



14th International conference on integrated care: People, Policy & Practice Diamante, Brussels 02-04 April 2014

Dr Rakesh Gupta, Mission Director NHM, Haryana-India

Dr Suresh Kumar Dalpath
Deputy Director (Child Health, Nutrition and Immunization) Haryana-India

Dr Pawan Pathak, Team leader Newborn care USAID MCHIP India





Regular Appraisal of Program Implementation in Districts (RAPID): A Supportive supervision approach to improve essential newborn care in Haryana-India

Contributors:

Anju Puri, Ravi Kant Gupta, Krishan Kumar Vishal Dhiman, Tushar Purohit, Kapil Joshi,
Mandar Kannure,

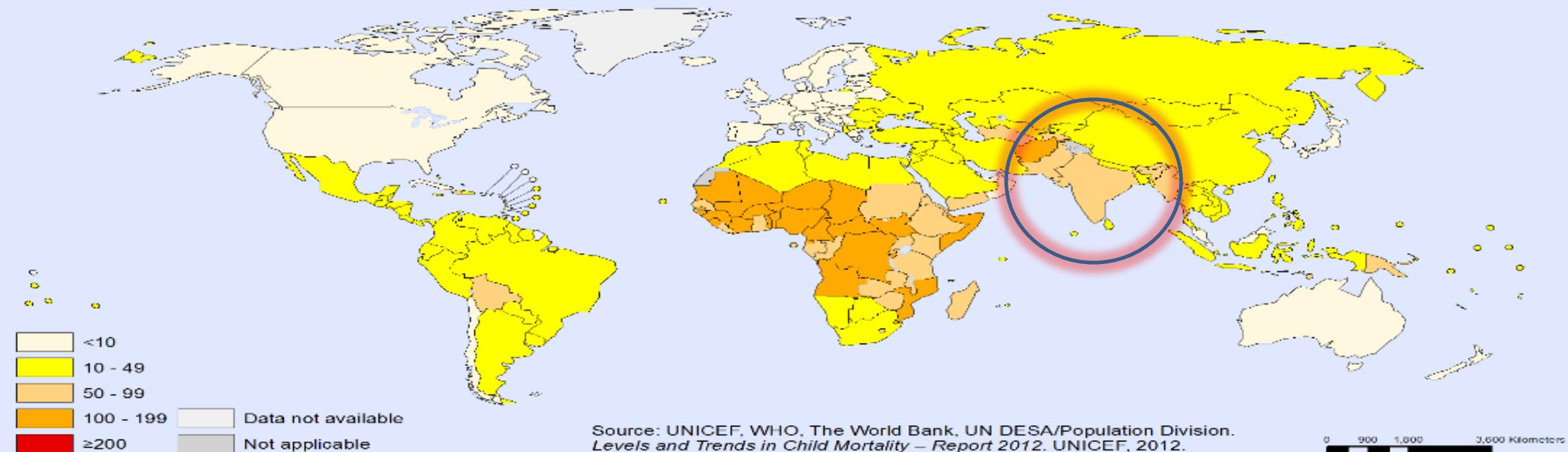




Global scenario: where newborn and child deaths occur



Under-five mortality rate (probability of dying by age 5 per 1000 live births), 2011



80% U5 Deaths occur in 24 countries, 50% in just 5 countries: India, Nigeria, DR Congo, Pakistan, Ethiopia

Around 9 million neonatal deaths/ year happen in India
*India accounts for 29 % of all first day deaths globally, which is ~300,000 a year.

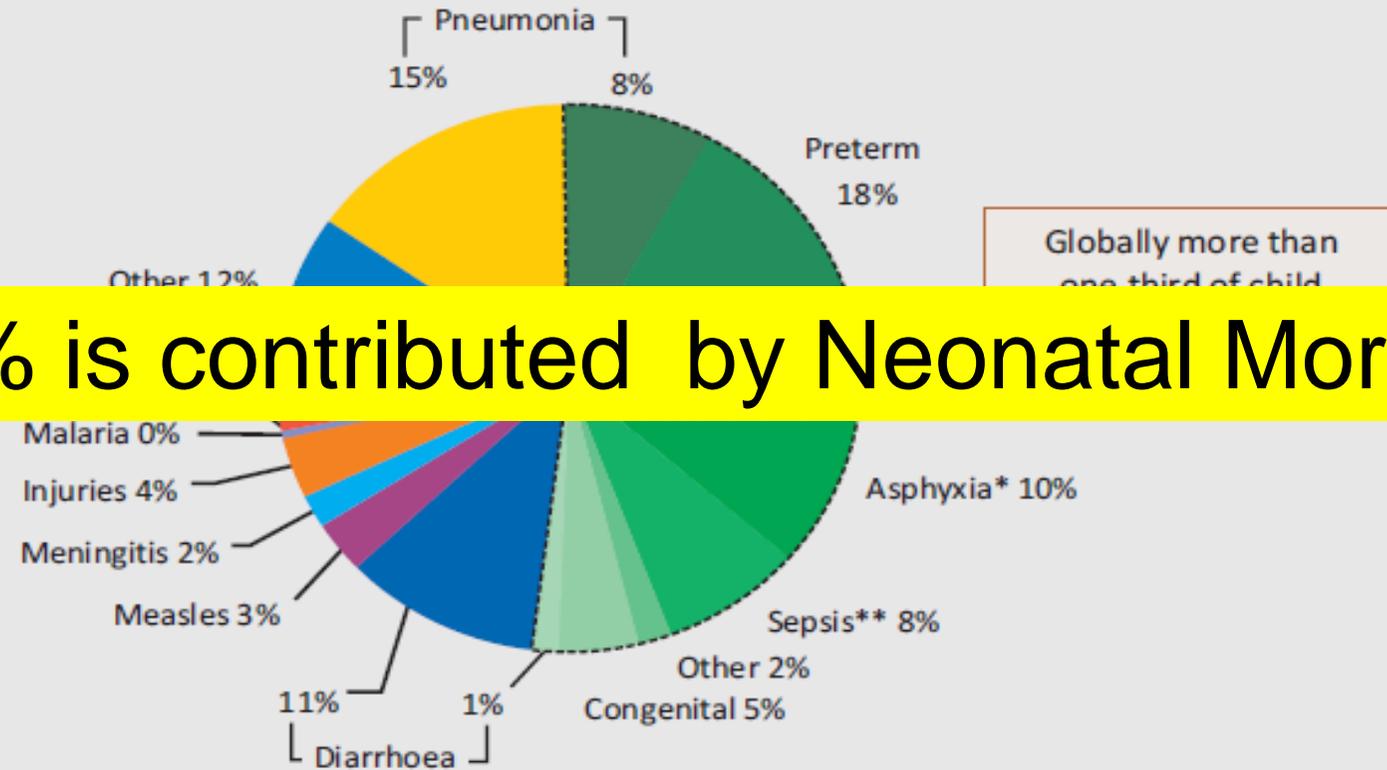




Causes of deaths among children under 5 in India



Causes of under-five child deaths in India, 2010



> 50% is contributed by Neonatal Mortality

Source: WHO/CHERG 2012

*Intrapartum-related events

**Sepsis/meningitis/tetanus



Status of Newborn Health of India



NEWBORN

EPIDEMIOLOGY

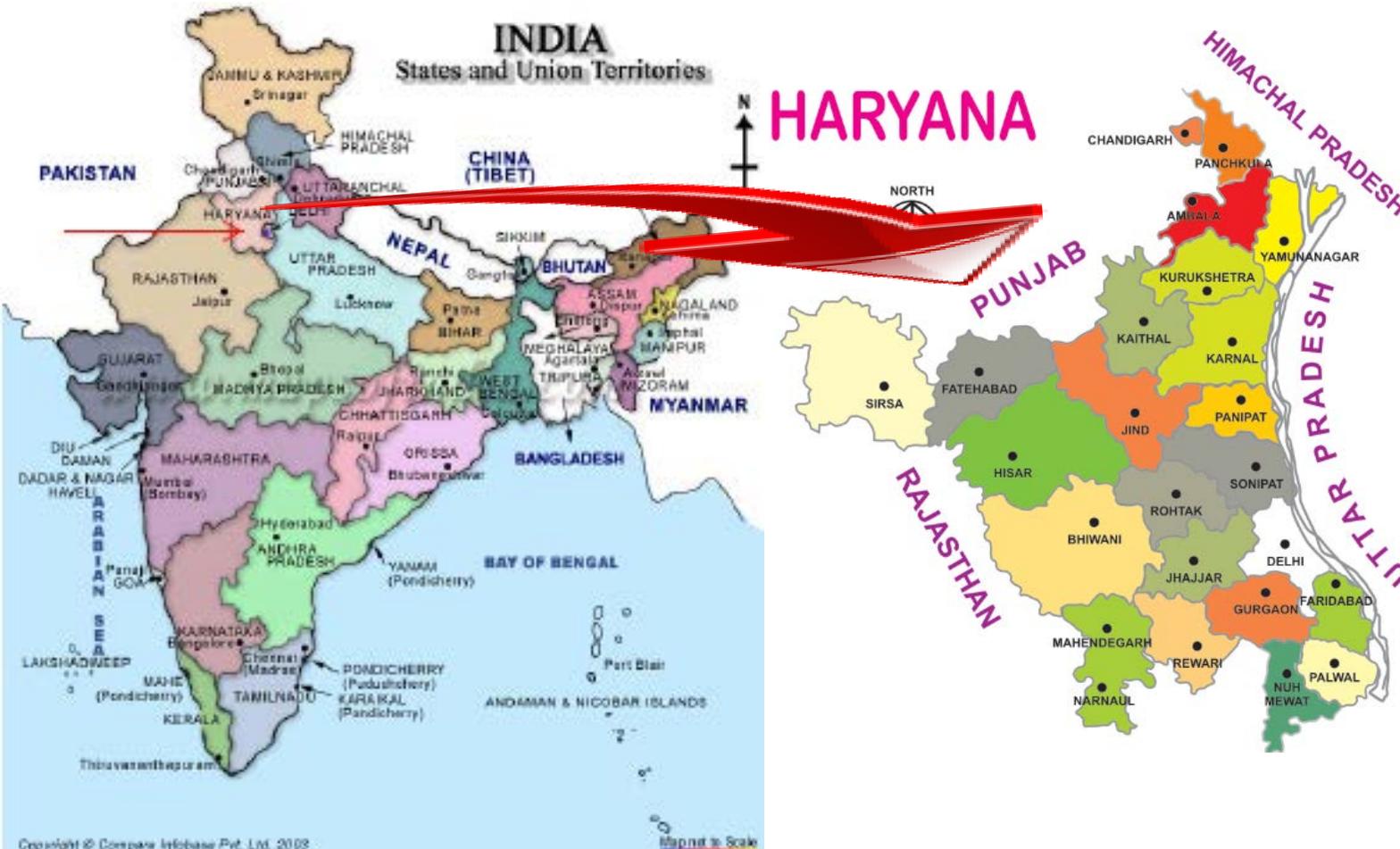
Total number of first day deaths (2011) ⁵	309,300
First Day mortality rate per 1,000 live births ⁵	11
Neonatal deaths (2011) ⁶	876,200
<i>Global rank for neonatal deaths – first 28 days of life*</i>	168
Neonatal mortality rate per 1,000 live births (2011) ⁶	32
<i>Global rank for neonatal mortality rate*</i>	138
Average annual rate of NMR reduction (MDG 4) % (1990-2011) ⁶	1.8
Proportion of under-five deaths that are newborn % (2011) ⁶	53
Total number of stillbirths (2009) ⁷	605,200
Total number of babies born preterm (2010) ⁸	3,519,100
Infants with low birth weight ¹ %	28
Preterm birth rate per 1,000 live births (2010) ⁸	13
Proportion of neonatal deaths from preterm birth complications ⁹ %	35
Proportion of neonatal deaths from intrapartum related events (birth asphyxia) ⁹ %	20
Proportion of neonatal deaths from neonatal infections (tetanus, meningitis, sepsis, pneumonia and diarrhea) ⁹ %	33
COVERAGE OF INTERVENTIONS	
Postnatal care for newborns within 2 days ³ %	N/A*
Early initiation of breastfeeding % (within 1 hour) ¹	41
Children who are exclusively breastfed % (<6 months) (2007-2011) ¹	46

