot toe for safe delivery V2/V3	
Oral home remedies	
6. Ginger juice 50ml plus honey 50ml given after delivery will prevent fits V3/V2	
7. Lagiyam specially prepared to be given to mothers after delivery for nearly a month or so.(It is called delivery Legium) V3/V2	
Others	
8. Nothing special	

Home remedies for Healthy Lactation	Validation
Oral remedies	Total no. of valid V3=8 V2=11
Cumin seed water with palm jaggery for healthy lactation V3/V2	
Jasmine flower grinded and applied over the breasts produces more milk V3/V2	
Taking a lot of tuber variety like potatoes in the meals increases milk V3/V2	
Green Vegetable in large quantity V3/V2	
Breast feeding is the best /V2	
Papaya fruit cooked and taken with meal increases milk V3	
Keelanelli (Phyllanthus Niruri) root- ground with cows milk V3/V2	
Local application	
(Ricinus communis) ground and applied over breast increases milk V3/V2	
(Vigna radiate), a pulse variety ground and applied over breast V3/V2	
Sometime breast becomes very heavy and painful, and then Jasmine flowers paste is applied on the breast. V3/V2	

Home remedies for Healthy baby	Validation
1. Breast feeding V2	Total no. of validations V3=2 V2=1
3. Urai medicine supplied at Siddha PHC / Dispensary gives immunity to the child V3	
2. Palm/Karupatti Candy /syrup V3	

Refer Validation Methodology: Chapter I page no. 19 and 20

Orissa: Validation Data

Prescriptions of Ayurveda and Homeopathy Doctors in Orissa (Puri District)

TABLE (I): Validation Summary of Prescriptions			
Prescriptions type	**Validation categories**	**Count**	**Percentage**
Ayurveda	V1-V5		92.64%
	V6	2	7.35%
Homeopathy	100% using Homeopathic Medicines, but potencies and frequency not mentioned properly.		

Refer Validation Methodology: Chapter I page no. 19 and 20

TABLE (II): Sample prescription of Ayurveda Doctors					
Presenting complaints of the patients interviewed	**Diagnosis by AYUSH doctors***	**Tests prescribed**	**Medicines prescribed by the AYUSH Doctors***	**Whether given injectable /Surgical treatment**	**Validation**
Pain in chest and difficulty in breathing	Shwasa roga (asthma)	X ray chest P-A view	Lavanbhaskar churna[V1], Navintrol tab[V6],Sanjeevani vati [V2]	None	V1=1V2=1 V6=1
Cold & cough	Acute cold & cough		Cough syr[V6], Kanakasava [V1]	None	V1=1 V6=1
Whitish discharge from vagina	Leucorrhea		Pradarantak lauha [V1],Patrangasava [V1], Lodhrasava [V1]	None	V1=3
Pain in knee joint	Sandhi vata (osteo arthritis)		Vatagajankush [V1],Nirgundi tail[V1], Sudhakar lepa [V6]	None	V1=2 V6=1
Severe pain in left leg and swelling, difficult	Sriayu sankocha (sprain)		Vata gajankush [V1] Suchakara malam [V1]	None	V1=2
Constipation, pain during defeacation	Fissure-in-ano		Panchasakar churna [V2], Arogyavardhini vati [V2]	None	V2=2
Dyspnoea, chest pain	(swasa rog) asthma	DC,TLC,ESR	Laxmi vilas ras[V1],Talisadi churna [V1], Vyaaghri haritaki[V1], Swasakuthar rasa [V1]	None	V1=4
Severe joint (knee joint) pain	Sandhi vata (osteo arthritis)		Vatagajankush [V1], Arogyavardhini [V1], Yogaraj guggulu [V1],Maha narayan tail [V1]	None	V1=4
Cessation mens, pain in low abdomen	Anartava (amenorrhea)		Rajaprovartin vati [V1],Ashoka risht [V1]	None	V1=2
Indigestion, vomiting	Ajinna & agni mandya		Agnitundi vati,[V1]Avipattikar churna [V1], Satamuladi [V2]	None	V1=2 V2=1

