Use of Information at the district level

Why Use Data?

- Need to know the disease profile- epidemiology is the study of prevalence and determinants of disease.
- Need to know the burden of disease—
  - *So that we know what are the health priorities and their determinants*
- Need to know situation in service delivery/access & utilization of services:
  - *So that areas/communities which lag behind/have greater need could be allocated more resources and inputs.*

Sources of Data/Information

- External Surveys
- Data from Routine Monitoring Systems.
- Commissioned Surveys and Studies.

External Surveys

- SRS: Sample Registration System
  - Birth Rate, Death Rate, IMR, Total Fertility Rate,
- NFHS- III- 2005-06- RCH service delivery data
- DLHS-III- 2007-08- RCH service delivery data.
- UNICEF Coverage evaluation survey- 2009
- NSSO- 60th round- cost of health care

Strengths and Limitations of each source

Use of information from external surveys

Uses

- For policy purposes
- For accountability- reply to legislature
- For district planning

Strengths:

High perception of reliability.

Issues:

- Available after a significant time lag.
- Does not have mortality data
- Dis-aggregation to facility/block level not available- essential for district planning.- except for DLHS others do not even have district level data !!-
- Limited number of parameters.

Routine Monitoring Systems

- Malaria- API, ABER, SPR, SFR, PF rate- by state, district and even by facility.
- Other VBDs- disease prevalence.
- Tuberculosis- case detection rates, cure rates, death rates,
- Leprosy- New MB cases and cases in children.
- IDSP- other communicable disease, disease outbreaks,
- Hospital Data: From hospitals which maintain reasonable case records.

Health Management Information System

- Mostly pertain to Output indicators- not as useful for outcomes or for processes. Mostly relate to service delivery: Indicators of strategy:
- Most process and inputs data would be from programme reporting- these have to be collected by programme officers independently.
- Impact/larger health outcome indicators present- but require greater interpretation- Maternal deaths, infant deaths, deaths under 5, peri-natal mortality, still births,

Barriers to use of HMIS

1. Perception of reliability- very low.
2. Quality of data – varied, needs interpretation to use.
3. Conversion to indicators, and interpretation of data very weak.
4. Information not available in easily accessible and usable form.
5. Clarity on what information would be most useful and for what purpose is weak.
6. Decentralisation process needs strengthening.

Issues of Data Quality

- Completeness of Reporting
  - Non reporting areas eg corporations, company townships etc.
  - Non reporting public sector facilities
  - Non reporting private sector facilities
- Timeliness of Reporting: (Just leave out data from last one or two months to improve data quality.)
- Accuracy and Reliability of Reporting.

  Primary recording systems /Duplication-/Data definition problems/- Problems in data entry/aggregation-

Need to build confidence in data – most who question it have never seen it.

Issues of data interpretation…

- Know which indicators to use – and for what…
- The choice of denominators:
  - expected population based vs reported- data based.
  - For population based- updating to current population size-
  - Uncertain/overlapping catchment area- for example institutional delivery rate in the headquarters block would be difficult to estimate- since the DH serves block mainly- but also the rest of district.
  - At facility level and in small blocks- use of data elements rather than indicators may be justified.
- Understanding of indicators and their inherent characteristics are useful.

False reporting and Falsification:

- False reporting: Not as common as expected. Only a 1% over-reporting at primary level. Also it affects some data elements more than others.- those highly monitored, those that beg it- eg no of cases of ANC, no of ANC cases where BP taken!!!
- Falsification- usually more at district and higher levels. Though recent trend is to give each block/each facility a target number for each data element and encourage reporting accordingly. Also done to compensate for data quality errors- which really confuses the picture.

HMIS in district planning

- Despite problems – more useful than any other existing data
- Information interpreted in context. Not possible at state/ national level- but block officer, could explain gaps. Great tool of decentralised programme management, but a very poor tool for enforcing accountability, or information for casting policy.
- Could be used for setting targets/outcomes/baselines- but greater use in understanding patterns across facilities – with regard to access and quality of care.

Five patterns to look for:

1. The gap between what is reported and what is expected… indicates those not reached!!

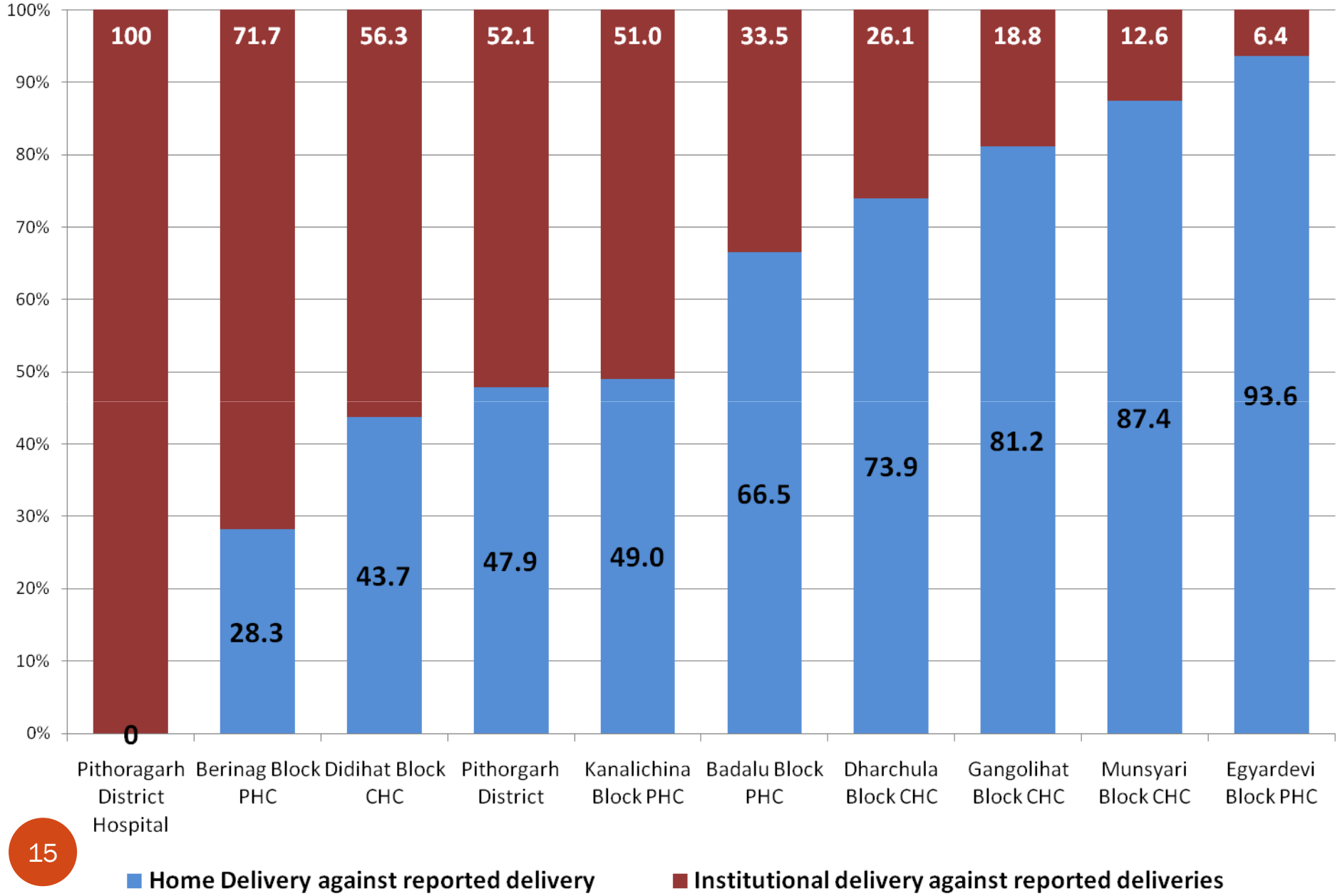
Tables could give the same information- if you know what to look for. –

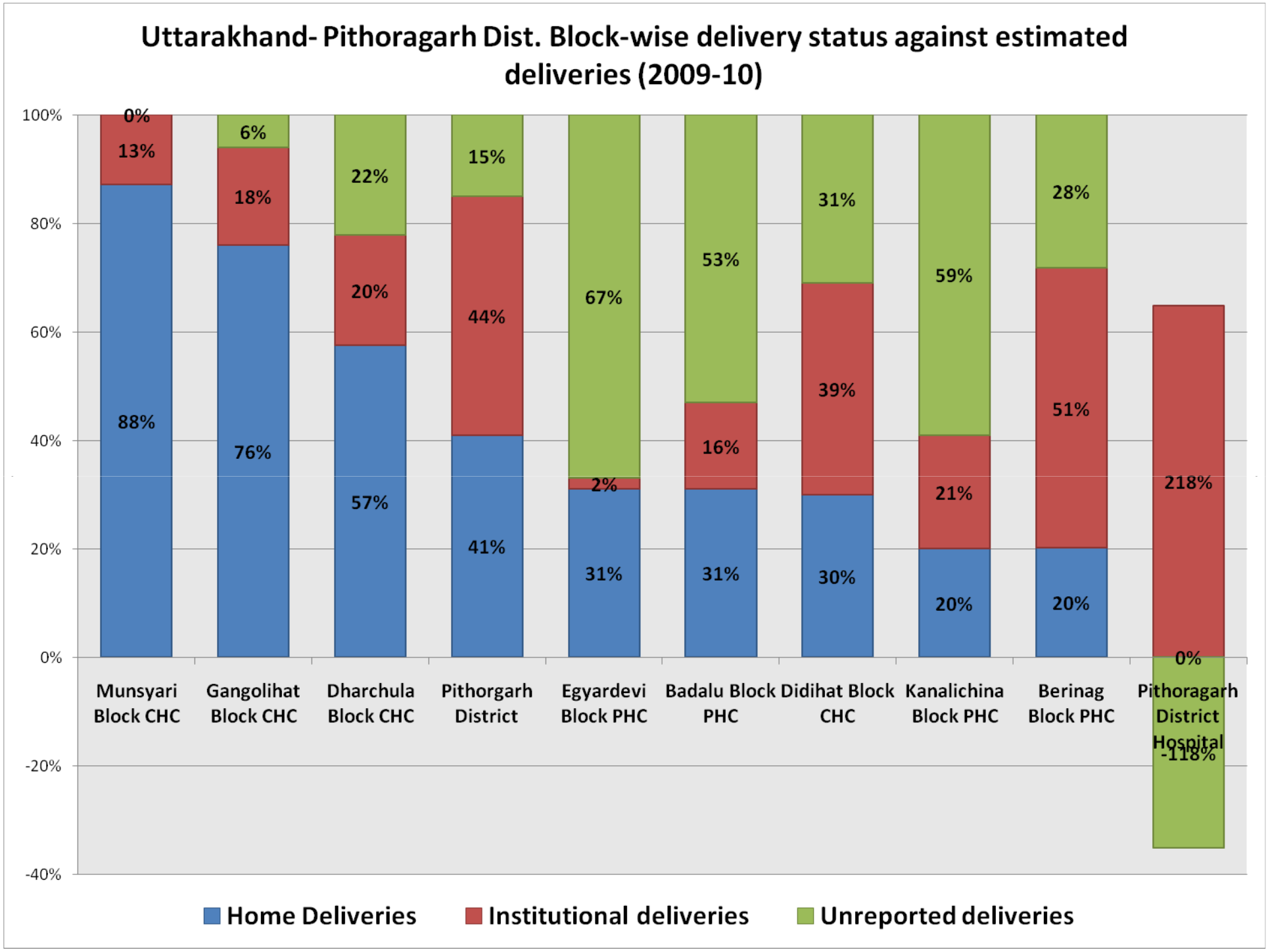
Principle: Always look for the reporting gaps- block

- sector wise- and section wise.