* Global rank only considers countries with >10000 live births (163 countries) whereby low rank means lowest numbers and mortality. N/A denotes not available.

For more data, country profiles are available in [Countdown to 2015 Accountability for Maternal, Newborn and Child Survival: The 2013 Update](#)



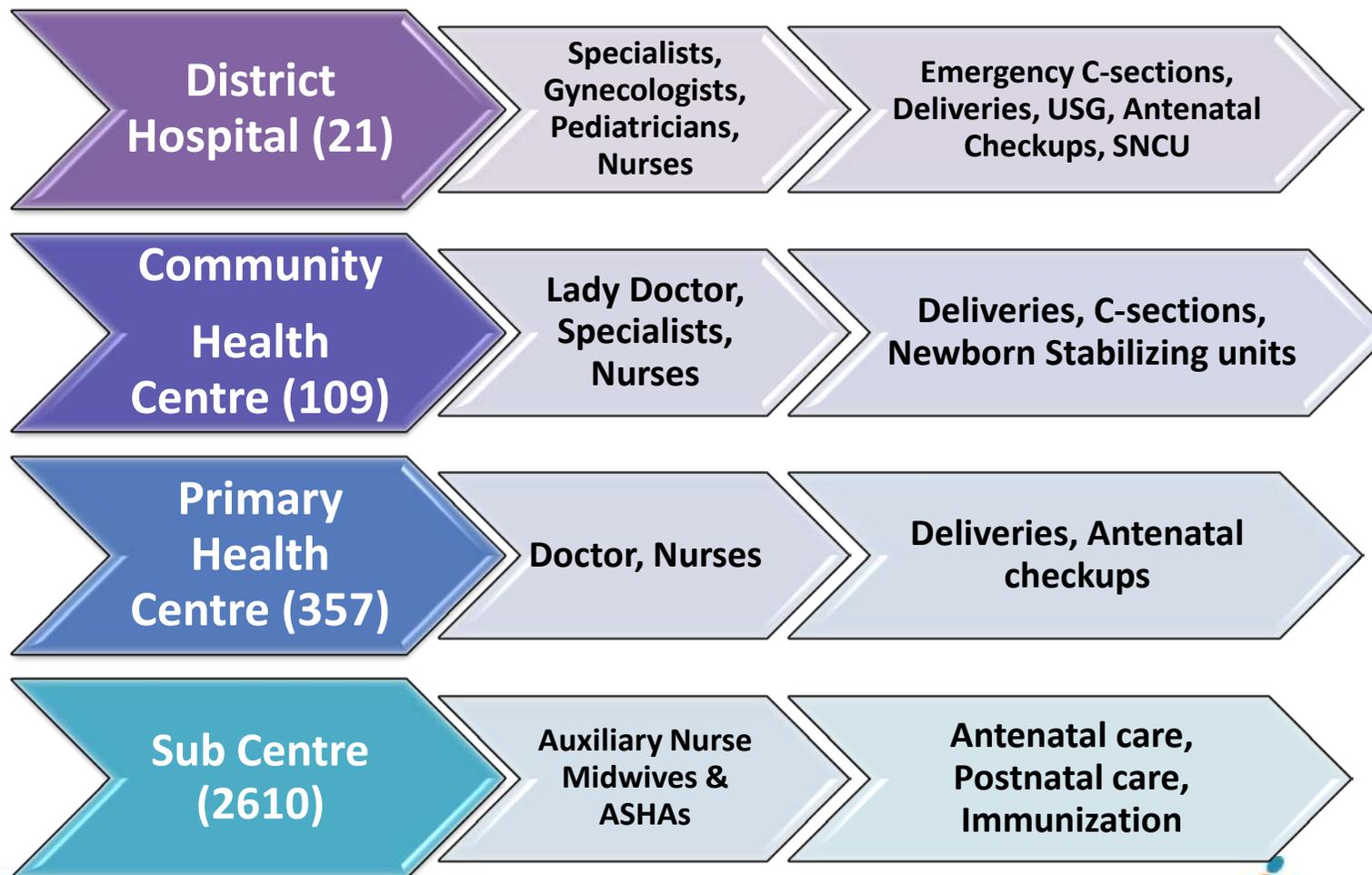
Demographic Profile: Haryana(State in India)



Population (2011 Census)	25.3 million
Male	13.5 million
Female	11.8 million
Density of Population	573 per sq.km
Literacy rate	76.64%
Male	85.38%
Female	66.77%
Birth Rate:	21.6 (SRS Dec 2013)
Death rate	6.8



Health facility infrastructure





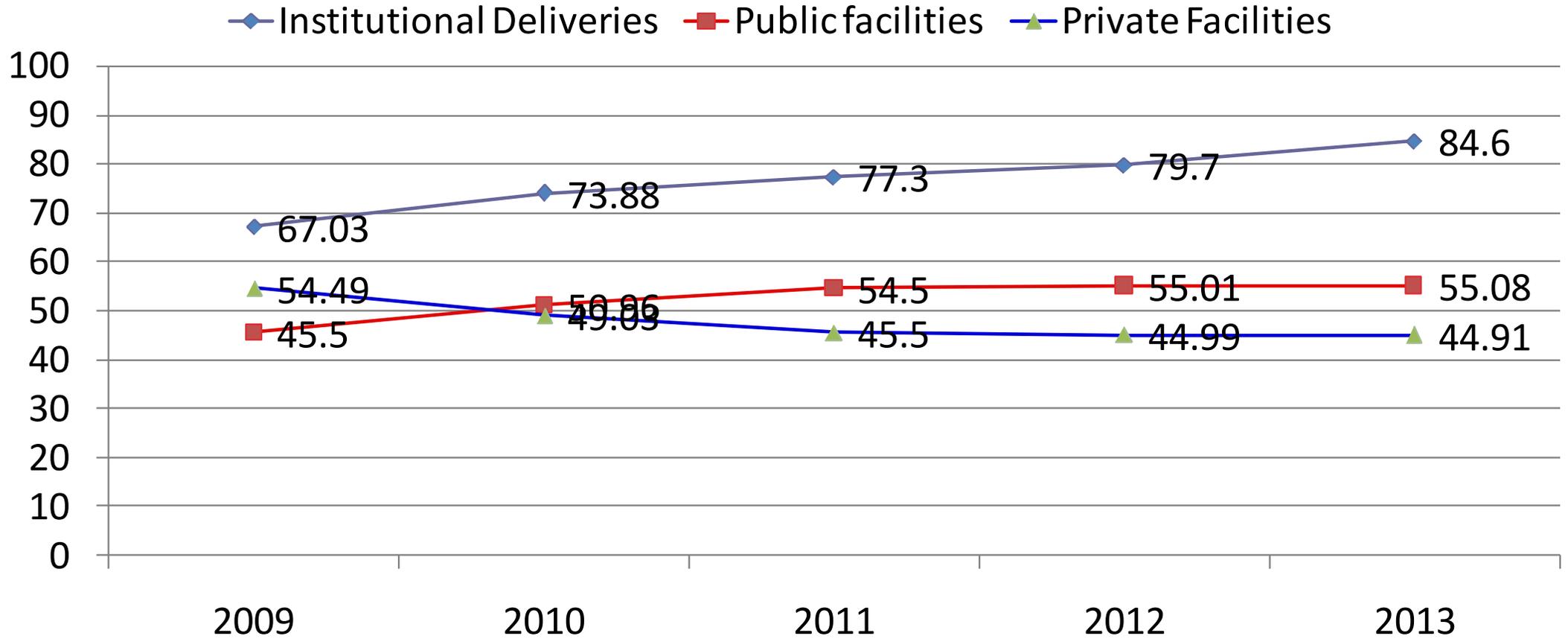
Key Health Indicators: Haryana(State in India)