Dyspnoea, restlessness, headache	Bronchitis		Talisadi churna [V1],Vyaaghri haritaki[V1], Chandrakalarasa [V1],	None	V1=3
Severe mascular pain	Sprain		Rasrraja ras [V1],Mahamasa taila [V1],	None	V1=2
Headache, bodyache,	Common cold	DC,TLC,ESR	Laxmivilas ras[V1],Godanti bhasma [V1],	None	V1=2
Indigestion, loss of appetite, vomiting	Ajima		Agnitundi vati [V1], Hingvashtak churna [V1],Lavana bhaskar[V1], Avipathikar churna [V1]	None	V1=4
Joint pain, weakness	Sandhiveda (osteo arthritis)		Vatachintamani,Rasaraj rasa [V1], Yogaraj guggul[V1], Maharasnadipancham[V2]	None	V1=3 V2=1
Dyspnoea, fever, headache	Bronchitis		Laxmivilas ras [V1], Talisadi churna[v1]	None	V1=2
Joint pain, clobring of finger	Vatarakta (gout)	DC, TLC, ESR	Vatagajankush , Kaishor guggul[V1],Pravala pishti [V2], Pinda taila [V1]	None	V1=2 V2=1
Fever, bodyache, headache	Jwara (fever)	Mp (qbc)	Laxmivilas ras[V1], Sanjeevani vati[V1],Amrita ristha [V1]	None	V1=3
Fever, headache, chest pain	Jwara (Fever)		Sanjeevani vati[V1], Laxmivilas ras[V1],Amrita ristha [V1]	None	V1=3
Breathlessness, chest pain, fever	Asthma	X-ray chest, sputcem for afb	Swasakuthar [V1],Laxmivilas rasa[V1], Talisadi choornam [V1]	None	V1=3
Whitish discharge from vagina, weakness	Sweta pradur (leucorrhea)		Pushyanuga [V1], Drakshyarista [V2],Ashokarista [V1],Pradarantak lauha [V1] Saubhvagya shunthi khand[V2]	None	V1=4 V2=1
Severe joint pain in lower knee	Osteo arthritis (sandhivata)		Rasabaana ras [V1], Kutaj arishta [V1], Sanjeevani vati [V1], Kutaja ghanavati [V1]	None	V1-4
An abscess on left leg difficulty in walking	Abscess		Calendula[v6] Dressing [v2]	Betadiene	V6=2

Refer Validation Methodology: Chapter I page no. 19 and 20

TABLE (III): Prescriptions of Homeopathic Doctors					
Presenting complaints of the patients interviewed	**Diagnosis by AYUSH doctors***	**Tests prescribed**	**Medicines prescribed by the AYUSH Doctors**	**Injectable /Surgical treatment**	**Validation**
Fever, malaise, headache, chest pain	Fever myalgia	CBC,X ray	Rhus.tox-30, Bell.-30	None	Though medicines can be used in the symptoms mentioned but symptoms are incomplete to validate prescription and according to homoeopathic principles single prescription is advisable. Potencies could have been indicated along with frequency of repetition.
Toothache & headache	Toothache	None	Cham.-30, (6 globules 4 times daily)	None	
Loose motion & weakness	Diarrhea	None	Nux vom. 30, Sulphur 30	None	
Fever, running nose, cough & head ache	Common cold	None	Allium cepa-30,(4 globules 4 times daily)	None	
Fever, headache, body ache & vomiting	Viral fever	None	Bell. 200, Allium cep 200	None	
Severe pain in leg & unable to walk	Boil	None	Bell. 6 (1 dram)	None	Though medicines can be used in the symptoms mentioned but symptoms are incomplete to validate prescription and according to homoeopathic principles single prescription is advisable. Potencies could have been indicated along with frequency of repetition.
Indigestion and anorexia, loss of appetite	Anorexia	None	Nux vom 200, Puls. 30	None	
Severe join in left leg	Sprain	None	Rhus tox-200	None	
Fever and running nose	ARI & fever	None	Allium cepa-30, Bell-30	None	
Severe pain in abdomen with loose motion	Diarrhea	None	Podophyllum, Bryonia-200-,Avena Q	None	

Refer Validation Methodology: Chapter I page no. 19 and 20

Validation of the Medicinal Plants mentioned by the Households (Puri District)

TABLE (IV): Validation Summary of Medicinal Plants		
Validation categories	**Count**	**Percentage**
V3	22	88%
V2	1	4%
V6	0	0%
Unclear for validation	2	8%

Refer Validation Methodology: Chapter I page no.19 and 20

TABLE (V): Validation of Medicinal Plants mentioned by the Households			
Serial no.	**Medicinal plants as named by the house-hold respondent**	**Botanical names (as validated by AYUSH experts)**	**Validation of the medicinal plants**
1	Tulsi[V3]	Ocimum sanctum	All plants named by the household were validated as per the category which is a recent Ayurveda compilation from the classical ayurveda texts. The corresponding botanical names were also verified out of which only one was not clear enough to find a corresponding Botanical name. Total Validation categories (With Botanical names)
2	Neem, Nimba[V3]	Azadirchta indica	
3	Bilwa (Bilva)[V3]	Aegele marmelos	
4	Gangasiuli [V3]	Nyctarrthes arbor-tristis	
5	Garlic [V3]	Allium sativum	
6	Ashoka [V3]	Saraca asoca	
7	Satamuli [V3], Satavari	Asparagua recemosus	
8	Vasang [V3]	Adhatoda Vasica	
9	Arjuna [V3]	Terminalia arjuna	
10	Banasebati	Not clear	
11	Harida [V3]	Curcuma longa	
12	Bata [V3]	Thymus vulgaris	
13	Gambhri [V3]	Gemliona arborea	
14	Manjestha [V3]	Rubia cordifolia	
15	Sariba [V3]	Indian sarsaparilla	
16	Bela [V3]	Aegle Marmelos	
17	Bilure [V2]	Not clear	
18	Brihar [V3]	Sida cardifolia	
19	Kantauni[V3]	Solanuum nigram	
20	Kutaja [V3]	Holarrlena antidysentarica	
21	Mahaninba [V3]	Melia azedarach linn	
22	Nirgundi [V3]	Vitax negundo	
23	Surana [V3]	Amorphophallus campanulatus blume	
24	Turmeric [V3]	Curcuma longa	