Muzzafar pur- 2009- 10 HMIS data				
Total Population	43,04,074		Expected Deliveries	1,30,444
Home SBA	Home Non SBA	Institutional	Total Deliveries Reported	Unreported Deliveries
2,217	1,976	35,941	40,134	90,310
Home SBA %	Home Non SBA%	Institutional %	Total Deliveries Reported %	Unreported Deliveries %
2%	2%	28%	31%	69%

Uttarakhand- Pithoragarh Block-wise delivery status against reported deliveries (2009-10)




Uttarakhand- Pithoragarh Dist. Block-wise delivery status against estimated deliveries (2009-10)
100%
80%
60%
40%
20%
0%
-20%
-40%
0%
13%
88%
6%
18%
76%
22%
20%
57%
15%
44%
41%
67%
2%
31%
53%
16%
31%
31%
39%
30%
59%
21%
20%
28%
51%
20%
218%
0%
-118%
Munsyari Block CHC
Gangolihat Block CHC
Dharchula Block CHC
Pithorgarh District
Egyardevi Block PHC
Badalu Block PHC
Didihat Block CHC
Kanalichina Block PHC
Berinag Block PHC
Pithoragarh District Hospital
Home Deliveries
Institutional deliveries
Unreported deliveries

2. Case Loads distribution across facilities-

1. Which facilities are managing the case loads? For any given service? How they need to be strengthened.
2. What is the population that is unable to access services- what facilities need to be built up/revitalised?
3. What is the range of services offered? Are there gaps between service guarantees and what is available?

This has implications on which facilities to take up for strengthening and for differential financing …..

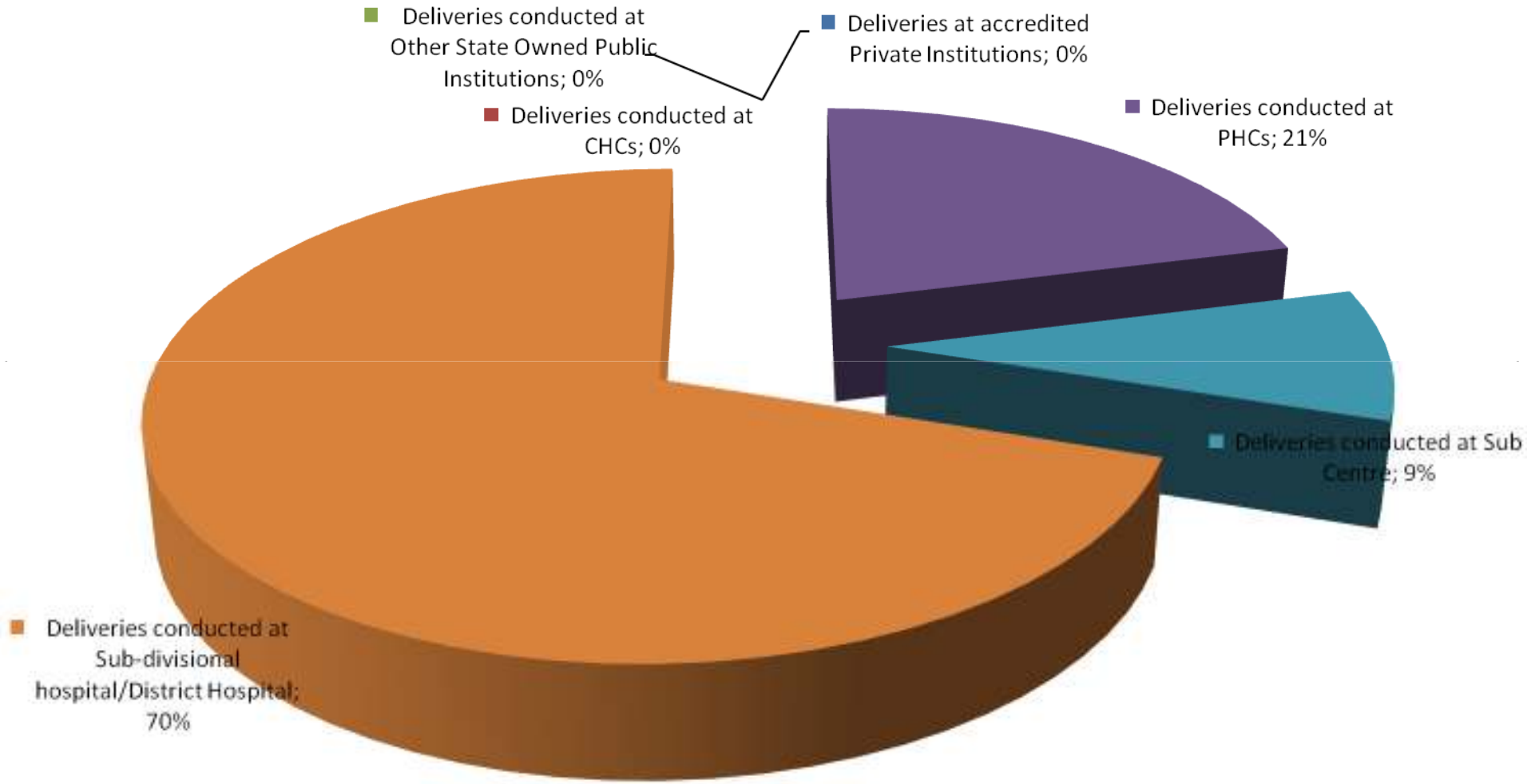
Facility Development- Identification of case load in various group of facilities (Barwani Dist.-MP) 2009-10

BARWANI DISTRICT	SCs	PHCs	CHCs	SDH/DH	Other State owned institution	Private Facilites
Deliveries conducted	1%	31%	39%	28%	0%	0%
Complicated deliveries managed	-	18%	21%	49%	0%	12%
C Sections Conducted	-	0%	0%	81%	6%	13%
Sterilisations conducted	-	9%	55%	36%	0%	0%

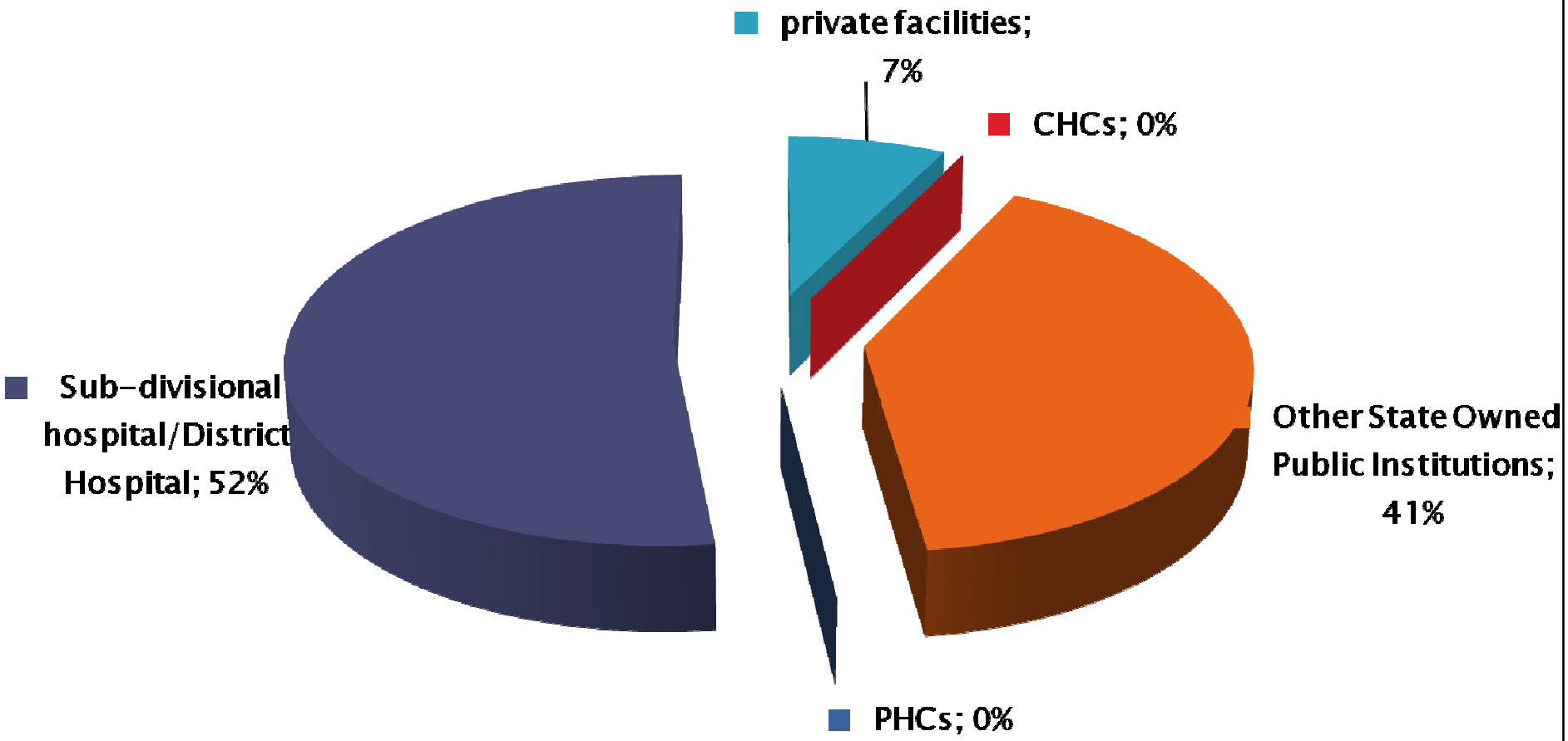
Facility Development- Identification of case load in various group of facilities (Barwani Dist.-MP) 2009-10