Key Health Indicators	India	Haryana	Target 2017 (Haryana)
Maternal Mortality Rate (MMR)	178 (SRS 2010-12)	146 (SRS 2010-12)	80
Infant Mortality Rate (IMR)	42 (SRS 2012)	42 (SRS 2012)	28
Neonatal Mortality Rate (NMR)	29 (SRS 2012)	28 (SRS 2012)	23
Under 5 Mortality	52 (SRS 2012)	48 (SRS 2012)	32
Total Fertility Rate (TFR)	2.4 (SRS 2012)	2.3 (SRS 2012)	2.0
Sex Ratio	940 (2011 Census)	877 (2011 Census)	940
Institutional Delivery	79.7% (GOI Source)	84.6% (CRS 2013)	100%
Full Immunization	54% (DLHS 2007-08)	59.6% (DLHS 2007-08)	100%



Institutional Delivery Trends

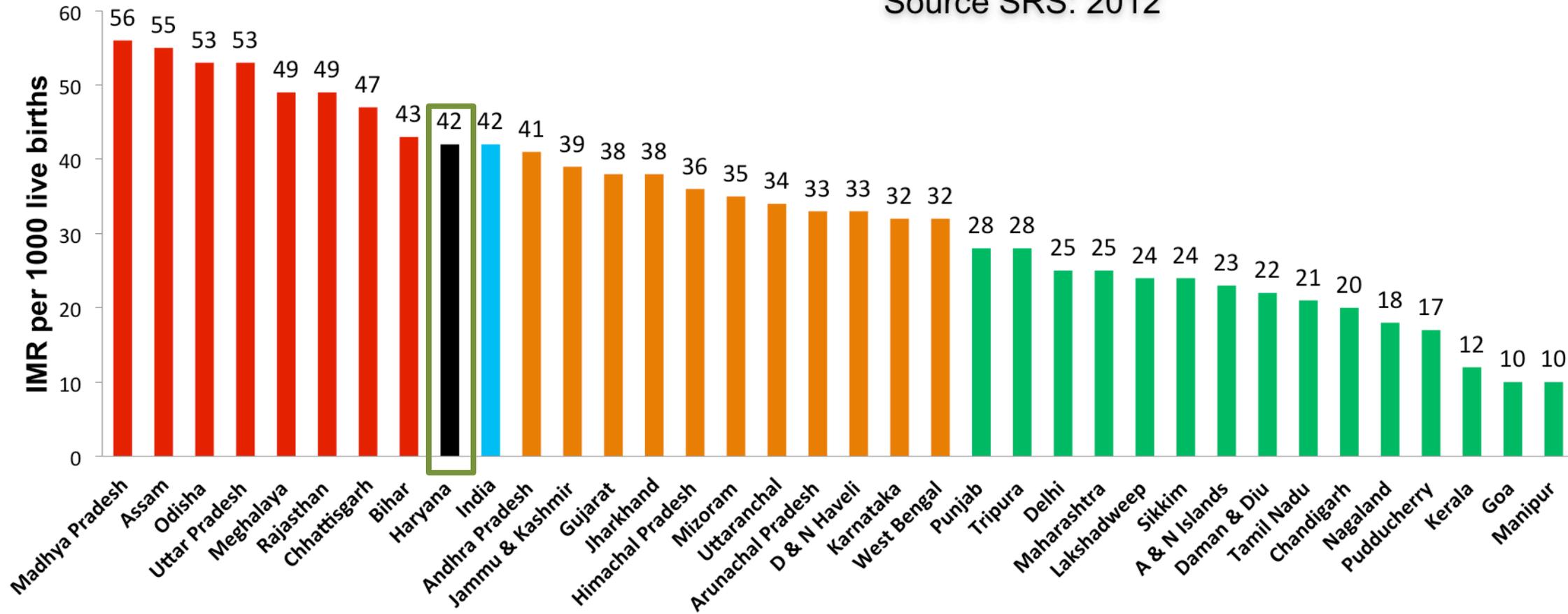




IMR – Comparison of different state of India

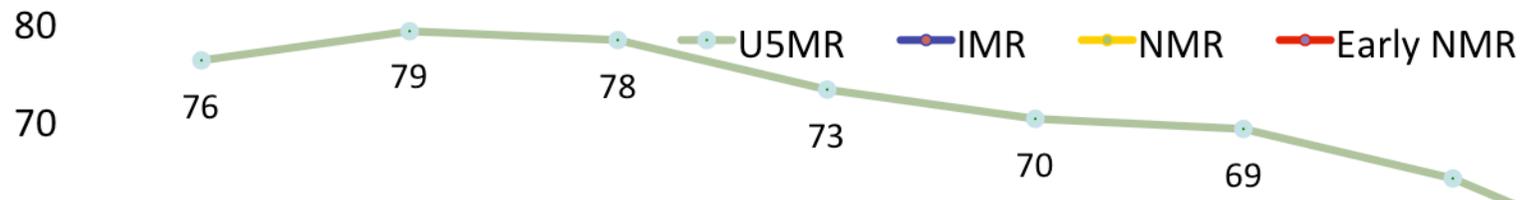


Source SRS: 2012

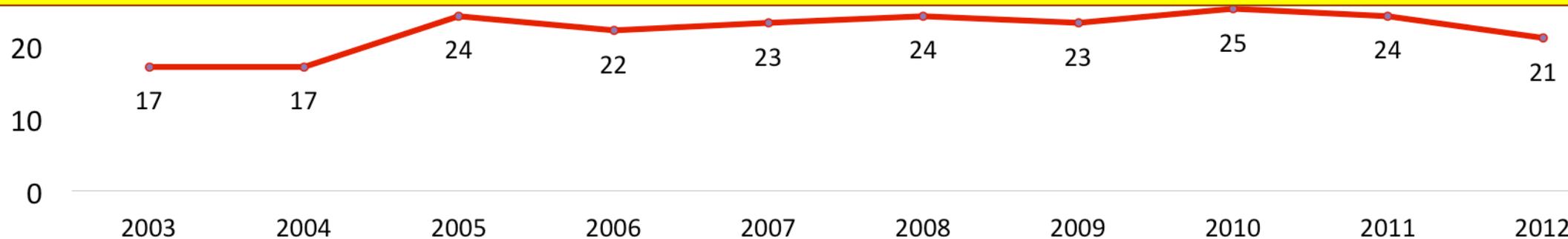




Mortality trends (Haryana) Source, SRS



Despite 15% increase in institutional deliveries and significant gain in public health facilities & various health Interventions since launch of NRHM in 2005 but still IMR & NMR is not reduced as per expectations





Mechanism of provision of Newborn Care



Most newborns only require essential newborn care

Delivery Point

Newborn corner (1 bed)



District Hospital

CHC

PHC

Community

Sick newborn

Special newborn care unit (12-20 beds)



Stabilization units (4 beds)



Only 10% newborns need to be referred for special attention

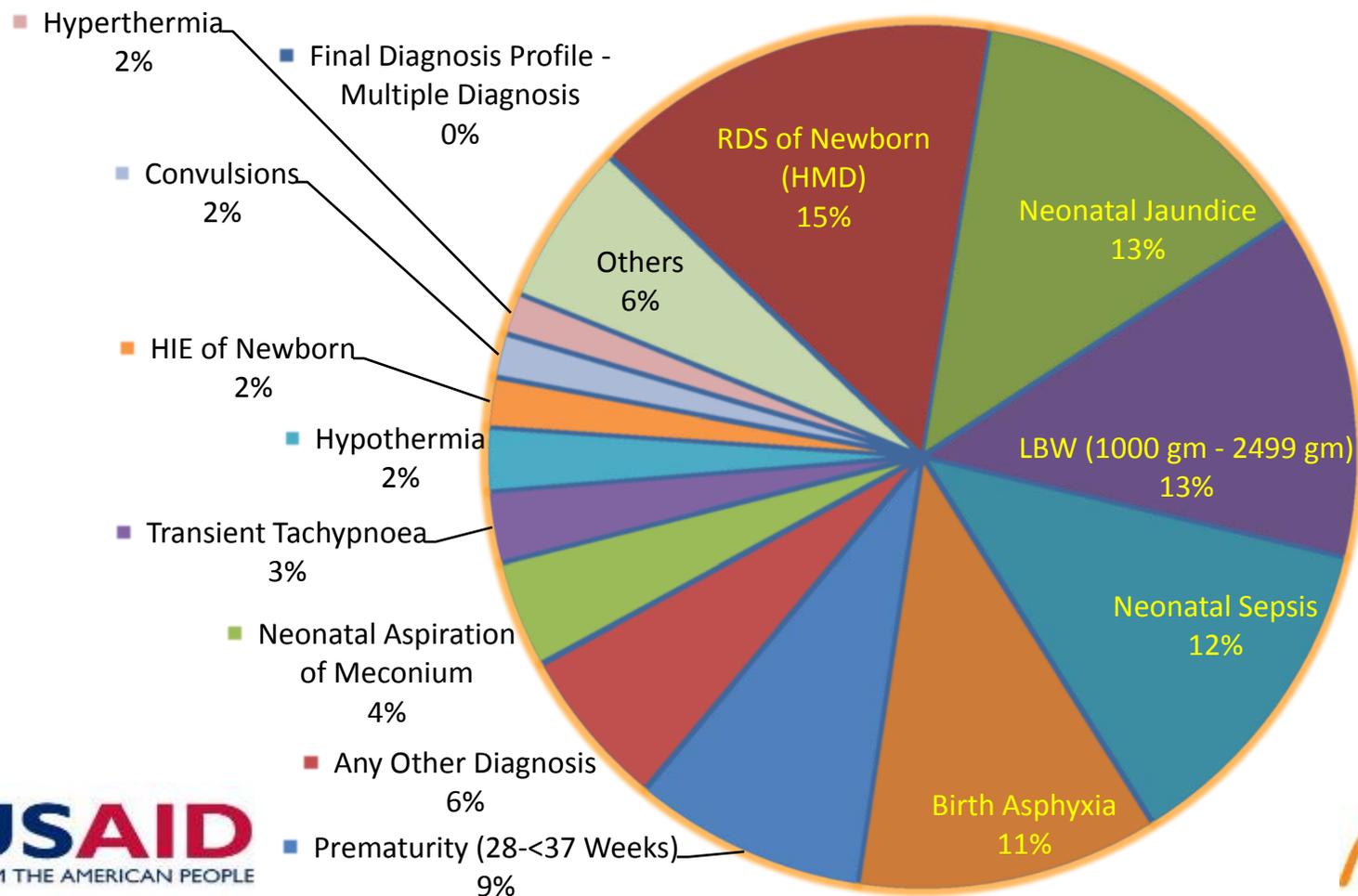


Admission Analysis in Spacial Newborn Care Units (SNCU)-Haryana



Morbidity Profile (N=16198)

Source SNCU DATA registry : 01.04.2013 to 31.03.2104





Essential Newborn Care (ENC) - Essential and Universal



Essential newborn care to All

- Interventions for all infants to meet their **physiological needs**.
- **Prevention of infections** due to uncleanliness at birth and later
- Preservation of **warmth** and prevention of hypothermia
- appropriate **nutrition** by early, exclusive and frequent **breastfeeding**

Additional care to ~20%

- newborns who acquire diseases before, during or after birth or who are born **too soon/ too small**
- It includes early detection and management of diseases and hypothermia.
- **Preterm and newborns with asphyxia** require special attention.