TABLE (VI): Validation Summary of Medicinal plants Mentioned by the ASHAs		
Validation categories	**Count**	**Percentage**
V1-V5	V3=6,V2=7,V1=3	88.88%
V6	0	0%
Unclear	2	11.11%

Refer Validation Methodology: Chapter I page no. 19&20

TABLE (VII): Validation of the Medicinal plants with their uses as perceived by the ASHAs			
Name of the medicinal plant as told by the VHNs	**Botanical name (as validated by experts)**	**Perceived medicinal properties by the VHNs**	**Validation**
Bela[V3]	Aegele marmelos [V3]	Gastritis[V2]	V3=6 and V2 =1 for the name of plants mentioned by the ASHAs in local language. For 2 plants mentioned by the ASHA the botanical name was not clearly found. For the perceived medicinal properties of these plants by the ASHAs. V1=3,V2=7for the perceived medicinal properties.
Tulsi [V3]	Ocimum sanctum [V3]	Cold cough[V1], fever[V1]	
Neem [V3]	Azadirachta indica [V3]	Skin diseases[V1]	
Paladhua	*Corresponding botanical name for this vernacular name was not clear*	Worm infection[V2]	
Adraka [V3]	*Zingiber Officinale* [V3]	Digestive problem [V2]	
Begunia [V3]	*Solanum Melangana* [V3]	Skin diseases [V2], respiratory infections [V2]	
Banasebati [V2]	*Not clear*	Wounds [V2]	
Ashoka [V3]	*Saraca Asoca* [V3]	Gynecological problem [V2]	

TABLE (VII): Validation Summary of the Perceptions of the Household on Food items and their special medicinal properties		
Validation categories	**Count**	**Percentage**
V1-V5	V1=10,V2=25,V3=18,V4=5	96.6%
V6	V6=0	0%
Unclear /Non response	2	3.33%

Sl. No	**Food Items (as mentioned by the households)**	**Perceived Medicinal Properties**	**Validation**
1.	Adraka[V3]/Shunthi [V3]	Cough and cold[V1], Digestive[V2], Pachana[V2], it relieves the pain due to vatta[V1]	Total Number of Validation categories= V1=10 ,V2= 25 , V3= 18, V4=5,V6=0,Not Clear =2 The medicinal properties of all quoted food items were validated.It was interesting to see that for one food item more than one medicinal property was also mentioned by the ,households.
2.	Lasun [V3] (Garlic)	Pain [V1], Chronic cough [V1],Skin disorders [V1],Worm infection[V2],Agni Vardhak [V2],Diabetes [V2],Piles[v4],It relieves the pain due to vatta[V2]	
3.	Jeera [V3]	Indigestion[V1]	
4.	Kakdi [V3]	Burning [V2]	
5.	Kulattha [V3]	For chronic cough[V4],kapha [V2],anapachana [V2],indigestion [V2],nutrition [V4]	
6.	Maricha [V3]	Constipation [V2],Diabetes [V2],Cough[V1]	
7.	Milk [V3]	Abdominal colic [V2]	
8.	Moonga dal [V3]	Nutrition [V2] ,General debility[V1]	
9.	Mustard [V3]	Apetizer[V2],indigestion [V2]	
10.	Turmeric [V3]	Skin diseases [V2],Cold & Cough [V2],Blood purifier [V2]	
11.	Surana [V3]	Pain [V2] ,piles [V4],diabetes [V4]	

12.	Sariba V3	Skin diseases V4	
13.	Pappya V3	Stomach disorders V2 ,Constipation V2	
14.	Onion V3	Fits V2	
15.	Elua V3	Sin disorders V4 ,Burns V2	
16.	Neem V3	Skin diseases V2, Infections V2	
17.	Karela V3	Diabetes V1, Blood purifier V1, Piles V4	

TABLE (IX): Validation summary of home remedies mentioned by the Households under following heads