BARWANI DISTRICT	Sendhwa Block	Thikari Block	Pansemal Block	Pati Block	DH Barwani	Silawad Block	Niwali Block	Rajpur Block
Deliveries conducted	14%	19%	9%	8%	23%	4%	9%	14%
Complicated Pregnancy managed	5%	11%	6%	0%	51%	8%	6%	13%
C-Section conducted	7%	0%	0%	0%	93%	0%	0%	0%
Sterilisations conducted	31%	8%	10%	2%	20%	7%	8%	13%

Facility Development- Identification of case load in various group of facilities (Delivery)- Chandel (Manipur) 2009-10



Facility Development– Identification of case load in various group of facilities (Sterilisation)– West Imphal (Manipur)2009–10



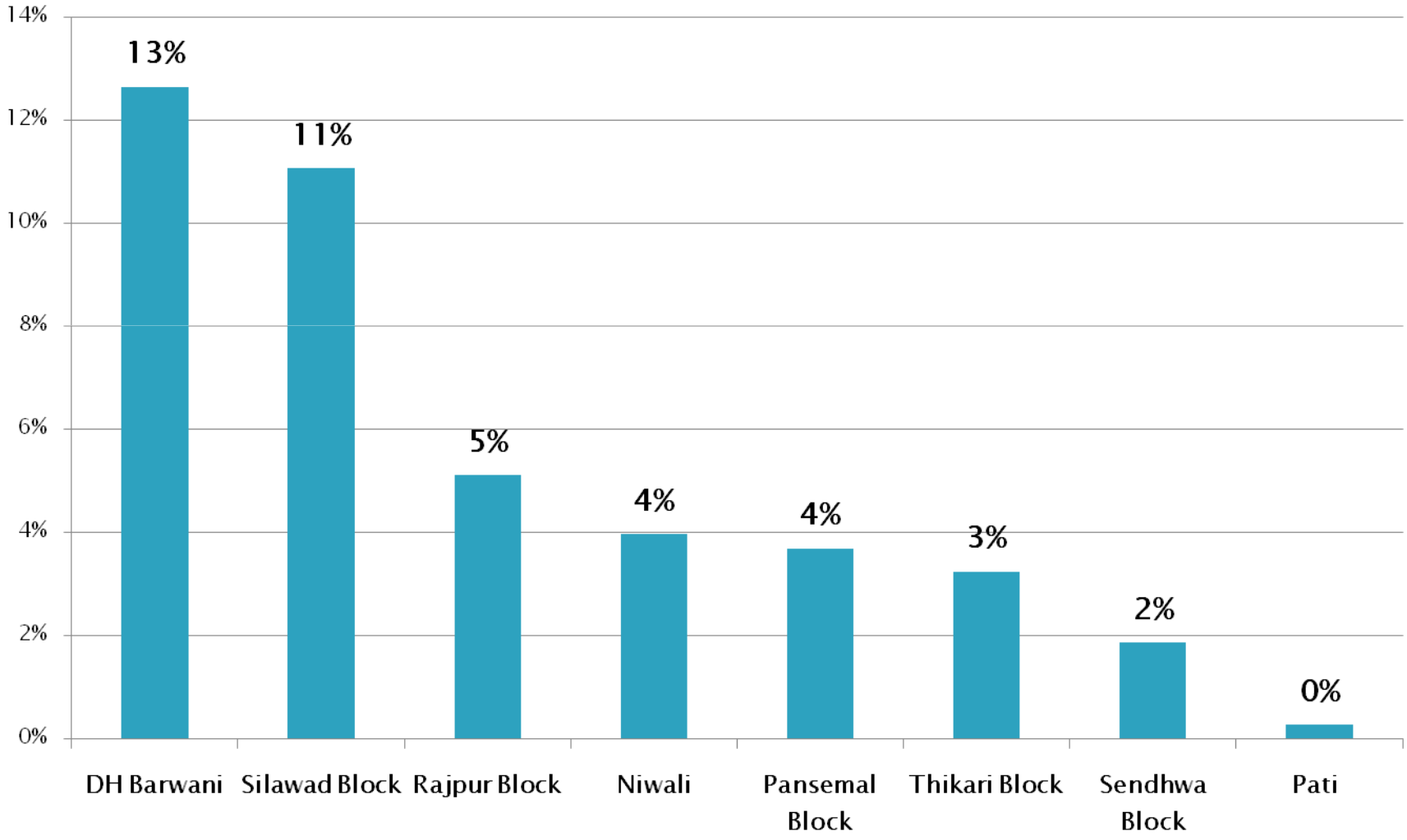
3. The range & quality of delivery services

Reported Deliveries	125497 (91%)
C- sections	4355(3%)
Other Compl. pregnancies	4244(3%)
PNC complications	16019
Still births	1501
Iv antibiotics	1237
Iv hypertensive	86
Iv oxytocics	1137
Blood transfusion	65
severe anemia treated	1304
Abortions managed	2156(1%)
RTI/STI- per lakh OPD cases	33508(810)

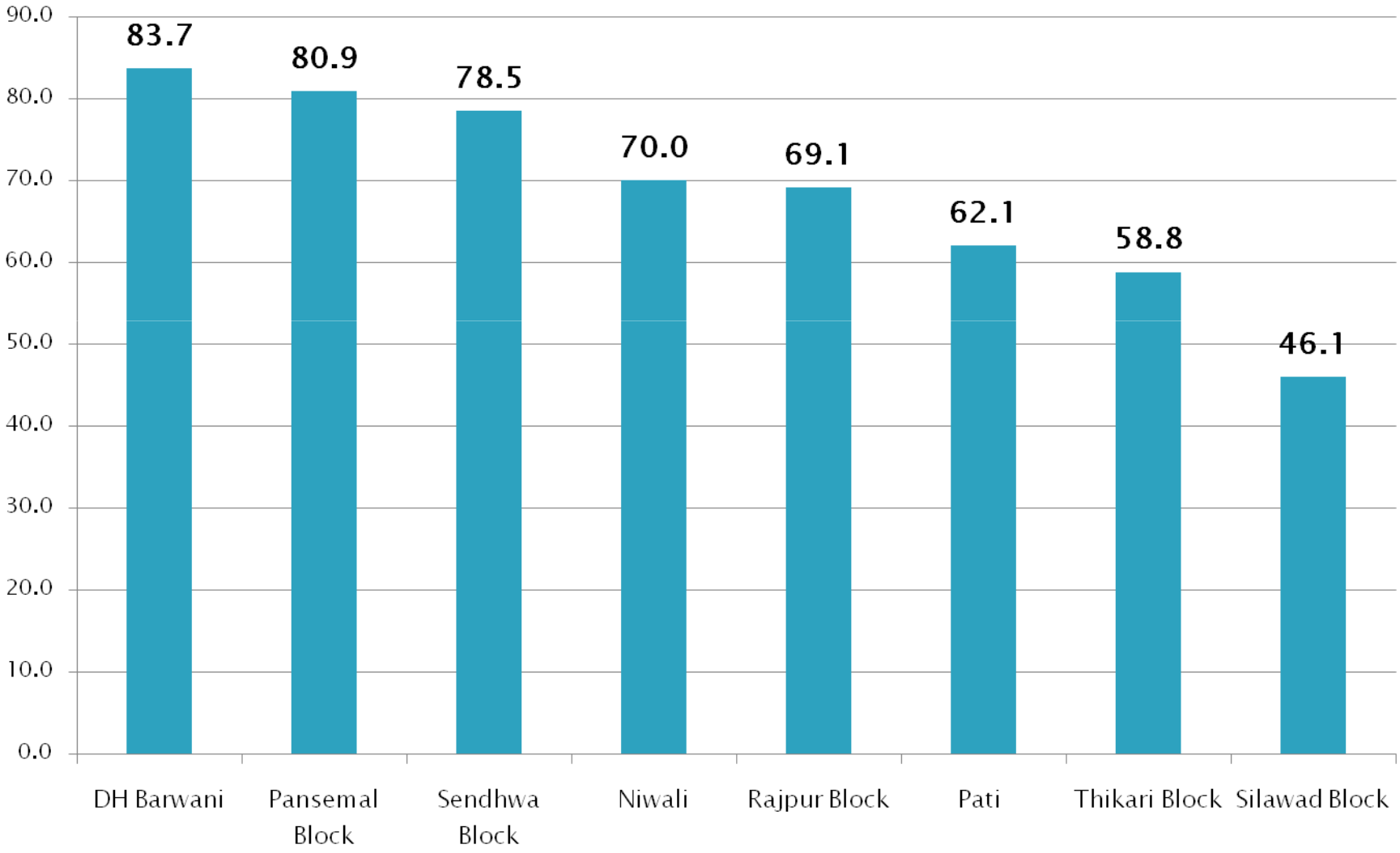
South 24 paraganas- west bengal

Reported Deliveries	37689 (91%)
C- sections	10219(27%)
Other Compl. pregnancies	11602(26%)
PNC complications	2
Still births	121
Iv antibiotics	11938
Iv hypertensive	241
Iv oxytocics	1343
Blood transfusion	157
severe anemia treated	99
Abortions managed	1963(5%)
RTI/STI –per lakh OPD cas.	5838(150)

MP -Barwani- Blocks - Percentage fo obstetric complications attended against against Institutional(Pub & Pvt) deliveries - Apr'09 to Mar'10



Percentage of deliveries discharged under 48 hours (MP-Barwani) 2009-10



RTI/STI cases per Lakh OPD (Khargone –MP) 2009-10

	RTI/STI per lakh OPD	Male RTI/STI per lakh OPD	Female RTI/STI per lakh OPD
Jhirniya Block	8655	4668	3987
Barwah Block	1849	689	1160
Gogawa Block	899	445	455
Oon Block	591	218	373
CH BARWAH	444	149	295
CH SANAVAD	209	97	112
DH KHARGONE	154	25	129
Bhagwanpura Block	154	79	75
Maheshwar Block	50	19	31
Kasravad Block	47	19	28
Segoan Block	27	0	27
Bhikangoan Block	0	0	0