Knowledge, aptitude, skills & practices issues



Case study :1

- Newborn not cried immediately after birth, mucous extractors available but locked , keys with other nurse, three minutes later suction done, steps of resuscitation not known staff, referred, out come adverse

Case study:2

- The newborn delivered, no urgency on the part of the health providers to dry the newborn and provide skin to skin contact,
- Utilities like dry linen not arranged, started drying the baby using a gauze piece
- *The cord was cut after five minutes, and the newborn hanged up side down and his back slapped.*
- Neither was the newborn wrapped properly nor was it given back to the mother for breast feeding, was taken for weighing and later on kept in radiant warmer. given prelacteal feed



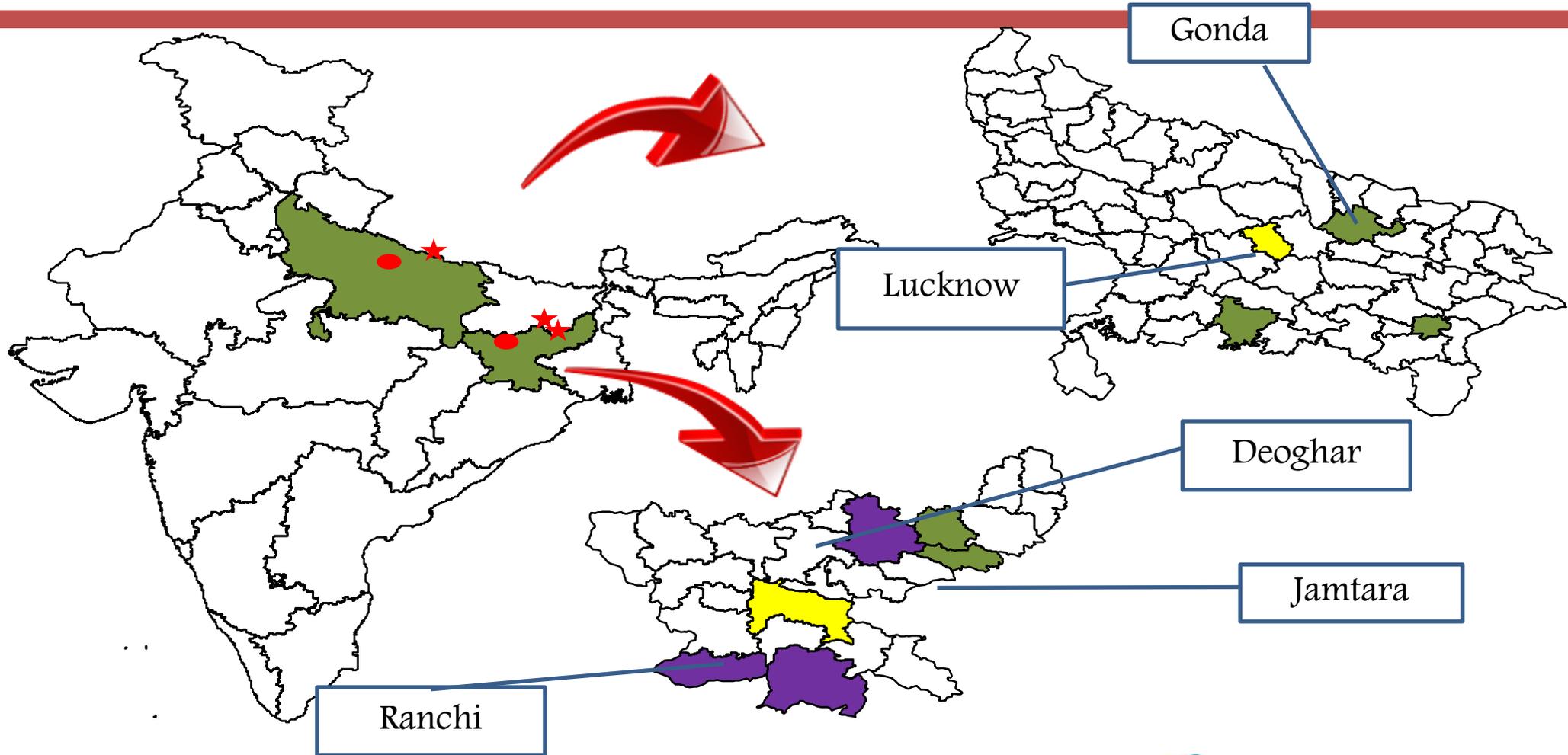
The Intervention



Regular Appraisal of Program Implementation in Districts: (RAPID) for essential newborn care and resuscitation



MCHIP Experience – Evidence based intervention



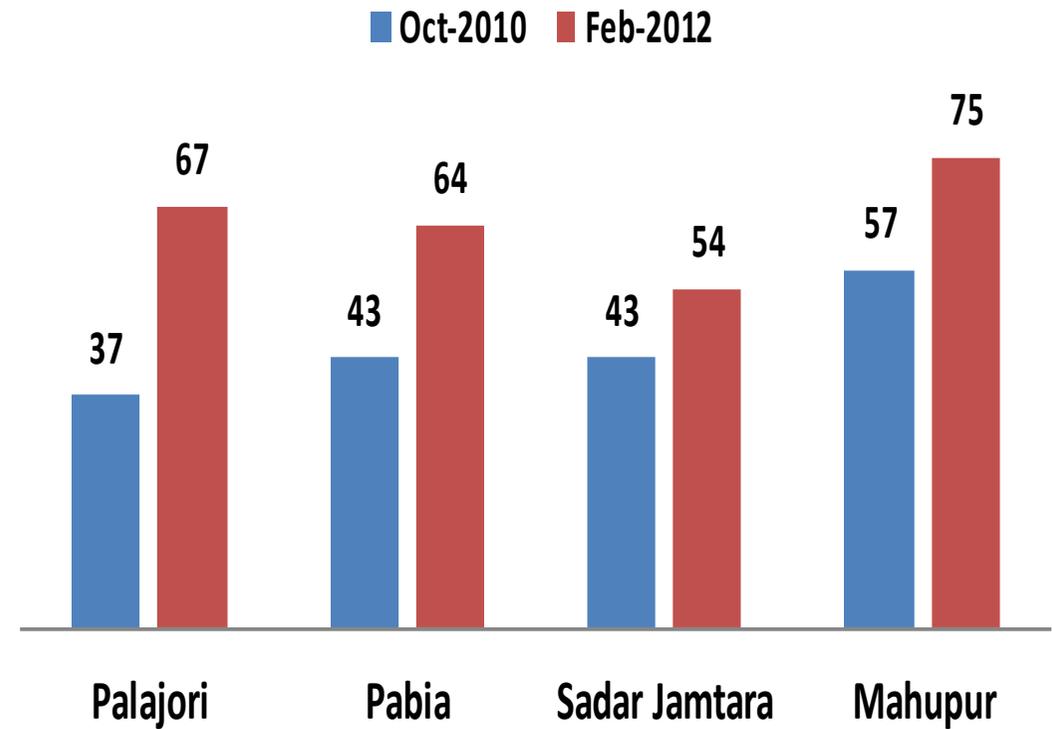


Score-card and improvement scores in Jharkhand



Parameters	CHAIBASA		GIRIDIH			SIMDEGA	
	SADAR CHAIBASA	CHAKRADHARPUR	DUMARI MORE	RAJDHANBAD	BAGODAR	KOLEBERA	SADAR SIMDEGA
INFRASTRUTURE	Yellow	Yellow	Red	Green	Green	Yellow	Green
NEWBORN & DELIVERY CARE	Green	Green	Green	Green	Green	Yellow	Green
HUMAN RESOURCE	Red	Red	Red	Yellow	Red	Yellow	DATA NOT PICKED
DRUGS	Red	Red	Red	Red	Yellow	DATA NOT PICKED	Red
EQUIPMENTS & SUPPLIES	Yellow	Red	Yellow	Red	Yellow	DATA NOT PICKED	Yellow
REGISTERS RECORD REPORT	Yellow	Yellow	Red	Red	Yellow	Red	Red
PROTOCOLS & GUIDELINES	Red	Green	Red	Red	Red	Red	Green
INFECTION PREVENTION	Red	Red	Red	Red	Red	Red	Red
KNOWLEDGE (M&N CARE)	PROVIDERS NA	Red	Red	Red	Red	Red	Yellow
KNOWLEDGE (RESUSCITATION)	PROVIDERS NA	Red	Red	Red	Red	Red	Red
OVERALL SCORE	31%	30%	15%	25%	35%	19%	44%

Facility readiness scores of the demo sites





Regular Appraisal of Program Implementation in Districts: (RAPID)



USAID
FROM THE AMERICAN PEOPLE





Management tool to improve Quality of Newborn Care Services





Purpose & objectives



Purpose

- **Determine the existing capacity** of health facilities to provide necessary care to mother and their newborns
- **Establish a baseline** useful in realizing plan of action (e.g., the Road Map for Accelerating the Attainment of the MDGs related to maternal and newborn health)
- **Guide policy, planning, and prioritization** to strengthen the health system using Newborn Care as a point of entry.

Objectives

- To **assess the preparedness** of health care facilities in providing Essential Newborn Care & Resuscitation (ENCR).
- To **assess the existing practices** followed by skilled birth attendants during intra partum care.
- To **improve the Knowledge & Practices** of essential new born care and resuscitation in facilities by providing onsite trainings and regular follow-up.