Categories of conditions for which home remedies were asked	Validation categories	Count	Percentage
20 types of Health conditions	V1-V5	82	95.34%
	V6	4	4.65%
Malnutrion and Convalescence	V1-V5	14	93.3%
	V6	1	6.6%
Mother and child care	V1-V5	54	93.1%
	V6	4	6.8%

TABLE (X) A: Validation of home remedies mentioned by the Households under following heads

Disease	Home remedies used for Infants	Validation Total Validation In All Age Groups
Cough & Cold	Tulsi Juice + Honey V1,Adrakarasa+Honey V1 Old Ghee V2, Tulsi Juice V1,Gangasiuli Rasa V2,Vasa+Honey V1	V1-4, V2-2
Diarrhea	Jaipatra V1 , Mulethi V2 , Vasa+Honey V1 Tulsi+Honey V1 Dalimba V1 ,Jaiphala V1 Kutaja V1	V1-6,V2=1
Fever	Betel Leaf+ Tulsi Patra Juice V1 +Honey V2 Jaiphala V1 Vasa Juice V2	V1-2,V2=2
Jaundice	Bhunimb V1 Bhumalki Rasa V1, Brahmi V4 Tulsi Patra Juice V4 Jaiphala V4 Kalmegh V2	V4-3,V2-1,V1=2
Diabetes	Jamun V1 Tulsi V2 Methi Seeds V2, Karela juice V4 , Yoga V2 & Excercise V6	V1-1,V2-3,V4=2,V6=1
Fistula	Vasak V1	V1-1,
Headache	Head massage with oil V2 ,Nasya V1 Vasak V2,Yoga V2	V2-3 V1-1
Joint pain	Alovera Leaf Juice V2,Maharasnadi Kwath V2, ,Hot Til Oil Massage and fomentation V1	V2-2 ,V1=1
Memory Loss	Brahmi Juice V1 Thalkuni Patra V1 Brahmi Oil Massage V1 Vasak V2 Decoctions made at home of the herbs suggested by Local Vaidya V2	V1-3,V2-2
Debility	Milk V1 ,Masur Dal V2 Ashwagandha Churna V2 Vasak V2,Eggs V1, Banana V2	V1-2,V2-4
Constipation	Brahmi Triphala Churna V1,Castor Oil V1,HaridaTriphal Churna V1 Vasak V2	V1-3,V2=1
Mental Illness	Brahmi V1 Brahmi Oil Massage V1 Vasak V2 Jatamansi V2	V1-2, V2-2

White discharge	Rice Water V1,Kalmegh V1	V1-2
Anemia	Puruni Leaf V1 Kalmegh V2 Jaggery V2,Fish ,Meethi Neem V2	V1-1, V2-3
Menstrual	Ashok Chhal Kwath V1 Rice Water V1Kalmegh V2	V1-2 V2-1
Malnutrition	Cow Milk V1 Milk V2,Fruits V1 Rice Water + Triphala V2 Kalmegh V2,Jowar V2	V1-2 V2-4
Insect bites	Madhu Sarpi V2Chirata V2 Garlic V2 Kalmegh V2	V2-4
Worm infestation	Chirayata V2 Paladhna Patra Rasa V1 Chirata V2, Haldi Churna V1 Bidang Beeja V1 Kalmegh V2	V2=3,V1-3
Minor Injuries	Banasebati Lepa V2, Haldi Lepa V2 Milk with Haldi V2 antiseptic cream V6	V2-3, v6=1
Major Injuries	Hospitalisation V6 Milk with Haldi V2	V6-1

TABLE (X) B: Validation of the Home Remedies mentioned by the Households for Combating Malnutrition

Categories Of People	Home Remedies	Validation
New Born & Infant	Mother's Milk V1	V1=1
Others Children(1-14) Adolescent Girl Pregnant Women Nursing Mother	Cow Milk,Fish V1,Fruits V2,Rice V1, Moong Dal V1Vegetables V1,Dalia V2,Milk,Butter,Cheese, V2, Ghee V1,Leafy Vegetable V6, Meat V1,Milk V1, Banana V1 ,Sugar V1 and Atta Laddus V1,java V2,jowar V2	V1=9 V2=4 V6=1

Refer Validation Methodology: Chapter I page no. 19 and 20

TABLE (X) D: Validation of the Home remedies mentioned by the Households for Mother & Child Care

Home Remedies Used For Healthy Pregnancy	Validation
Lifestyle related	V2=7 V1= 8 V6=2
Rich Diet V1	
Milk V1, Green Vegetables V6, Fish V1,Meat V1	
Kakamachi Root With Milk V2, Cow Milk ,Ghee V1+ V2	
Nutritious Food V1+ V2	
Satabari Mula Rasa V1+ V2	
Local Application	
Regular massage with oil (Til or sarson) V2	
Rest V2	
Others	
Health Checkup V1+ V2+ V6, Precautions suggested by elderly V2	