Family Planning Services (MP-Dewas) 2009-10

MADHYA PRADESH- DEWAS Dist.- Sterilisations - Apr'09 to Mar'10			MADHYA PRADESH- DEWAS Dist.- FP Methods - Apr'09 to Mar'10		
	Reported	%age of Reported Sterilisation		Reported	%age of All Reported FP Methods
Total Sterilisation	8,522	-	Total Reported FP Methodd (All types) Users	52,192	-
NSV	187	2%	Sterilisations	8,522	16%
Laproscopic	5,856	69%	IUD	7,406	14%
MiniLap	1,773	21%	Condom Users	26,361	51%
Post Partum	706	8%	OCP Users	9,903	19%
Male Sterilisation	187	2%	Limiting Methods	8,522	16%
Female Sterilisation	8,335	98%	Spacing Methods	43,670	84%

Lab Services Indicators (MP-Jhabua) 2009-10

MADHYA PRADESH- JHABUA Dist.- Lab Services - Apr'09 to Mar'10				
Total OPD	Total HB tested	Total HIV Tested	Total Population	
219,993	31,882	1,024	1,656,802	
HB test conducted as %age of OPD	HB<7gm as %age of HB tested	HIV test conducted as %age of OPD	HIV positive as %age of HIV tested	Blood Smear Examined as % of Population
14.5%	9.2%	0.5%	0.8%	6.2%

Other IPD services as percentage of Total OPD (Katni-MP) 2009-10

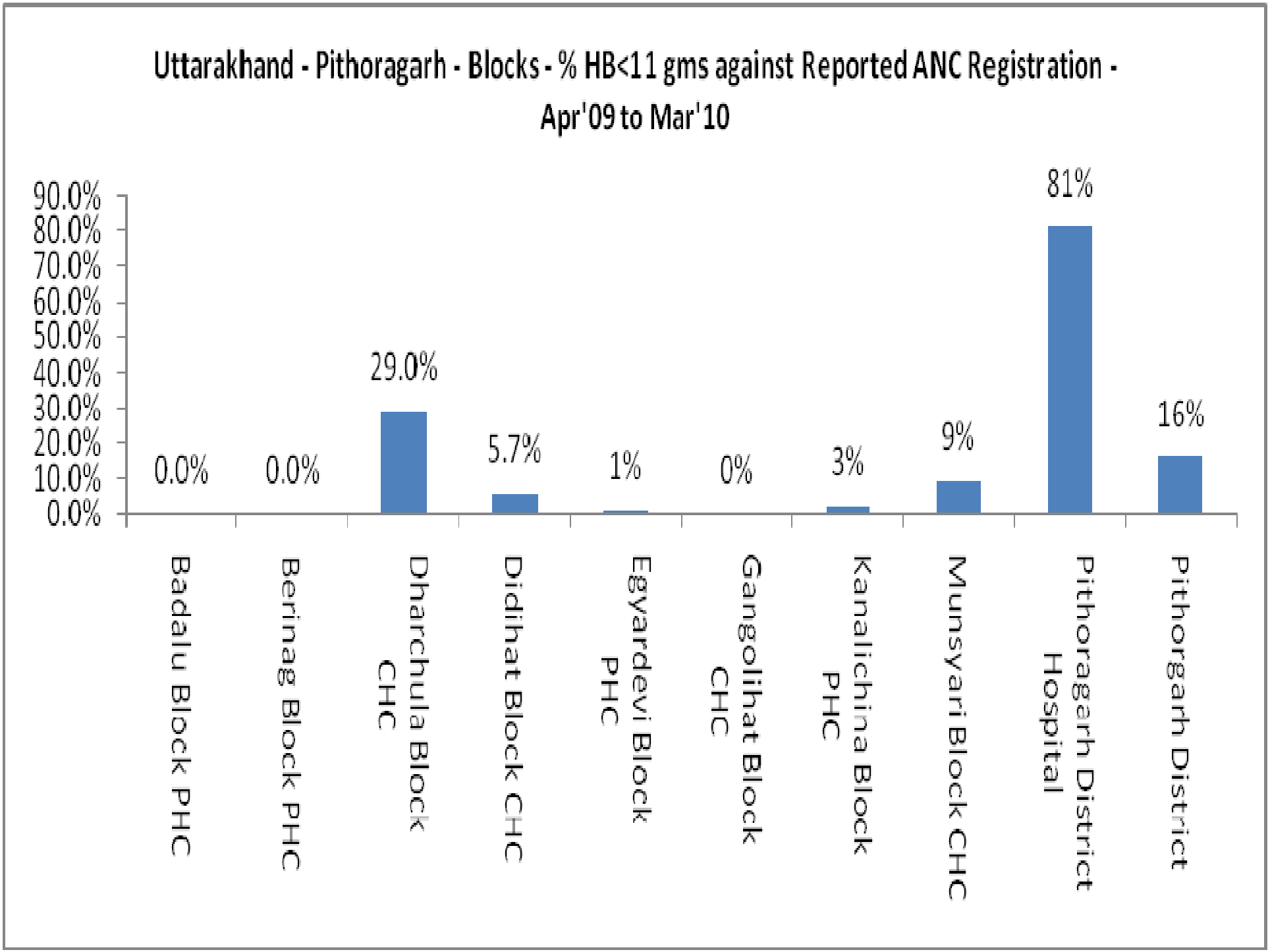
	kanhwara block	DH Katni	Bahoriband Block	Dhimarkheda Block	Vijayraghogarh Block	Barhi Block	Katni Urban	Rithi Block	Badwara Block
Operations Major as percentage of OPD	0%	0.3%	0%	4%	0%	0%	0%	0%	0%
Operations Minor as percentage of IPD	0.3%	0.2%	0%	0.9%	0%	0%	0%	0%	0.1%
AUYSH OPD as percentage of total OPD	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adolescent counselling sessions as percentage of total OPD	0%	0%	0%	0%	5.8%	0%	0%	0.1%	0%
Dental procedures as percentage of total OPD	0%	1.3%	0%	0%	0.7%	0%	0%	0.1%	0%

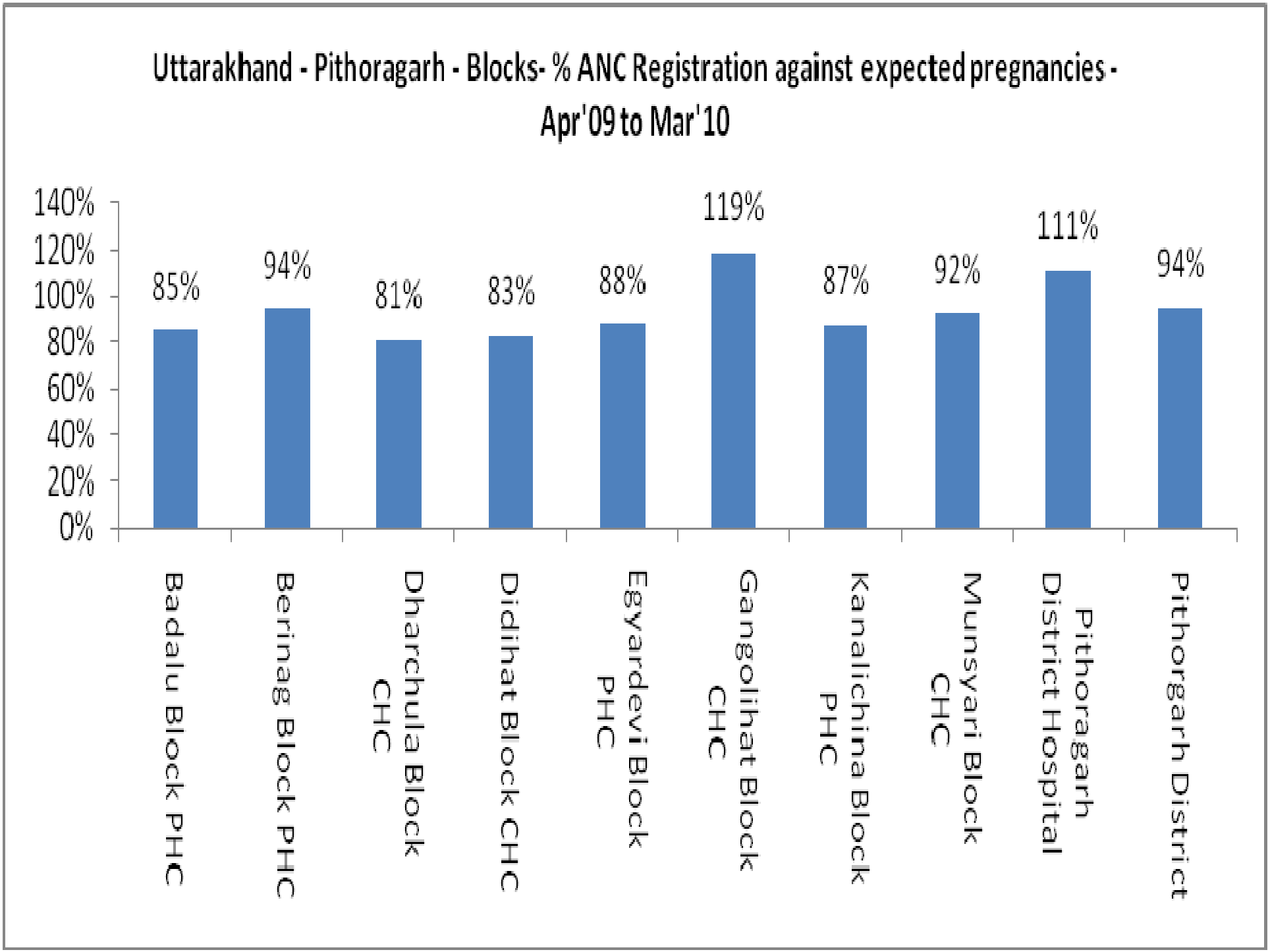
List of indicators used in Dist. Analysis

- OPD/IPD
  - Total OPD cases and per capita OPD attendance
  - IPD as percentage of OPD
  - Operation major as percentage of total OPD
  - Operation minor as percentage of total OPD
  - AYUSH as percentage of total OPD
  - Dental procedures done as percentage of total OPD
  - Adolescent counseling services as percentage of OPD
- Lab
  - Hb test conducted as percentage of OPD
  - Hb<7gm as percentage of Hb tested
  - HIV test conducted as percentage of OPD
  - HIV positive as percentage of HIV tested
  - Blood Smear Examined as percentage of Population

4. Outreach Services – achievement by block/ by sector

- What is the extent of population coverage- where are the gaps? Eg ANC
- What is the quality of outreach care?
- *Is it* too few immunisation points/VHNDs planned, or many sessions being missed? Or adverse facility to VHND/immunisation points ratio or sub-centers without staff?