Process



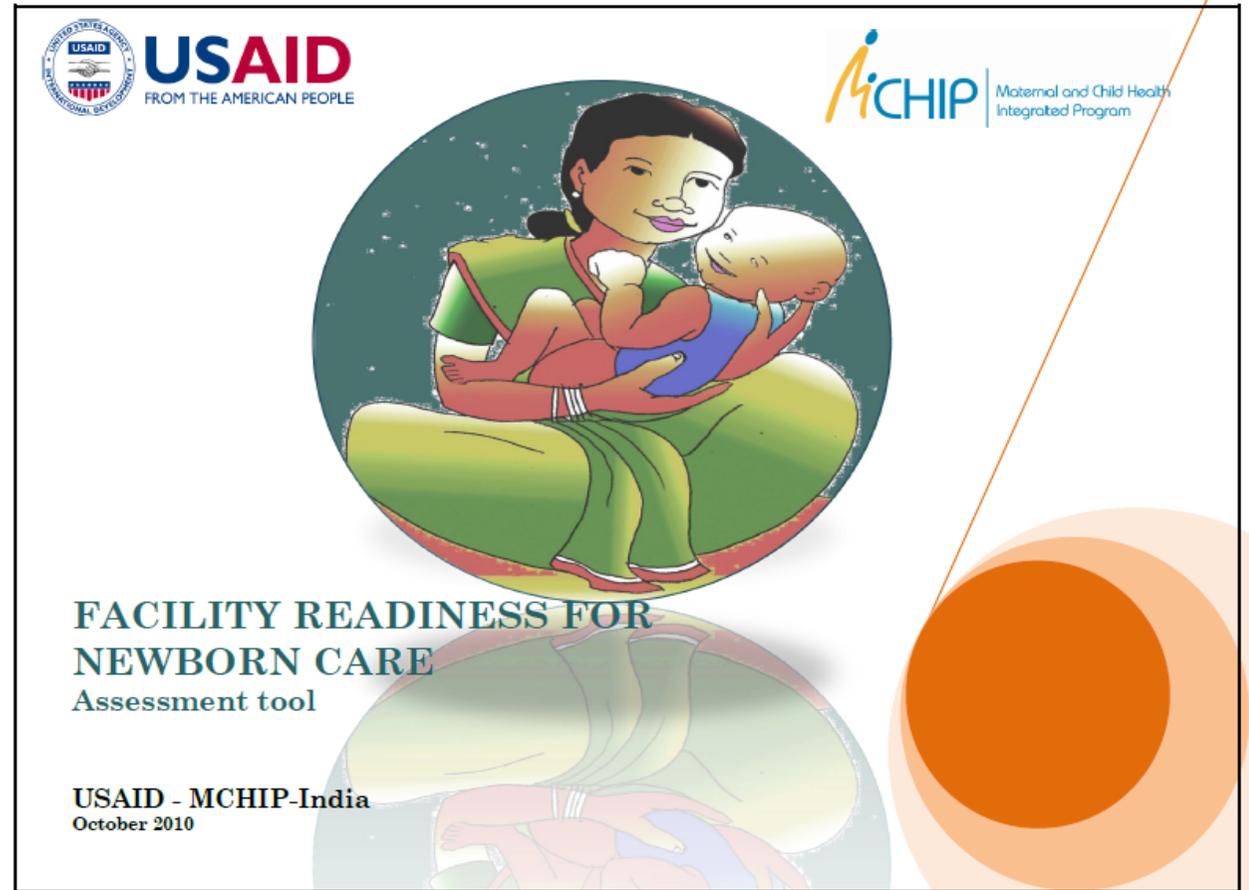
- Orientation of key officials
- Investigators teams formulation
 - Team Composition- Each team comprises of two investigators.
- Training on the tools
- Field visit / onsite assessment
 - Large facilities (DH, SDH & CHCs) – 3 to 4 hrs
 - Small facilities (PHCs) – 2 to 3 hrs
 - Health centers (HSCs) – 2 hrs
- Dissemination of findings
- Decision and follow up



Methodology & Tool



- The facility readiness has a **cross sectional assessment design**.
- Tool is composed of **8 sections**, administered by data collection teams who visited each health facility in their assigned area/region.
- It gives a picture of the **current conditions in each facility**. When information from all facilities is aggregated, the current conditions in the district/state as a whole emerge.





Assessed parameters during the facility readiness at facility



1. Infrastructure

- **Beds** for neonatal & Maternal care
- Positioning and functionality of essential equipment and **NBCC** in delivery room.
- **Electricity & Water supply** in LR
- Designated area for other MCH services and availability of working ambulance.

2. Availability of services

- 24-hour coverage for **delivery and newborn care services**
- Other services: **Referral**, ANC, Postpartum care, Family planning, Immunization, RTI/STI, BT

3. Human resource

- Availability of **skilled providers** at facility to conduct normal & complicated delivery

4. Drugs, Equipments

- Availability and condition of **supplies** and equipment for newborn care
- Mechanism for procurement , supply, maintenance and repair of equipment

5. Register and Client case record Review

6. Protocol and Guidelines for essential newborn care

7. Infection & Prevention knowledge & Practice

8. Knowledge & Practices of health providers regarding essential newborn care & resuscitation





Use of data for improvement

ENBC&R Score card of District Jind

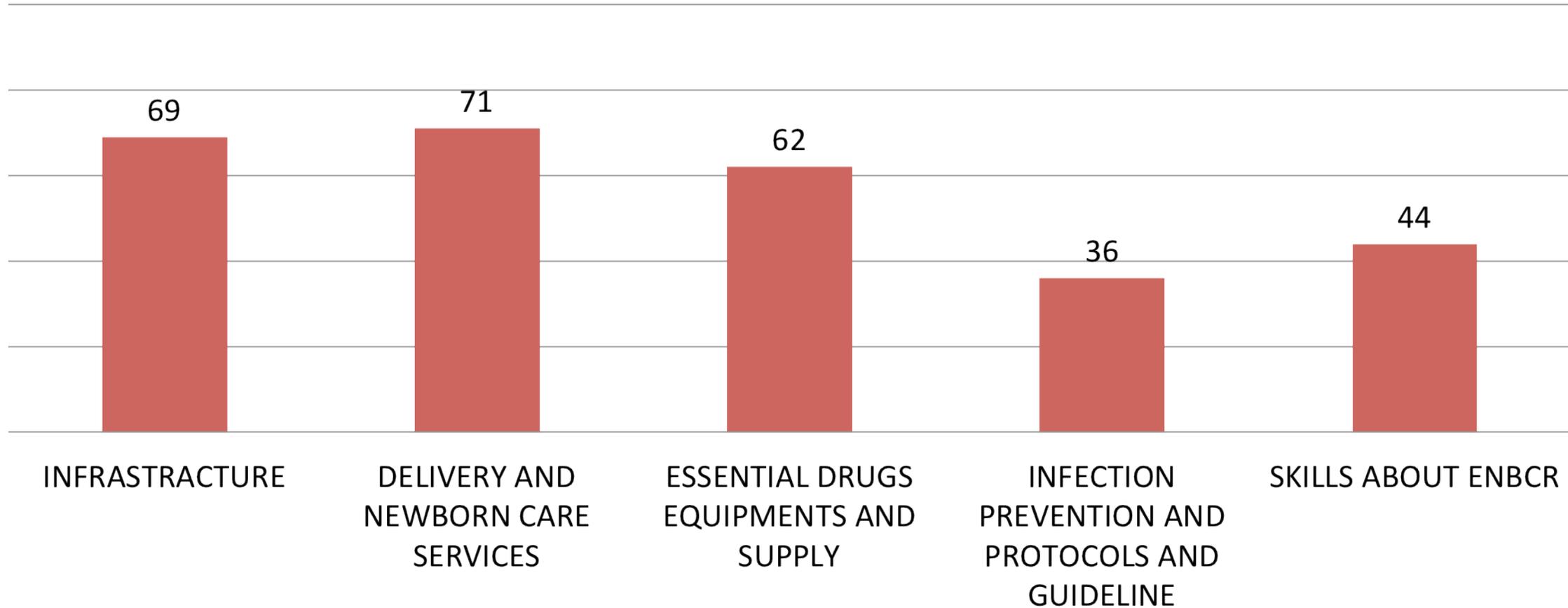
Name of facility	Infrastructure	DELIVERY AND NEWBORN CARE SERVICES	ESSENTIAL DRUG EQUIPMENT AND SUPPLY	PROTOCOLS/ GUIDELINE AND INFECTION PREVENTION KNOWLEDGE	PROVIDER KNOWLEDGE AND SKILL	FACILITY OVERALL AVERAGE
SDH NARWANA	92	100	75	19	72	71
GH JIND	100	91	85	16	57	70
PHC MUVANA	83	82	72	25	75	68
CHC SAFIDON	92	91	69	16	63	66
PHC CHATTER	75	73	60	41	80	66
CHC KAHARAK RAMJI	83	82	56	19	51	58
CHC KALWA	92	64	64	41	29	58
PHC ALEWA	92	73	60	28	33	57
PHC DHANOURI	75	82	62	25	42	57
PHC RAJANA KALAN	75	82	59	22	46	57
PHC RAJANA KALAN	75	82	59	22	46	57
CHC UJHANA	75	73	60	31	43	56
CHC UCHANA	75	73	60	28	42	55
PHC DHANODA KALAN	83	82	53	3	55	55
PHC DARYAWALA	50	82	57	22	63	55
PHC JAIJAIWANTI	75	82	57	16	36	53
CHC KANDELA	92	73	60	13	24	52