Home remedies used for safe delivery	Validation
Lifestyle related	V2=23 V6=1
Milk[V2] Ghee[V2]	
No home remedy[V2] No idea[V2]	
Proper diet[V2]	
Warm milk with ghee[V2]	
Ajwain,[V2] Grapes[V2] Banana[V2] Butter[V2]	
Castor oil with milk [V2], just before delivery[V2]	
Coconut sweet[V2]	
Dalia,[V2]	
Dry warm liquid[V2]	
He has seen it but could not name the remedy/preparation of decoction[V2]	
Khichdi,[V2]	
Mother takes protein items in her diet[V2/V6]	
Proper walk,[V2]	
Sounth ladoo,[V2]	
Take the help of doctors [V6] and suggestions of elderly members[V2]	
Water with ghee or castor oil[V2] Regular Massage from Dai [V2]	

Home Remedies Use For Healthy Lactation:	Validation
Bhuin Kakharu Churna [V2] +Lauki+Bhiri [V2]	V2=2 V1=2
Cow Milk [V1]	
Satabari Churna+Cow Milk [V1]	

Home Remedies For Baby's Health	Validation
Balataila & Cow Milk [V1]	V1=5 V2=7 V6=1
Balataila Massage [V1]	
Cow Milk [V1]	
Honey [V2],Ghee [V2],Cow Milk [V1]	
Immunisation [V6],Cowmilk Massage [V1],	
Milk,Baby Oil For Massage [V2]	
Nutritious Food [V2],	
Oil Massage [V2],Turmeric Paste All Over The Body And Regular Feeding [V2]	
Turmeric+Haridra+Trikatu Paste In Cow Milk 1/2 tsp (Ghutti) [V2]	

Refer Validation Methodology: Chapter 1 page no. 19 and 20

ANNEXURE 3

Data on Private Institutions: Kerala, Tamil Nadu and Uttarakhand

Kerala

TABLE (I): System-wise Details of Number of Private Medical and AYUSH Institutions in Kerala				
SL. NO	SYSTEM OF MEDICINE	YEAR		
		1986	1995	2004
		No.	No.	No.
1.	Modern Medicine	3,565	4,288	4,825
2.	Ayurveda	3,925	4,332	4,922
3.	Homeopathy	2,078	3,118	3,226
4.	Others	95	290	535
Total		**9,663**	**12,028**	**13,508**

Source:.
1. Departments of Health, Kerala for Allopathic Services
2. ISM and Homeopathy Departments of Kerala Government/AYUSH Officials under State Directorates/Departments of Health/ State Health Society for AYUSH service

Looking at the above figures there seems to be a huge presence of the private institutions in the state and the Allopathic private institutions are less than the Ayurveda institutions. Adding to this all the Homeopathy institutions as well, the private sector is much stronger in AYUSH in Kerala. Some of the most renowned and prestigious Ayurveda institutions which are also declared as centres of excellence by the Dept. of AYUSH are present in Kerala.

Tamil Nadu

A substantial number of private facilities of AYUSH exist in the state. Overall, 4 institutions (medical colleges with hospital facilities) were profiled out of which one was of Siddha system, one of Yoga & Naturopathy and the other two were Homeopathic Medical colleges. The details of each are summarised below:

i. The Yoga and Naturopathy institute has been functioning since 12 years, currently with 8 doctors and 30 beds.

ii. Homeopathic College-1, functioning since 8 years, had 4 OPD & IPD departments, namely general medicine, pediatrics, surgery and obstetrics & gynaecology. It had a teaching staff of 43 people most of them having a MD degree in Homeopathy. It is an ISO certified college out of the 10 colleges in the state. 100 bedded hospital, five peripheral centres, physiology and biochemistry labs along with Homeopathic pharmacy lab, OT, X-ray unit, Ultrasonography unit, neonatal care unit and also an ambulance.

iii. Homeopathic College-2, functioning since 8 years, with 61 doctors, 60 beds, attached with 5 rural health centres.

iv. Siddha Medical College also functioning since 8 years, with 16 doctors, 100 beds, 60 patients a day, 20% bed occupancy.

TABLE (II): Annual Utilisation Data - 2007-08 of the Private AYUSH Institutions			
S. No.	Institutions	OPD	IPD
1.	Homeo 1	32,199	1,373
2.	Homeo 2	1,45,291	2,659
3.	Siddha	16,220	20% bed occupancy
4.	Yoga/Naturopathy	2,545	179

Source: OPD attendance Registers at the Private facilities surveyed.

From the above profile it can be inferred that the utilisation of AYUSH facilities and service delivery infrastructure of these institutions were fairly good with lab facilities, IP availability and team of AYUSH doctors.