Uttarakhand - Pithoragarh - Blocks - % HB<11 gms against Reported ANC Registration - Apr'09 to Mar'10
90.0%
80.0%
70.0%
60.0%
50.0%
40.0%
30.0%
20.0%
10.0%
0.0%
0.0%
0.0%
29.0%
5.7%
1%
0%
3%
9%
81%
16%
Badalu Block PHC
Berinag Block PHC
Dharchula Block CHC
Didihat Block CHC
Egyardevi Block PHC
Gangolihat Block CHC
Kanalichina Block PHC
Munsyari Block CHC
Pithoragarh District Hospital
Pithorgarh District


Uttarakhand - Pithoragarh - Blocks- % ANC Registration against expected pregnancies - Apr'09 to Mar'10
140%
120%
100%
80%
60%
40%
20%
0%
85%
94%
81%
83%
88%
119%
87%
92%
111%
94%
Badalu Block PHC
Berinag Block PHC
Dharchula Block CHC
Didihat Block CHC
Egyardevi Block PHC
Gangolihat Block CHC
Kanalichina Block PHC
Munsyari Block CHC
Pithoragarh District Hospital
Pithorgarh District

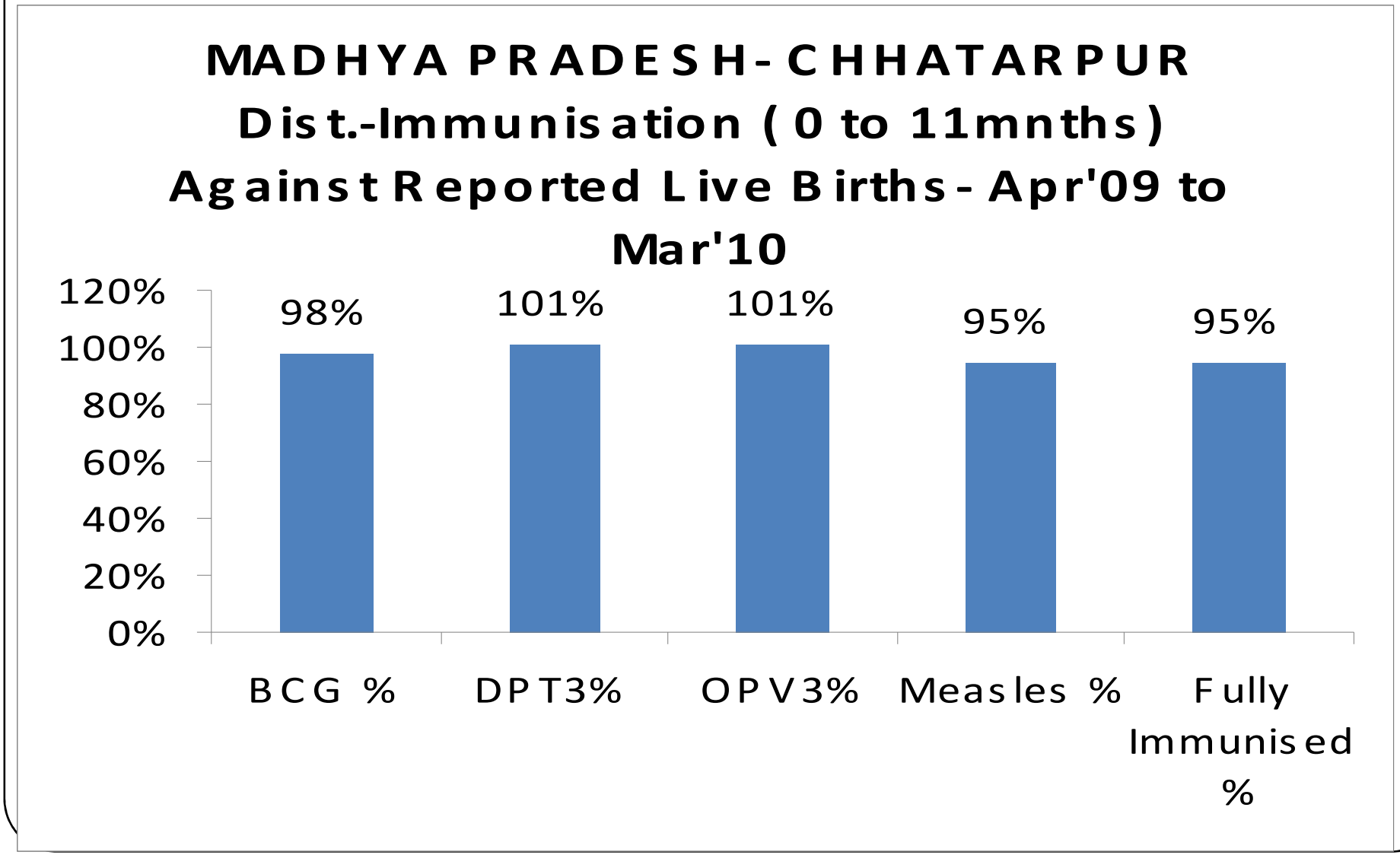
Outreach Service Indicators

- **ANC**
  - ANC Registration against Expected Pregnancies
  - ANC Registration in First trimester against Total ANC registration/ Expected pregnancies
  - 3 ANC Checkups against ANC Registrations
  - TT1 given to Pregnant women against ANC Registration
  - 100 IFA Tablets given to Pregnant women against ANC Registration
  - Hypertension cases detected against ANC registration
  - Eclampsia cases managed against ANC registration
  - Percentage of ANC moderately anemic (Hb<11) against ANC registration
  - Percentage of ANC severe anemia treated (Hb<7) against ANC registration
- **Postpartum Care**
  - PNC within 48 hours as percentage of reported delivery
  - PNC between 48hours to 14 days as percentage of reported delivery

Outreach Services Indicators

- **Immunization**
  - BCG given against Expected Live Births
  - OPV3 given against Expected Live Births
  - DPT3 given against Expected Live Births
  - Measles given against Expected Live Births
  - Fully Immunized Children against Expected Live Births- by sex and totals
  - Percentage of immunisation sessions held against planned
  - Percentage of immunisation sessions attended by ASHA against sessions held
- **Family Planning** :
  - All Methods Users (Sterilizations(Male &Female)+IUD+ Condom pieces/72 + OCP Cycles/13)
  - Percentage of sterilizations against reported FP Methods
  - Percentage of IUD Insertions against reported FP Methods
  - Percentage of Condom Users against reported FP Methods
  - Percentage of OCP Users against reported FP Methods

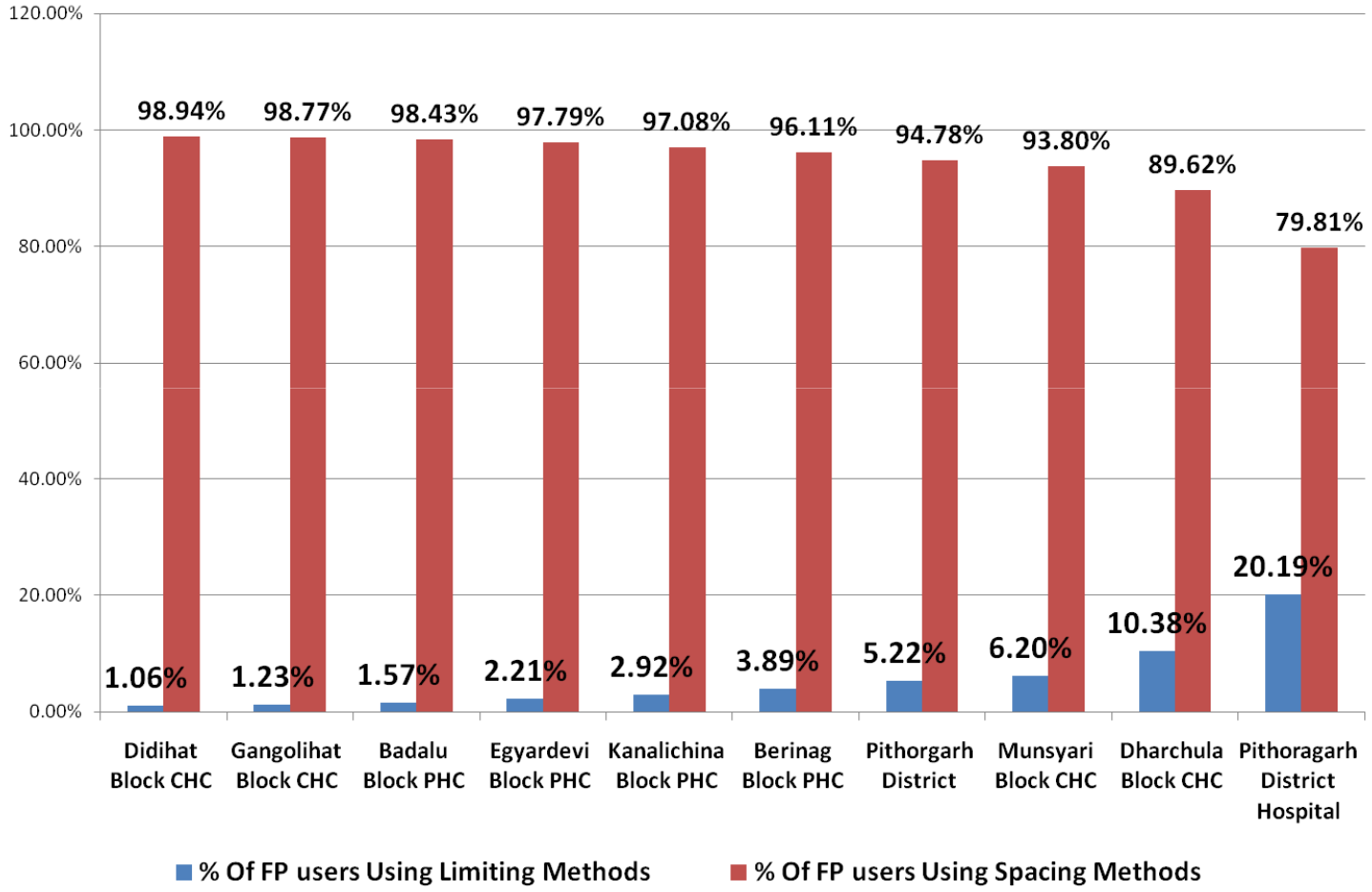
Immunisation status against reported live births (MP-Chhatarpur) 2009-10



Immunisation sessions (MP-Ratlam) 2009-10

	Immunisation sessions Planned	Immunisation sessions held	Immunisation sessions atteneded by ASHAs
Ratlam District	11857	11502	8979
Billpank Block	2334	2334	2334
Kharwa Kala Block	2158	2148	1810
Bardiagoyal Block	2144	2025	1392
Sailana Block	1735	1634	1128
Piploda Block	1386	1386	1018
DH Ratlam	1280	1176	928
Bajna Block	820	799	369

Family Planning users Blocks-wise (Pithoragarh-UK) 2009-10



4. Community Level Interventions.

- Functionality of ASHAs(immunisation sessions attended, paid for JSY)
- Effectiveness of ASHAs: BF in first hour, newborn weighing efficiency.
- Health Practices in the community
- JSY payments.