Districts Facility Readiness Score of Essential Newborn Care and Resuscitation

Name of Districts	Infrastructure	Delivery And Newborn Care Services	Essential Drug Equipment And Supply	Knowledge About Infection Prevention & Protocols/ Guidelines	Provider Knowledge And Skills	District Overall Average
HISAR	72	84	73	50	51	61
ROHTAK	75	83	70	50	61	61
JHAJJAR	70	82	69	46	61	60
KARNAL	72	77	68	46	59	59
REWARI	72	84	68	49	48	59
PANCHKULA	71	74	62	50	53	58
FARIDABAD	67	80	65	51	51	57
KURUKSHETRA	70	77	70	37	48	54
MEWAT	65	81	64	40	50	54
BHIWANI	72	67	61	37	39	52
JIND	73	71	55	18	43	52
AMBALA	76	64	75	48	32	51
Y NAGAR	76	61	63	17	28	49
KAITHAL	64	68	63	33	47	49
GURGAON	64	79	57	38	44	49
SIRSA	55	65	47	24	36	47
FATEHABAD	67	70	56	32	31	47
PANIPAT	76	69	61	18	32	45
SONIPAT	58	58	56	32	40	43
PALWAL	72	49	53	16	35	41
NARNAUL	64	50	51	15	36	39
Score 75 % And Above		Score between 51 % to 74 %			Score 50 % and less	



Facility Readiness Scores of 1st Round in 21 Districts of Haryana, India





On job trainings, Peer Learning, Skill demonstrations





Read & Do Tools for Care Providers



READ & DO TOOL

नवजात की त्वरित देखभाल

नवजात की त्वरित देखभाल

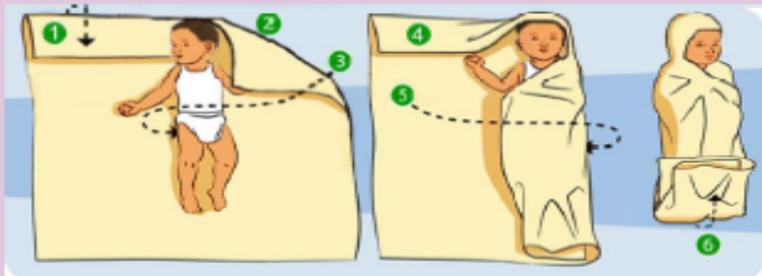
- जन्म के ठीक पहले माँ के पेट पर एक गर्म एवं स्वच्छ कपड़े बिछाये
- नवजात के जन्म के तुरंत बाद उसे माँ के पेट पर रखें

नवजात को पोंछने एवं सुखाने का तरीका

- साफ एवं गर्म कपड़े से नवजात के सिर, चेहरा, छाती, आंख, हाथ, पेट, कमर, पैर एवं पीठ को पोंछ कर सुखाना है
- गीले कपड़े को पीठ पोंछते हुए हटाना है
- गर्मी मिलते रहने के लिए दूसरे गर्म कपड़े से नवजात को लपेटना है।

नवजात को कैसे लपेटना है

- एक चौकोर कपड़ा लेना है
- कपड़े को किसी एक कोने से मोड़ना है
- शिशु का सिर मुड़े हुए हिस्से पर रखना है
- शिशु का दाया भाग लपेटते हुए कपड़े को बाएँ तरफ दबाना है
- निचले कोने से शिशु को लपेटते हुए कपड़े को शिशु कि तुड्डी से दबाना है
- शिशु का दाया भाग लपेटते हुए कपड़े को बाएँ तरफ दबाना है



READ & DO TOOL

जन्म की तैयारी

जन्म की तैयारी

सुनिश्चित कर लें कि

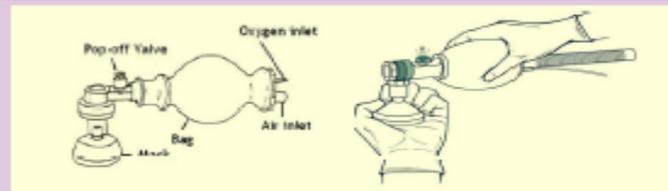
- प्रसव कक्ष का तापमान 25 डिग्री सेल्सियस से अधिक है
- रैडिएंट वार्मर चालू है
- साफ पानी एवं साबुन से हाथ धोए हैं
- उपयोग के लिए दस्तानों के दो सेट ले लिए हैं
- उपयोग के लिए डिसपोजेबल (साफ ब्लेड, नाल बंधने के लिए धागा गोज पीस एवं रुई, क्लीन ड्रेप) किट ले ली है
- सेल्फ इनफ्लेटिंग बैग चेक करके ले लिया है
- दोनों प्रकार (0 एवं 1 नम्बर) के फेस मास्क ले लिए हैं

हाथ धोने के आवश्यक कदम

- हथेली और फिंगर स्पेस
- डोरसम और फिंगर स्पेस
- दोनों हाथ के नकलस
- दोनों हाथ के अंगूठे
- नाखून और हथेली की रेखाएँ
- कलाई से लेकर कोहनी तक

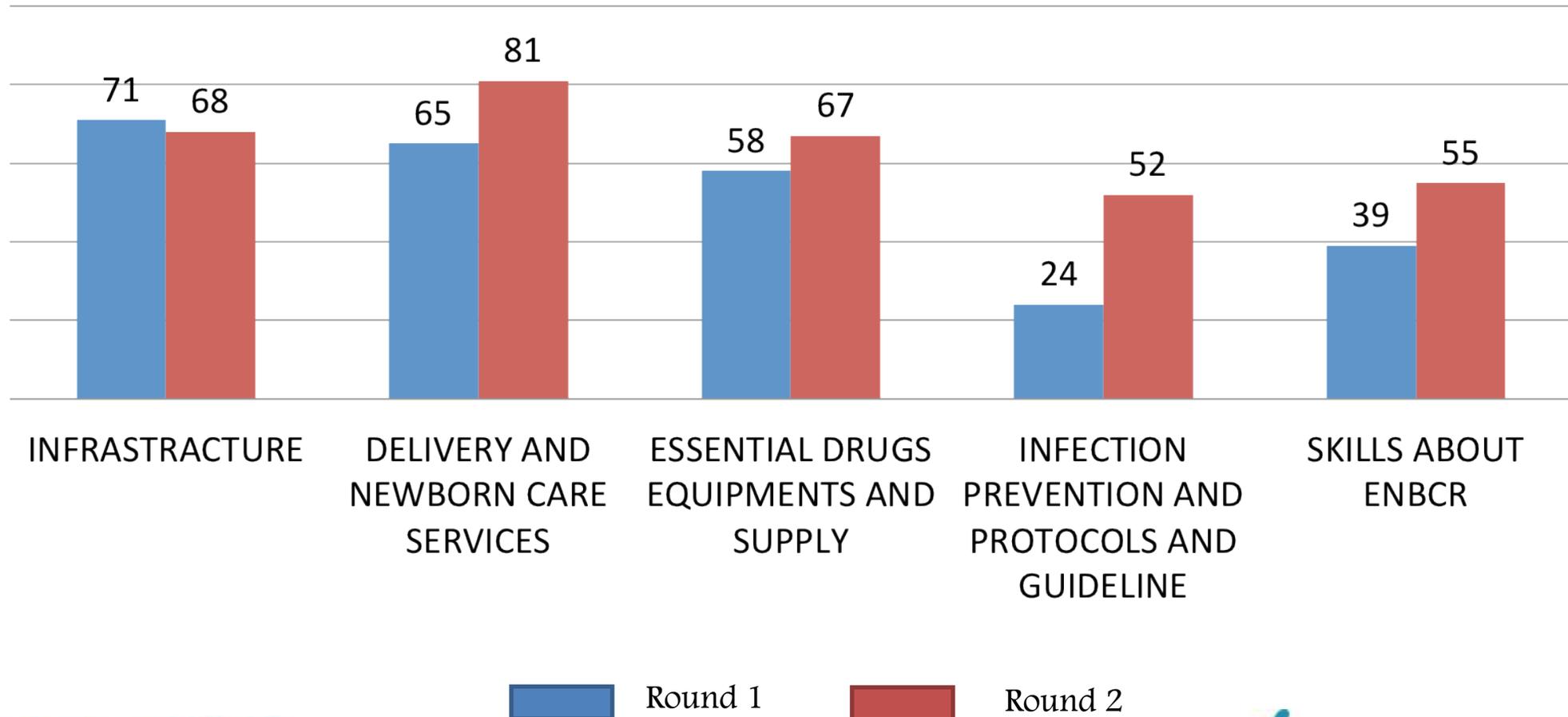
सेल्फ इनफ्लेटिंग बैग चेक करने के कदम

- बैग छोड़ने पर वापस अपनी स्थिति में आ रहा है या नहीं देखना है
- हथेली पर हवा का दबाव महसूस हो रहा है या नहीं
- पॉप ऑफ वाल्व की गति एवं आवाज को देखकर एवं सुनकर जाँचना है कि उपकरण सही काम कर रहा है या नहीं।





Progress in Facility Readiness Components after Supportive Supervision in 5 districts