Research Institutions: In the selected district, include a botanical conservation, research and training centre which had over 2,500 rare and endangered botanical species and a herbarium of important medicinal plants. This institution had released a book on introducing Siddha medicine at school level and cultivating herbs in schoolyard and home.

Uttarakhand

A large number of private institutions that are AYUSH stand-alone or co-located with integrated practice exist in the state. The data available from two of them in the study district provides some insights and has been analysed as part of the findings.

The Standalone private institution had 14 doctors and 10 paramedics and was functioning since last 60years.It had a bigger establishment with more number of doctors and paramedics providing AYUSH services compared to Government services,

The figures of attendance on the day before the survey in the year 2008-09 shows higher use of the private facilities, and therefore the high load does indicate the demand for AYUSH services.

TABLE (III): OPD attendance by Age and Sex for AYUSH on the previous day

Institution	Infants & Children		Adults & Elderly		Total		
	M	F	M	F	M	F	T
Pvt (co-located)	3	1	42	30	45	31	76
Pvt (Standalone)					38	30	68

Source: OPD attendance Registers at the Private facilities surveyed.

ANNEXURE 4

Prescriptions of Allopathic Doctors: Case Study Tamil Nadu*						
Age	Sex	Health Problems	Diagnosis	Tests Prescribed	Oral Treatment	Injectable Treatment
37	Male	Fever	Urti	Cap Amox, Tab-Dexa, T-Bc	Inj Gent 2ccim, Inj Bc 2ccim	
43	Male	Fever, Cold & Cough	Urti		T-Erythro,T-Dexa, T-Cetrizine,T-Ranitidine	Inj Gent, Inj Para 2cc Im
42	Male	Knee Joint Pain	Arthritis	Blood Tc, Dc,Esr, Ra Factor	T-Choloroquine, T-Calcium,T-Dcilo, T-Ranitidine	
25	Male	Stomach Pain With Burning Sensation	Gastric Ulcer	Nothing Specific	Cap Omicap	Inj Ranitand, Inj Ranitidine 2ccim
27	Male	Stomach Pain	Gastric Ulcer		T-Omicap, T Rantac, T-Digene	
30	Male	Swelling In The Left Leg	Lymphatic Obstructed		T-Amok, T-Desca, T-Diclo	Inj Genta 2cc Im, Inj Lasix 2ccim
28	Female	Fever, Cold	Urti	T-Enthromycin500, T-Dectacle, T-Cetrizene, T-Bcomplex		
38	Male	Difficult To Breath	Bronchitis	Nothing Specific	T-Deataxc, T-Amoxycilin,T-Bc,T-Deriphyl	Inj-Deriphyillin+Inj Dexa
58	Male	Fever, Cold & Cough	Urti	T Erythro, T-Para, T-Rani, T-Bc		Inj Gent 2cc Im
47	Female	Fever	Fever	Nothing Specific	T-Para, T-Dex, T-Cpm	
42	Male	Fever, Cold & Cough	Urti	Cap-Erythromycin, T-Dexa, T-Cetrizine, T-Bc		Inj Gent, Inj Bc 2cc Im
40	Female	Wound In The Left Leg	Ulcer	Diabetes Mellitus	Cap Amox, T-Dexa, T-Bc	Inj Gent 2ccim, Inj Diclo 2cc Im
37	Male	Burning Micturition	Uti		T-Cifran, T-Meleco, T-Ranitidine	Inj Gent, Inj Diclo
19	Male	Fever	Urti		Cap-Amox, T-Dexa, T-Diclo, T-Bc	Inj Gent, Inj Para 2cc Im
21	Male	Swelling In Rt Leg	Lymphatic Obstructed		T-Lasic, T-Amox, T-Diclo,T-Dexa	Inj Gent, Ink Lasix 2cc Im
47	Male	Wound In The Rt Hand	Wound	Blood Sugar	T-Amox, T-Dexa, T-Diclo, T-Bc	Inj Gent, Inj Diclo
37	Male	Stomach Pain With Burning Sensation	Gastric Ulcer	Nothing Specific	Cap Omicap, T-Ranitidine	Inj Ranitidine 2cc Im
25	Male	Toothache	Caries Tooth		T-Diclo, T Bc, T-Ranitidine	Inj Diclo 2cc Rm