Newborn care status (Mandla-MP) 2009-10

	Live Births	Breastfeeding in first hour	Birth weighed	Percentage of Breastfed in first hour	Percentage of births weighed
Niwas Block	1203	857	810	71%	67%
Nainpur Block	2892	2302	3321	80%	115%
Bichhiya Block	3919	1528	2650	39%	68%
DH Mandla	408	0	408	0%	100%
Bamhani banjer block	3169	2602	2266	82%	72%
Mohgaon Block	1633	1116	1435	68%	88%
Narayanganj Block	1368	1115	1245	82%	91%
Mawai Block	1604	404	713	25%	44%
Ghughari Block	2007	1767	1794	88%	89%
Bijadandi Block	1373	1045	1375	76%	100%

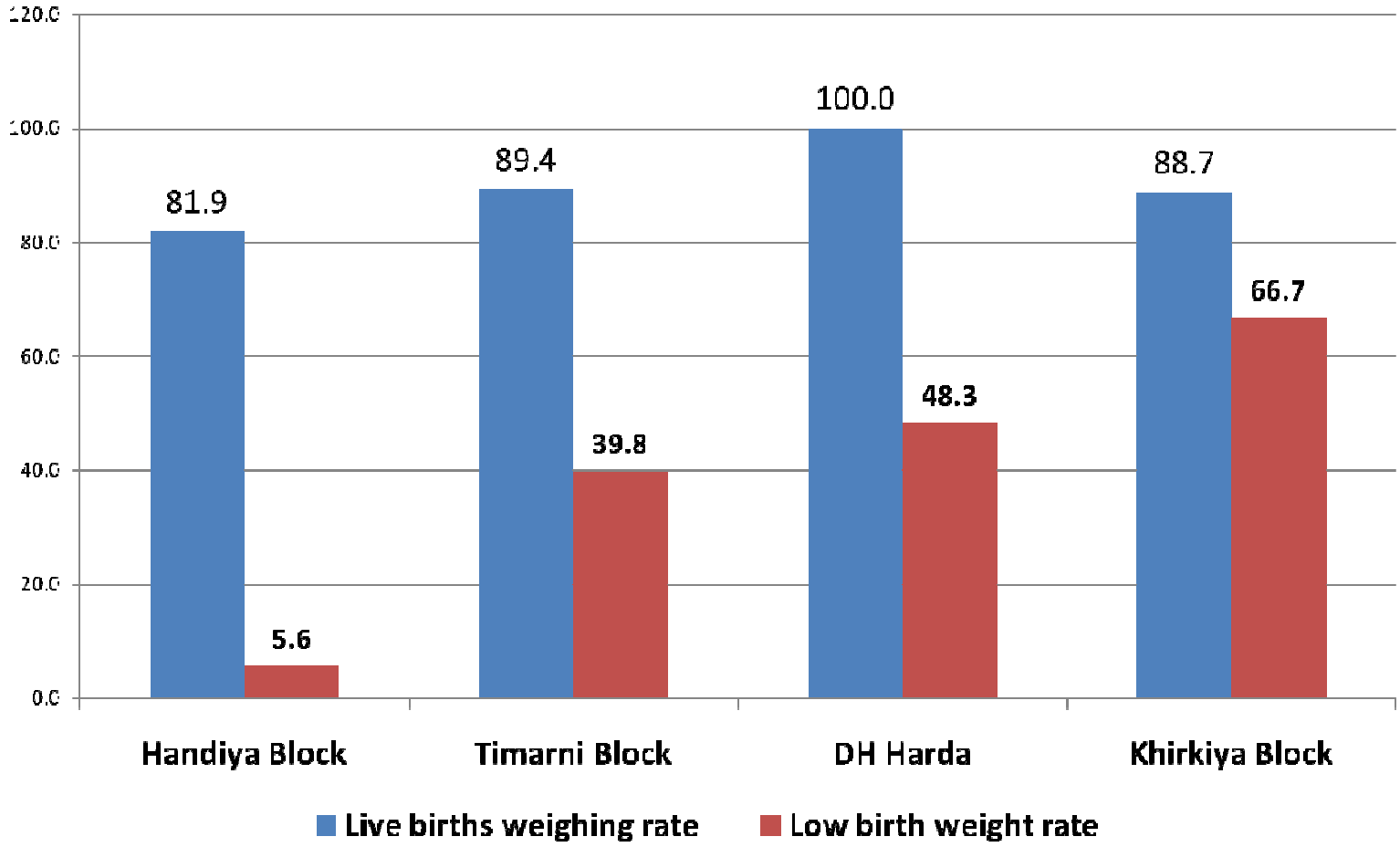
Monitoring ASHA programme:

Output indicator	Process Indicator	Data source and frequency
% of Institutional delivery+ % of home SBA delivery	JSY payment to Mother/ To ASHA	HMIS
	proportion of pregnant women who had a birth plan	ASHA divas/ monthly
	proportion of pregnant women who were streamed appropriately for a complication.	ASHA divas- monthly
% of pregnant women who received three ANCs	Immunisation sessions held as % of required/planned Attending immunisation day	HMIS
Quality of ANC-cases of HT detected, anemia detected, severe anemia treated		HMIS

Monitoring ASHA programme

Output Indicator	Process Indicator	Data Source
% Newborns Breastfed in first hour	% of newborns visited by ASHAs- within first hour.	HMIS + AD
% of LBW	% of newborn weighed in the last month	HMIS+ AD
% of newborns referred /admitted as sick	% of newborns who received full complement of visits % of newborns referred as sick. % of ASHAs who made visit to last three newborns in their area.	HMIS+ AD
% of children admitted for ARI % of children severe dehydration in diarrhoea	% of children with diarrhoea who got ORS % of children who got appropriate care for ARI % of children or pregnant women with fever for whom testing was done	HMIS+ AD

MP-Harda Birth weighing and low birth weight (2009-10)



List of indicators used in community care Analysis

- **Births & Neonates Care**
  - Live Births Reported against Estimated Live Births
  - New born weighed against Reported Live Births
  - New born weighed less than 2.5 kgs against newborns weighed
  - New born breastfed within one hr of Birth against Reported live Births
  - Sex Ratio at Birth
- JSY
  - JSY incentives paid to mothers as percentage of reported delivery
    - For home delivery
    - For institutional delivery
    - For private institutional delivery

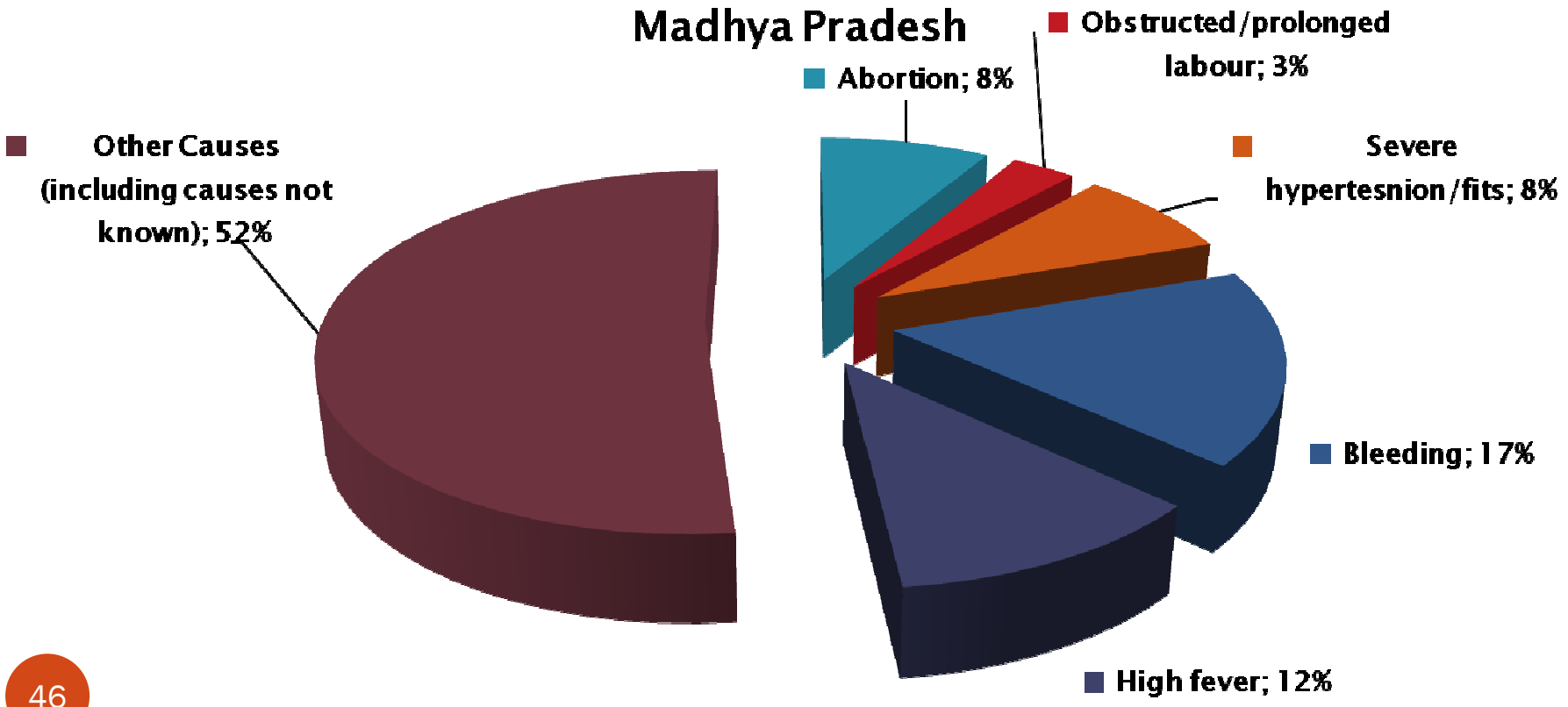
5. Health Outcomes- Mortality (could also and Low Birth weight.