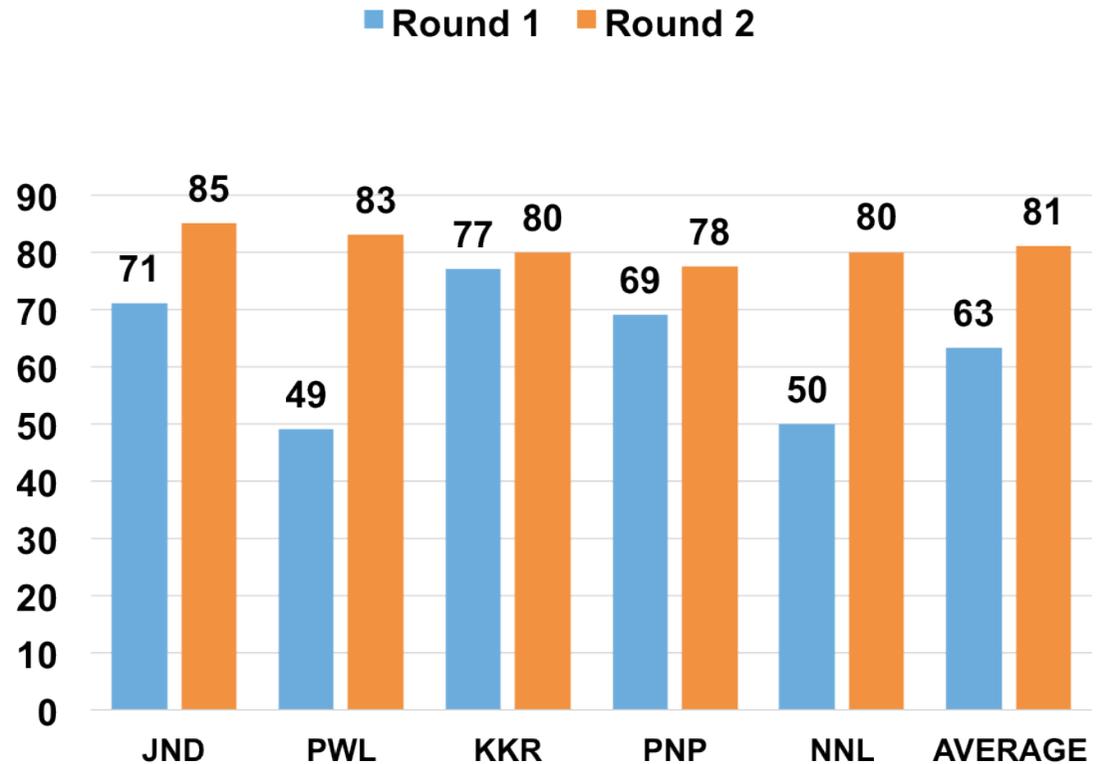




Delivery and Newborn Care Services at Facility Round 1 & 2



- At what time patient care start & end
- 24-hour coverage for delivery and newborn care services
- Facility with delivery services
- Facility with Essential newborn care services
- Referral
- Skilled person at facility or 24 hr on call facility
- Who conduct complicated delivery at the facility
- Other services: ANC, Postpartum care, Family planning, Immunization, RTI/STI, etc.

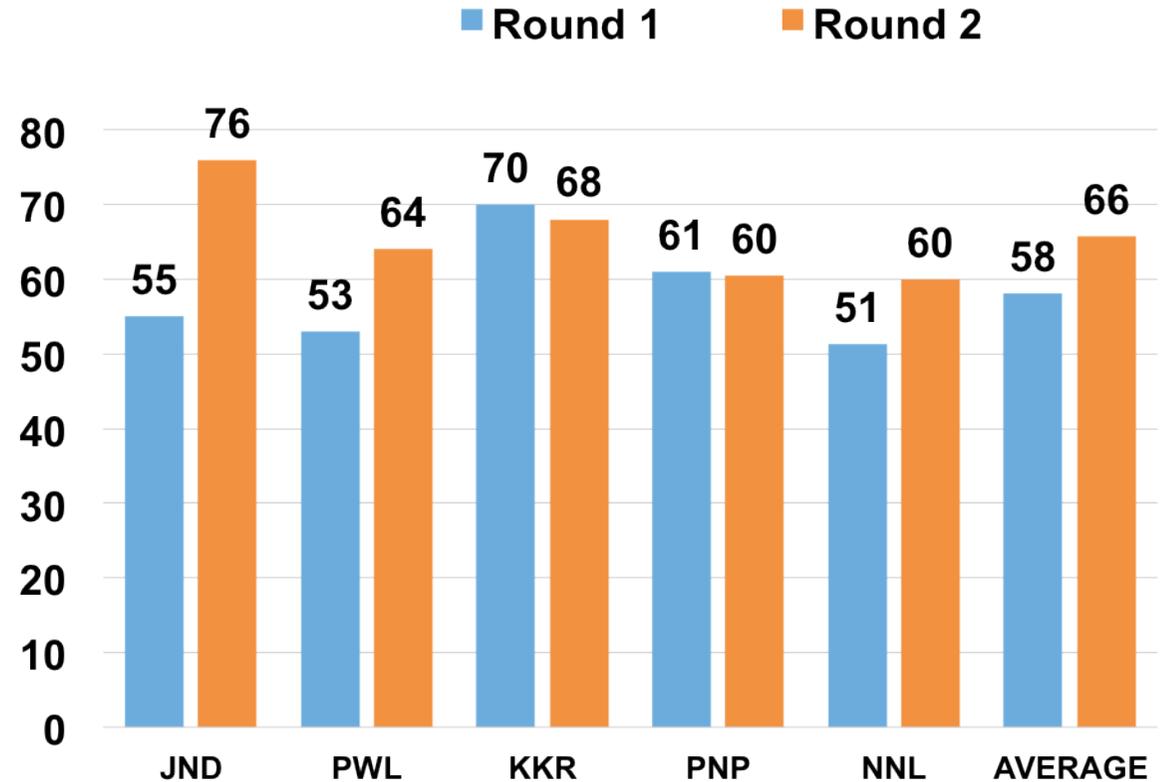




Essential Drug Equipment and Supply Services at Facility Round 1 & 2

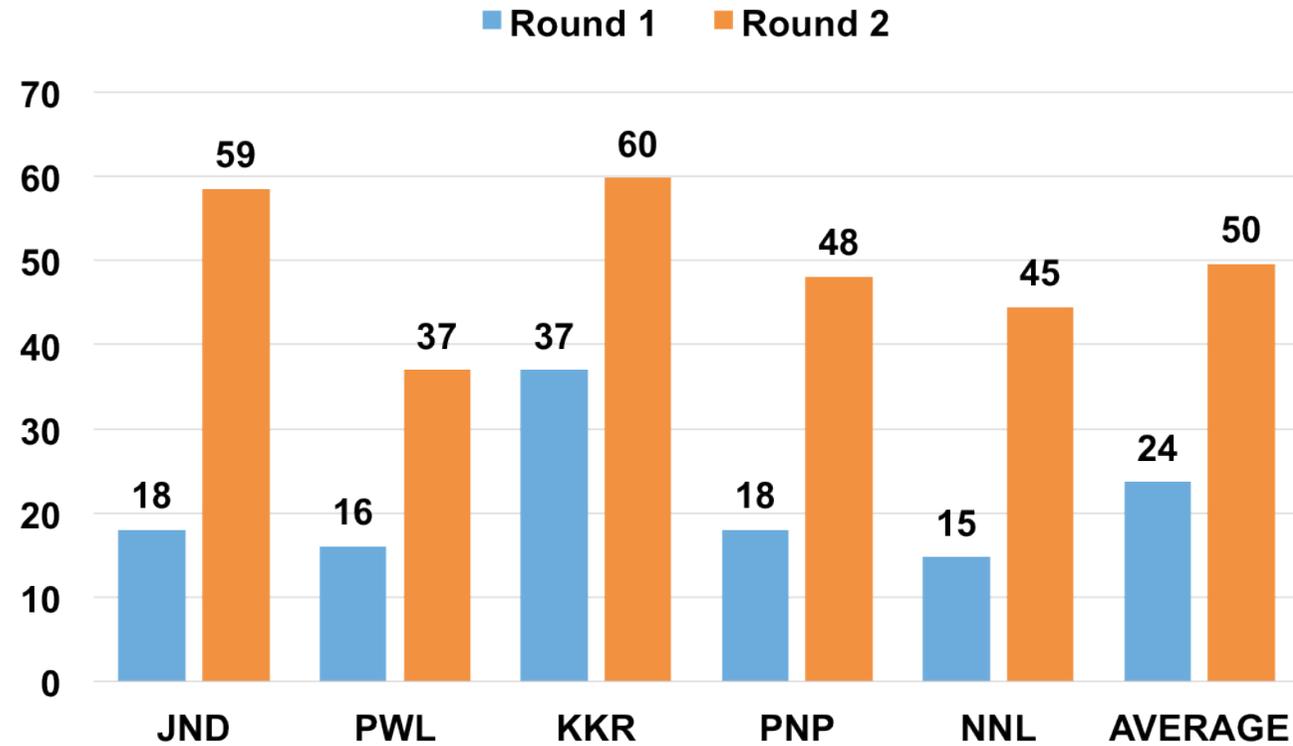


- Availability and condition of supplies and equipment for newborn care
- Monitoring Equipment, Warming equipment, Resuscitation equipment, Oxygen facility, Equipment for investigation, general equipment, Consumable and drugs
- Log book for technician visit
- Mechanism for procurement, supply, maintenance and repair of equipment
- Any breakdown in last 12 months
- Supply of drug and consumables
- When you order drugs and equipment and fund used in shortage