27	Male	Fever, Cold & Cough	Urti		I Enthromycin, Ceprizene, Bc	Inj Cyent, Inj Para
27	Female	White Discharge	Pid?		T-Norfaxcin-400, T-Metrogyl-400, T-Bc	Inj Gent 2cc Im, Inj Ranitidine 2ccim
32	Male	Neck Pain	Cervical Spondylitis	X-Ray	T-Diclo, T-Calcium,T-Rantax	Inj Diclo, Inj Gent 2cc Im
27	Male	Throat Pain Since 2 Days	Urti	T-Erythro, T-Para, T-Dexa, T-Bc	Inj Dexa 2ccim, Inj Diclo 2cc Im	
45	Male	Burning Micturition	Uti		T-Cifran-500, T-Metrogyl-400, T-Bc, T-Rantidine	Inj Gent 2cc Im, Inj Bc 2ccim
37	Male	Wound In The Rt Leg	Ulcer	Blood Sugar	T-Amox, T-Diclo, T-Bc, T-Rantidine	Inj Gent, Inj Diclo 2cc Im
52	Male	Swelling In Both Legs	Oedema To Lymphatic Obstruction	Urine Culture, Blood Tc-Dc-Esr	T-Lasix, T-Amox, T-Dexa, T-Ranitidine	
33	Male	Severe Headache	Sinusitits	X-Ray	T-Amox, T-Para, T-Bc, T-Ranitidine	Inj Diclo 2cc Im
33	Male	Fever, Cold & Cough	Urti		T-Amox, T-Cetrizine, T-Dexa, T-Para	Inj Gent, Inj Diclo 2cc Im
47	Male	Fever, Cold & Cough	Rti		T-Enytho, T-Dexa,T-Cenizene	Inj Gent, Inj Pavalatum
42	Female	Knee Joint Pain	Arthritis	Blood, Tc, Dc,Esr	T-Chloroquine,T-Calcinum, T-Diclo, T-Rantidine	
35	Female	Lower Abdomen Pain	Pid	Urine Routine, Hb, Alb	T-Citrizine, T-Metro, T-Raniti	Inj Ranitideine, Inj Bc 2cc Im
33	Female	Lower Abdomen Pain, White Discharge	Pid		Cap Cifran, Tab Deka, Tab Bc	
47	Male	Back Pain	Lumbar Spondylitis	X-Ray	T-Diclo, T-Bc,T-Rantidine, T-Amox	Inj Diclo 2cc Im
40	Male	Wound In The Rt Elbow Joint	Ulcer In The Elbow Joint	Blood Sugar	T-Ranti, T-Diclo, T-Bc	Inj Grant2cc Im, Inj Diclo 2cc Im
37	Female	White Discharge	Pid	Blood Esr, Vaginal Smear In The Next Visit	T-Cifran,T-Metero,T-Ranitidine,T-Bc	Inj Gent, Inj Ranitidine 2cc Im
40	Male	Wound In The Rt Elbow Joint	Ulcer In The Elbow Joint	Blood Sugar	Cap-Amox, T-Ranitidine,T-Diclo, T-Bc	Inj Gent, Inj Diclo
37	Male	Fever, Cold, Cough, Headache	Urti		T-Erythro, T-Para,T-Cetrizine, T-Bc	
33	Female	Lower Abdomen Pain, White Discharge	Pid		Cap-Cifran, T-Dexa,T-Diclo,T-Bc	Inj Gent, Inj Ranitidine 2cc Im

38	Male	Fever, Cold, Cough, Headache	Urti		T-Erythro, T-Para, T-Cetrizen, T-Bc	
32	Female	Soar Throat Fever	Rti		T-Erythro, T-Dexa,T-Cetrizine, T-Ranitidine, T-Bc	
32	Female	White Discharge	Pid	Scan Usg In 2 Weeks	T-Norflax, T-Metro, T-Ranitidine, T-Bc	
33	Female	Body Pain, Recurrent Fever	Typhoid?	Blood Typhoid Malarial Parasite Investigation	T-Cifran, T-Para+Diclo, T-Bc	Inj Gent 2cc Im, Inj Diclo 2cc Im
37	Male	Excess Sweating Giddiness			T-Amilodepine, T-Bcomplex	Inj Bc 2cc Im
37	Male	Stomach Pain	Amoebiasis		T-Norflak, T-Metexo, T-Rani	Inj Cyeut2cc
30	Male	Ear Pain	Ear Wax	Clean With Instil	H2o2, Genta Ear Drops, T-Amox, T-Diclo	Inj Diclo2cc Im
27	Male	Burning Micturition	Clavinary Tract Infection		T-Cifran, T-Metero,T-Ranitidine,T-Bc	Inj Genta, Inj Bc 2cc Im
32	Male	Neck Pain	Cervical Spondylitis	X-Ray		T-Diclo, T-Calcium,T-Rantac
22	Female	Fever, Cold & Cough	Urti		T-Erythro,T-Para,T-Ranitidine, T-Bc	Inj Genta 2cc Im
23	Male	Swelling In The Left Leg	Lymphatic Obstructed		T-Amox, T-Dexa, T-Diclo	Inj Genta, Inj Lasix 2cc Im
47	Male	Ear Pain	Ear Wax	Clean With H202 Instil	Gentaear Drops,Tamok, T-Diclo,T-Bc	
35	Male	Burning Micturition	Uti		T-Cifran, T-Metro, T-Ranitidine, T-Bc	Inj Genta 2cc Im, Inj Bc 2cc Im
20	Female	Fever	Urti		T-Erythro,T-Para,T-Dexa	Inj Genta, Inj Para 2cc Im
37	Male	Stomach Pain With Frequent Defecation	Amoebiasis		T-Norflox, T-Metero, T-Rantac, T-Lopromids	Inj Gent 2cc Im
21	Female	Fever	Urti	T-Erythro, T-Para, T-Dexa	Inj Genta 2cc Im, Inj Para 2cc Im	
45	Male	Neck Pain	Cervical Spondylitis	X-Ray	T-Diclo, T-Calcium, T-Rantac	Inj Diclo 2ccim, Inj Gent 2cc Im
37	Male	Stomach Pain With Frequent Defecation	Amoebiasis		T-Norflax,T-Metero, T-Ranitidine	Inj Gent
40	Male	Burning Micturition	Urti		T-Cifran,T-Metero,T-Ranitidine, T-Bc	Inj Gent, Inj Bc
58	Male	Fever, Cold & Cough	Urti		T-Erytho, T-Para, T-Ranitidine, T-Bc	Inj Gent 2cc Im