- Maternal Deaths and their causes
- Child deaths and their causes
- Perinatal mortality rate- neonatal mortality rate and still birth rates.
- Deaths in all age groups.

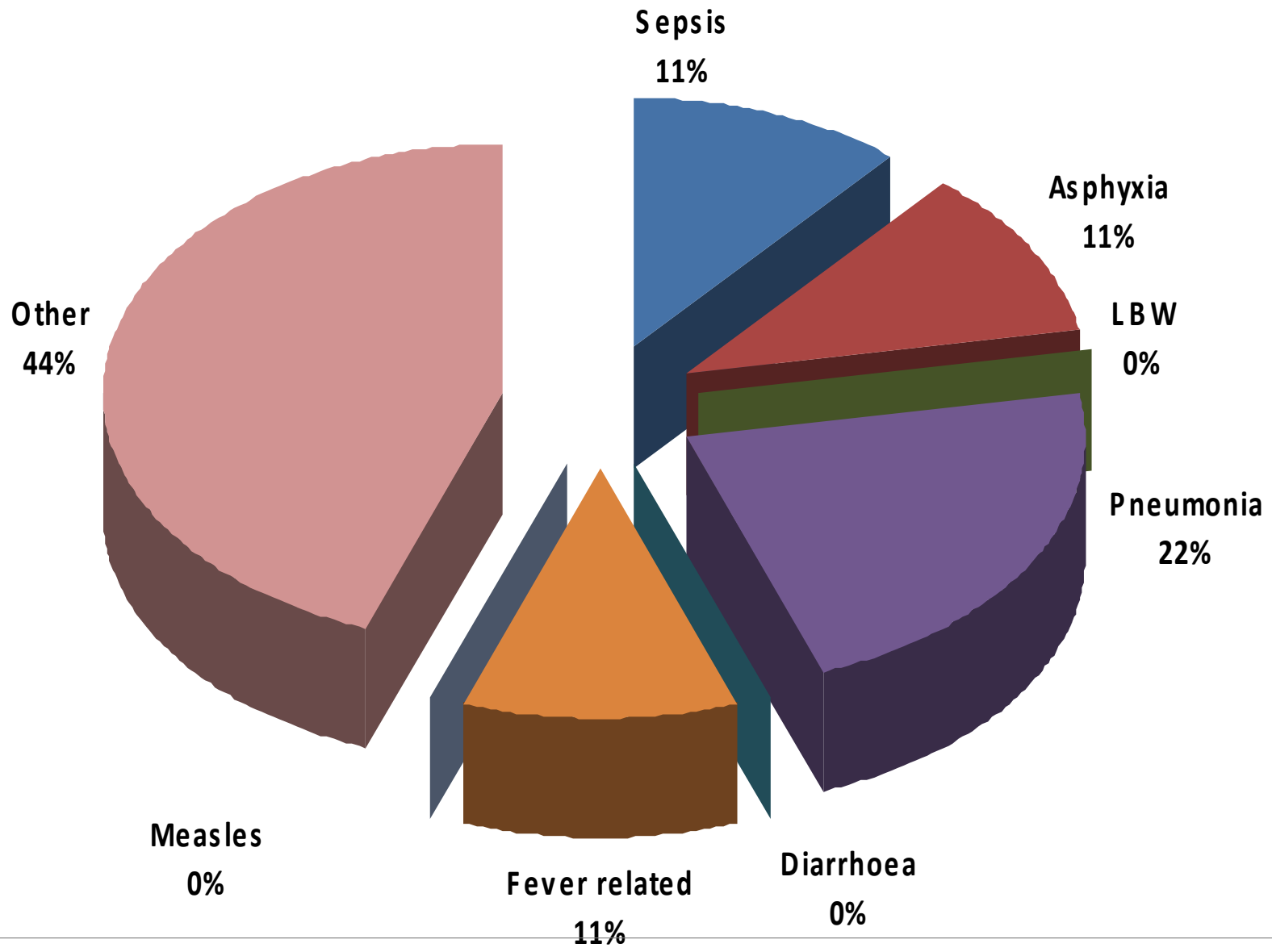
- Low birth weight.

MP- Cause of Maternal Death 2009-10

	Abortion	Obstructed/prolonged labour	Severe hypertesnion/fits	Bleeding	High fever	Other Causes (including causes not known)
Madhya Pradesh	45	17	42	91	61	274

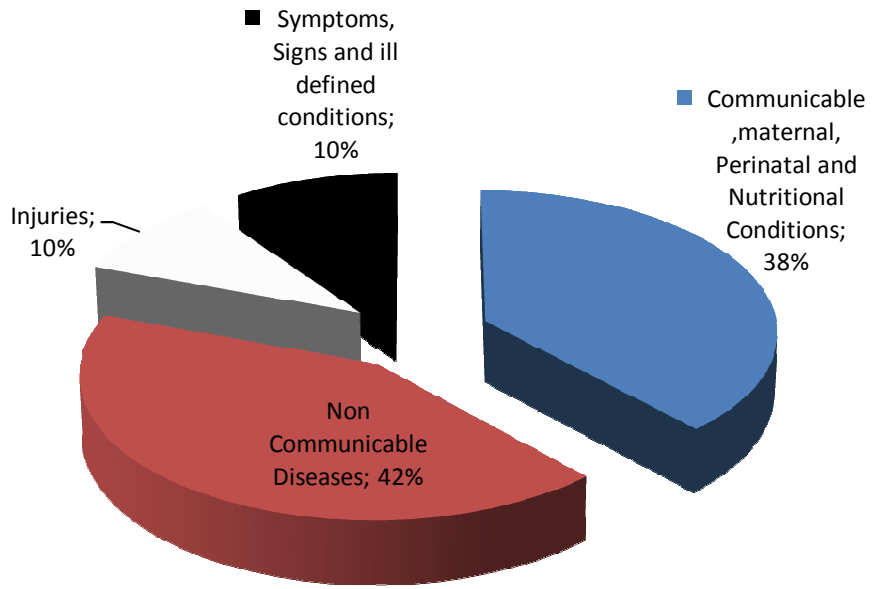


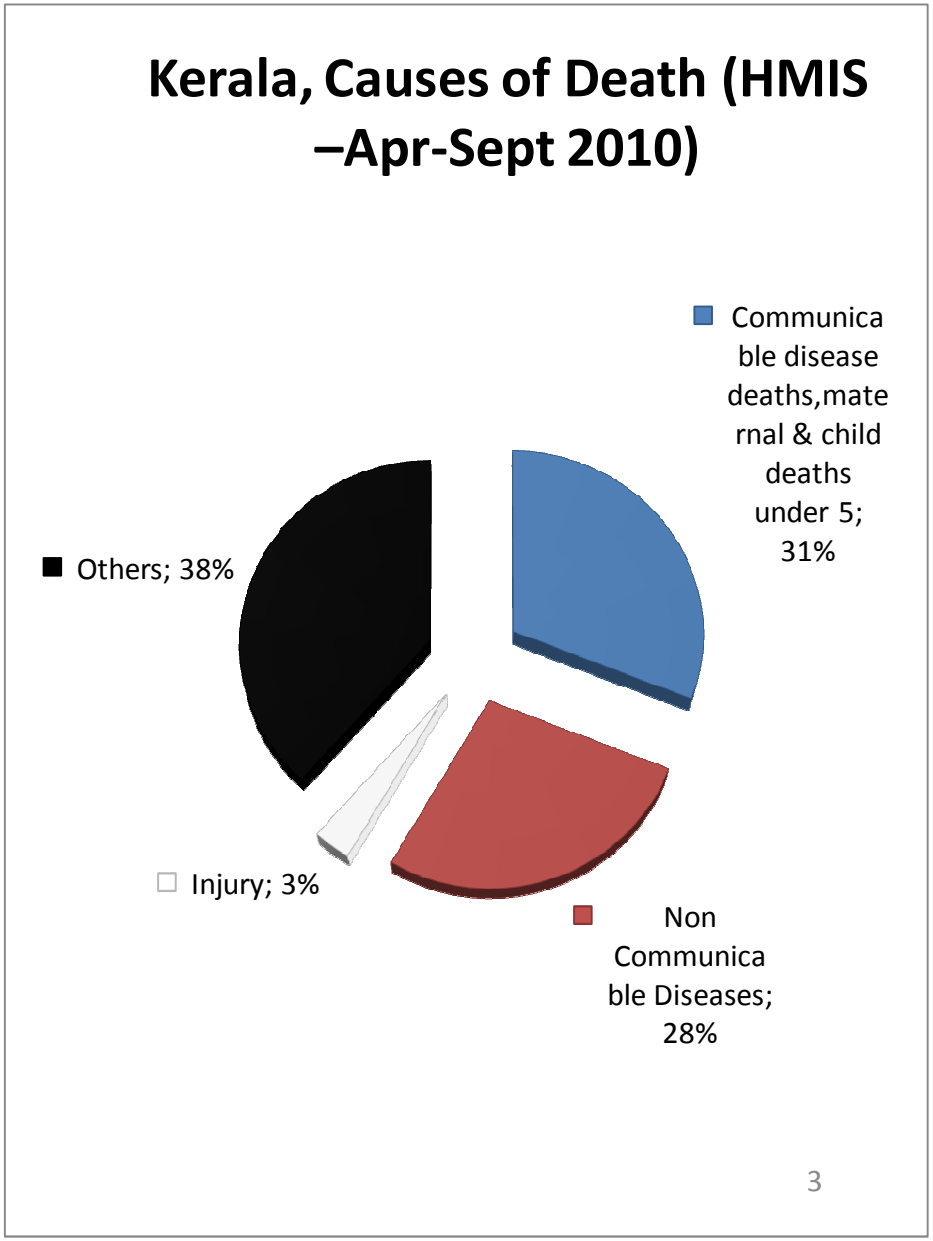
NAGALAND- MOKOKCHUNG DIST. - Causes of Infant & Child Deaths against Total Reported causes of Infant& Child deaths- Apr'09 to Mar'10