29	Male	Stomach Pain	Gastric Ulcer		T-Omicap, T-Rantac, T-Digene,T-Bc	Inj Rantac 2cc Im
33	Male	Toothache	Caries Tooth		T-Diclo, T-Bc,T-Ranitidine	Inj Diclo 2cc Im
45	Male	Lower Abdomen Pain		Blood Esr	T-Cifran, T-Metro, T-Renovit, T-Bc	Inj Gent 2ccim, Inj Roni 2cc Im
30	Male	Sweeling In The Left Leg	Lymphatic Obstructed		T-Amox, T-Dexa,T-Diclo	Inj Genta, Inj Lasix 2cc Im
27	Male	Stomach Pain	Gastric Ulcer		T-Omnicap,T-Rantac,T-Digene,T-Bc	Inj Ranitidine 2cc Im
45	Male	Fever	Urti	T-Erythro, T-Para, T-Dexa	Inj Gent, Inj Para	
37	Male	Ear Pain	Ear Wax	Clean With H202 Instil	Genta Ear Drops, T-Amox, T-Diclo, T-Bc,T-Dexa	Inj Diclo 2cc Im
27	Male	Fever, Cold & Cough	Urti		T-Erythro,T-Para,T-Cetrizine,T-Bc	Inj Gent, Inj Para 2cc Im
19	Male	Soar Throat Fever	Rti	T-Erythro, T-Deka, T-Rauiha, T-Bc		
33	Male	Toothache	Caries Tooth		T-Diclo, T-Bc, T-Rantidine	Inj Diclo 2cc Im
27	Male	Fever, Cold & Cough	Urti		T-Erythromycin, T-Para, T-Cetrizine,T-Bc	Inj Gent, Inj Para 2cc Im
33	Female	Body Pain, Recurrent Fever	Typhoid?	Typhoid Mp	T-Cifran, T-Diclo, T-Bc, T-Ranitidine	Inj Gent, Inj Diclo 2cc Im

*Injection use at the OPD level is irrational by WHO criteria.
Irrational medicines prescribed have been highlighted by the coloured rows: yellow for cases of fever, cough and cold; blue for diarrhoeal disease.

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India possesses an unmatched heritage represented by its ancient systems of medicine which are a treasure house of knowledge for both preventive and curative healthcare. The positive features of the Indian Systems of Medicine, namely, their diversity and flexibility; accessibility; affordability; a broad acceptance by a section of the general public; comparatively low cost; a low level of technological input and growing economic value have great potential to make them providers of health care that the larger sections of our people need."

– Government of India

National Policy on Indian Systems of Medicine & Homoeopathy-2002

The two systems of traditional and Western medicine need not clash. Within the context of primary health care, they can blend together in a beneficial harmony, using the best features of each system, and compensating for certain weaknesses in each. This is not something that will happen all by itself. Deliberate policy decisions have to be made. But it can be done successfully.

The time has never been better, and the reasons never greater, for giving traditional medicine its proper place in addressing the many ills that face all our modern – and our traditional – societies.

– Dr Margaret Chan

Director-General of the World Health Organization

WHO Congress on Traditional Medicine, 2008, Beijing, People's Republic of China.

Foolish the doctor who despises the knowledge acquired by the ancients.

– Hippocrates

National Health Systems Resource Centre

National Rural Health Mission
Ministry of Health & Family Welfare
Government of India
New Delhi

ISBN 81-908725-4-0