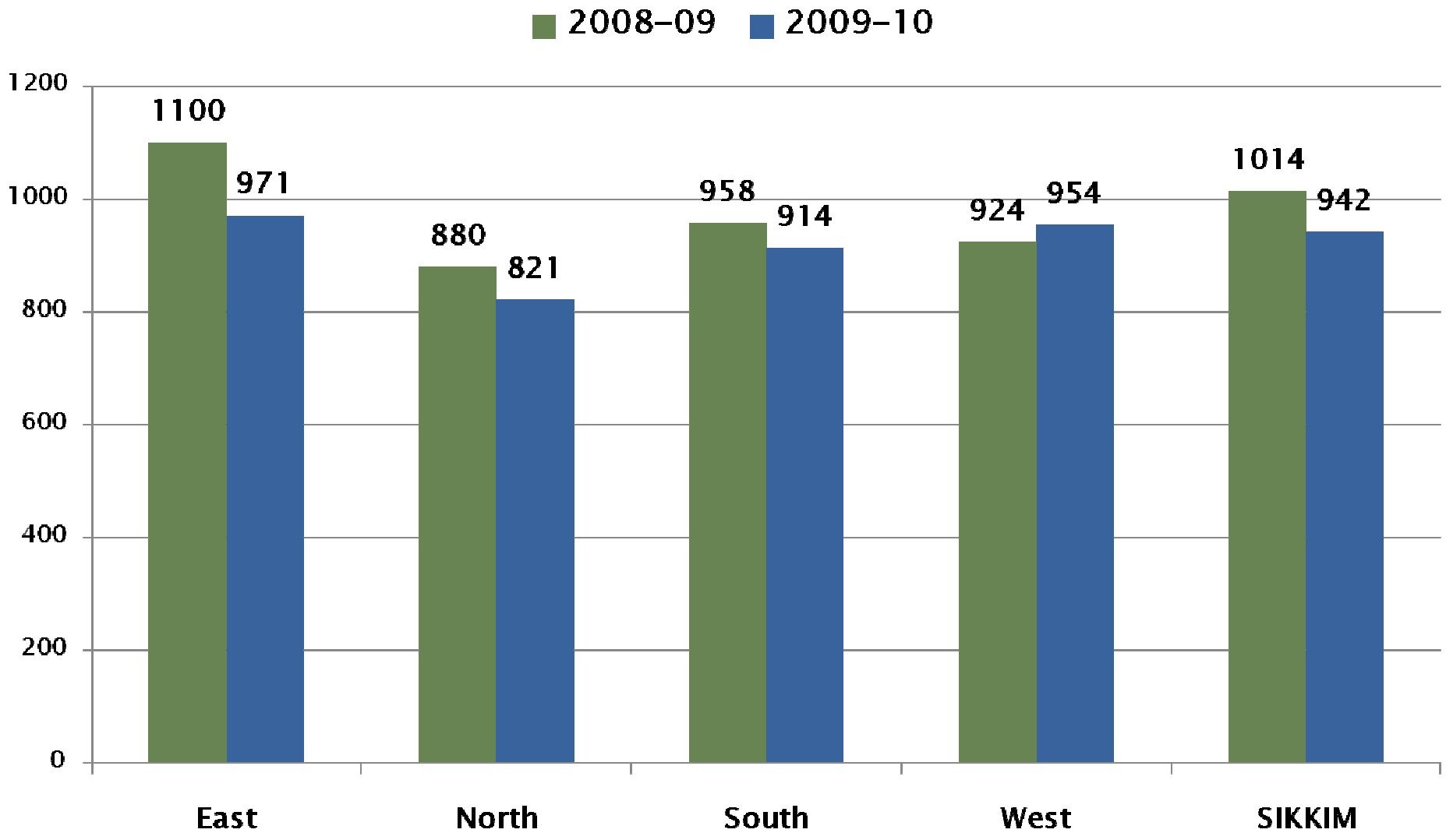
Death Profile- Comparison of HMIS data with RGI

RGI, Causes of Death India 2002-03

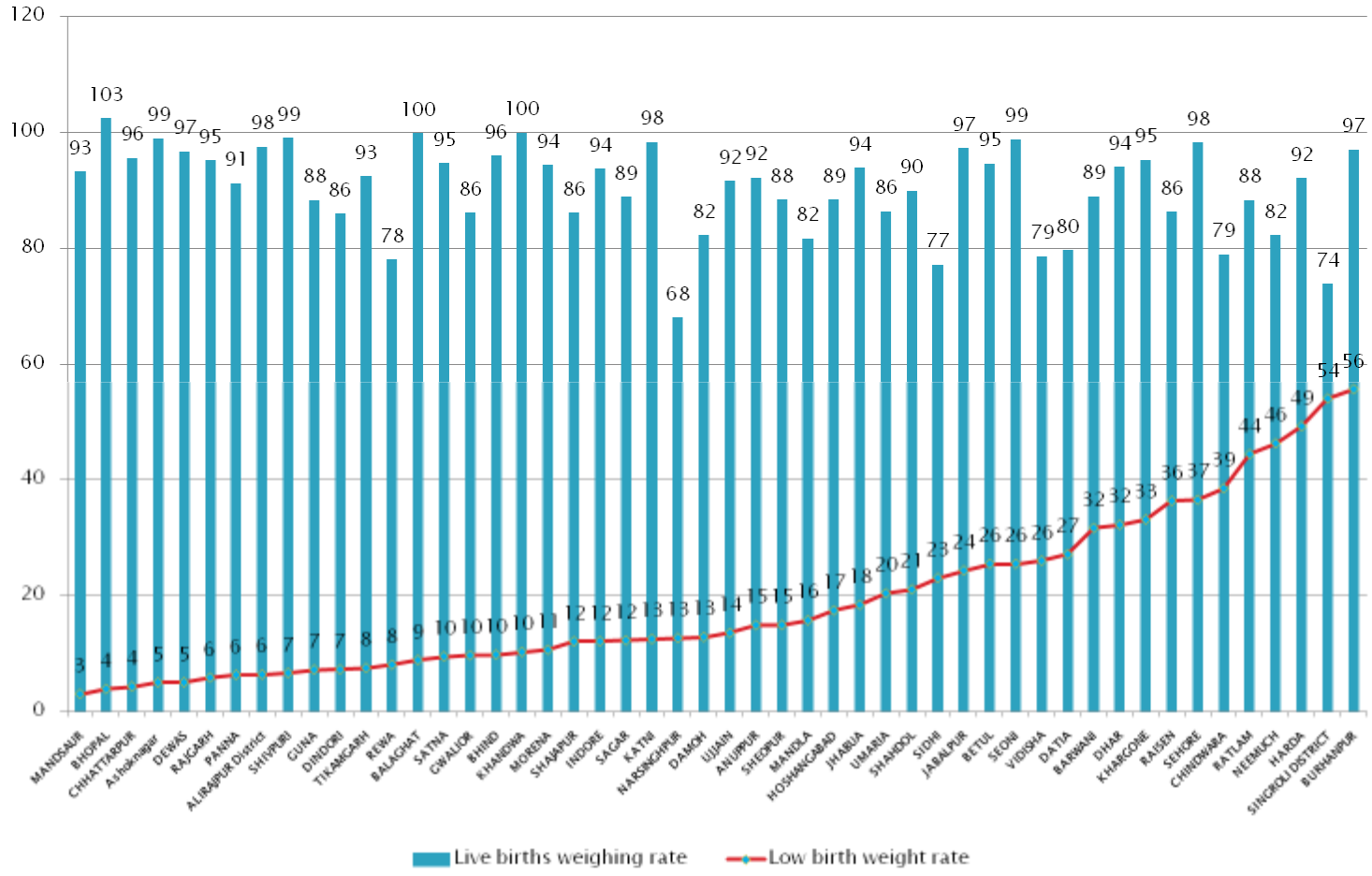




SIKKIM-Sex Ratio at Birth



MP- Weighing efficiency & Low Birth Weight 2009-10



Promoting use of information:

- Present it in CHMO review meetings- and with programme officers in a session called " Conversations over data"
- Make it readily available to all programme officers- keep meeting and distributing.
- Make it available on the web-site
- Respond to requests - Reduce information service delivery time to less than 30 minutes
- Disseminate it along with books/ training manuals etc.
- Call for its use in making PIPs.

Barriers to information use

- HMIS personnel see themselves as eyes/data entry hands of the administrators above or at that level- not as assistance (brains?)of the service providers and lower level managers .
- HMIS personnel see accountability function- do not see themselves as service providers.
  - ***Need for HMIS personnel to see themselves as information service providers : the programme officers become clientiele- they would ply the latter with information.***
  - ***Need for HMIS personnel to promote (market) the value and use of the information provided.***
  - ***Need for HMIS personnel to see feedback forms as the central output of the system***.- not sending up- but sending down- that is what decentralisation is about!!

Need to perceive what is useful.

- Eg Kerala- the identification of areas of low RCH service delivery and its links with programme design.
- Eg. Need to find out which sub-centers or PHCs conduct delivery>
- Eg. Which facilities have poor coverage.

The power to understand the needs, customize the application and deliver the report.

Whose task is this? Programme officers or HMIS managers?

Need reforms in public health management..

- Differential Financing: Funding goes to facilities according to the volume of cases, range of cases seen and the quality of care. Blended Grants- Baseline grant plus Additional Performance Based Grant. Would need to build in equity considerations.
- Human Resources Deployment and incentivisation.
- Area focussed Behaviour change communication and demand side/community side investments: eg of Malaria/ Kala-azar.

Supplementary Commissioned Studies

- Cluster Sample Surveys- for validation/triangulation
- Qualitative Studies- for understanding determinants of poor coverage of services eg home delivery, high malaria, no deaths/high deaths.
- Qualitative studies for understanding high prevalence of diseases,
- Exit interviews and sample surveys for understanding costs of care.
- Hospital Based Epidemiology – case –control studies for understanding determinants and risk factor and patterns of disease

THANK YOU