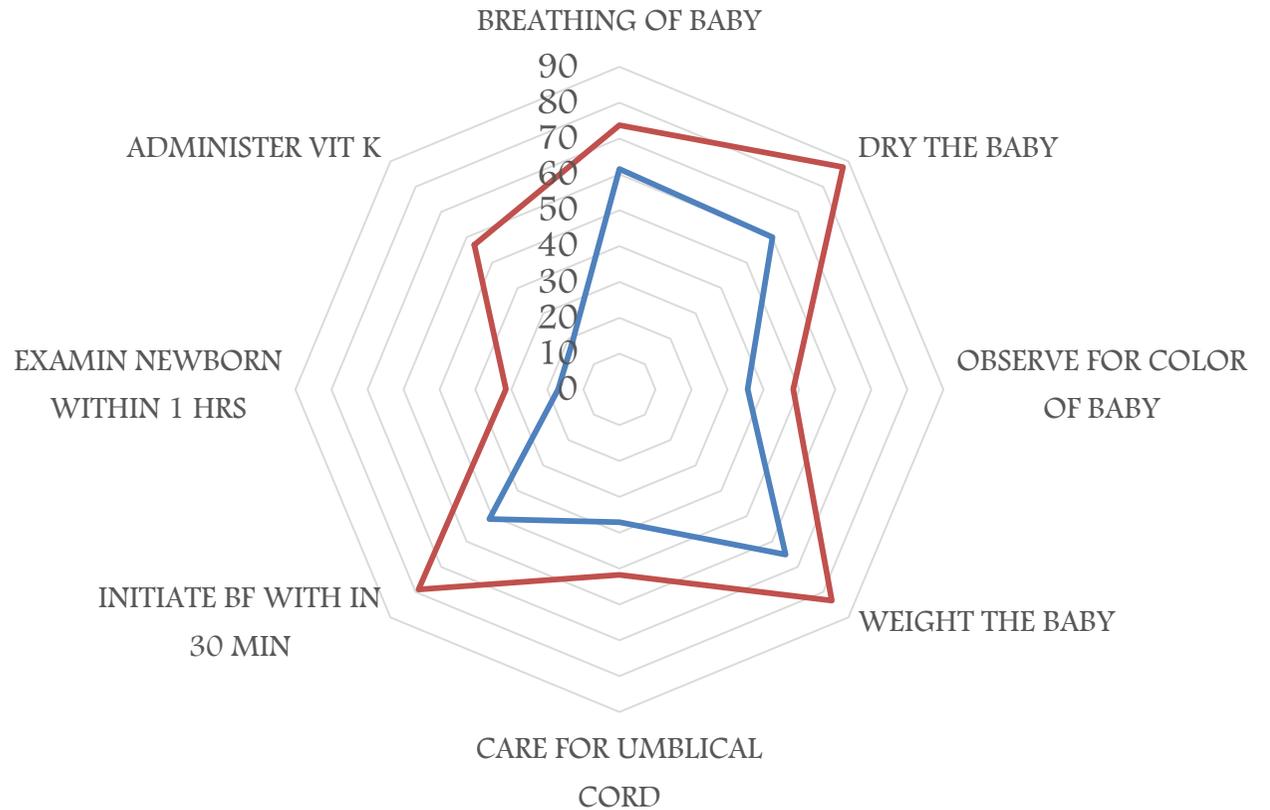
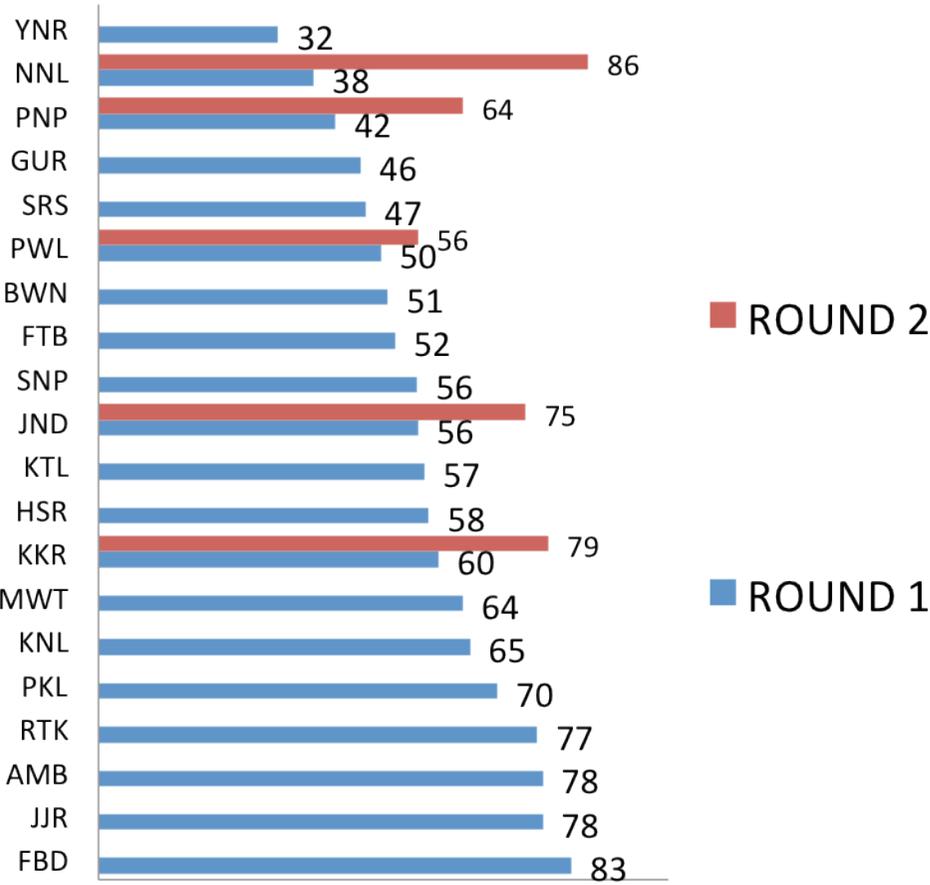
Knowledge of Health workers about Infection Prevention & Availability of Protocols and guidelines at facility Round 1 and 2

- Are IEC materials displayed
- Resuscitation & care at birth, ENC, Newborn case management, **Breast feeding policy**
- Protocols for handling equipment, manual for infection prevention and control
- Other standard operating procedure manual
- Availability of disinfectants.
- Practices followed for infection prevention.



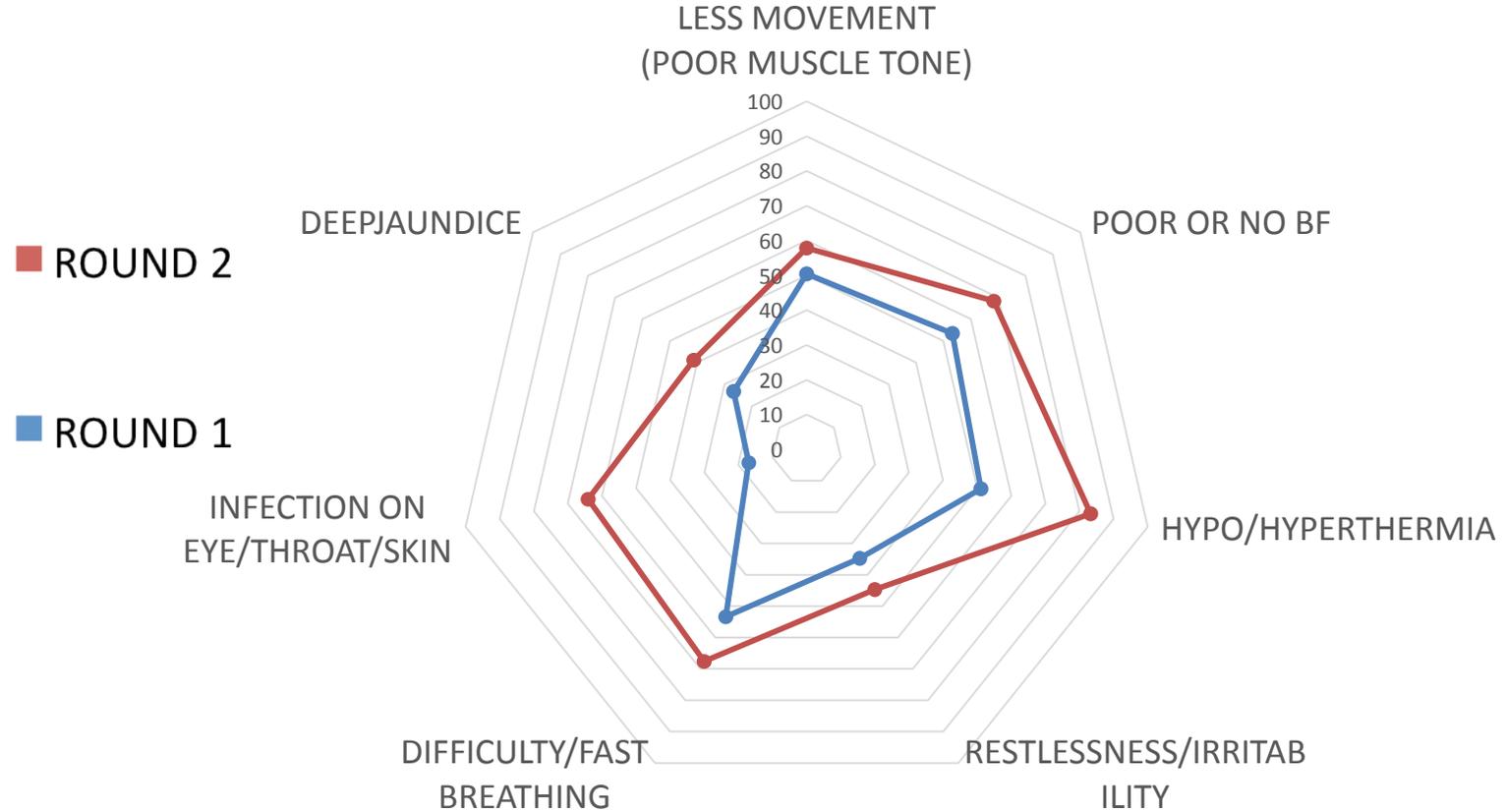
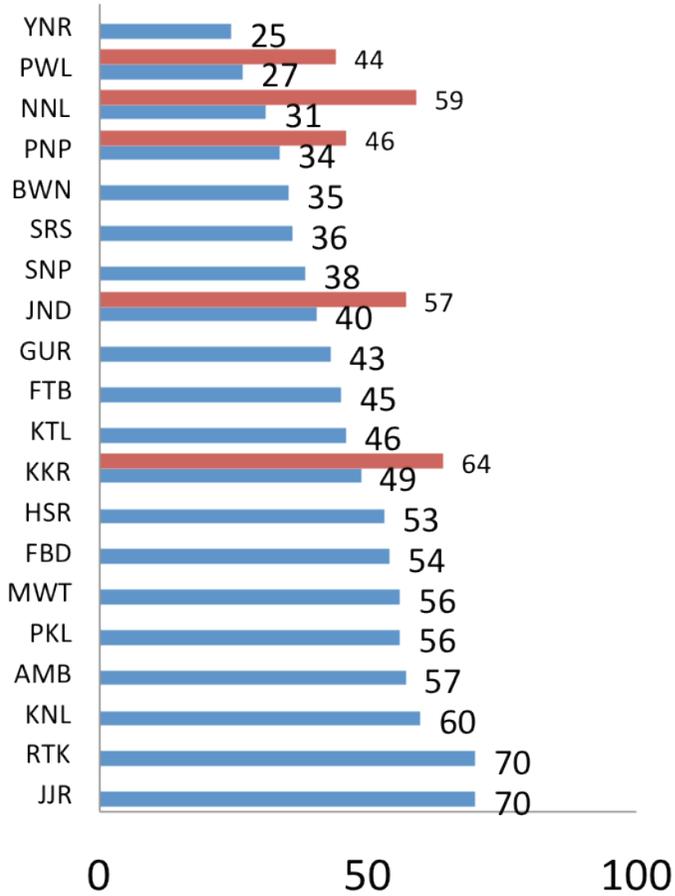


KNOWLEDGE ABOUT IMMEDIATE CARE TO NEWBORN WITHIN 1 HR



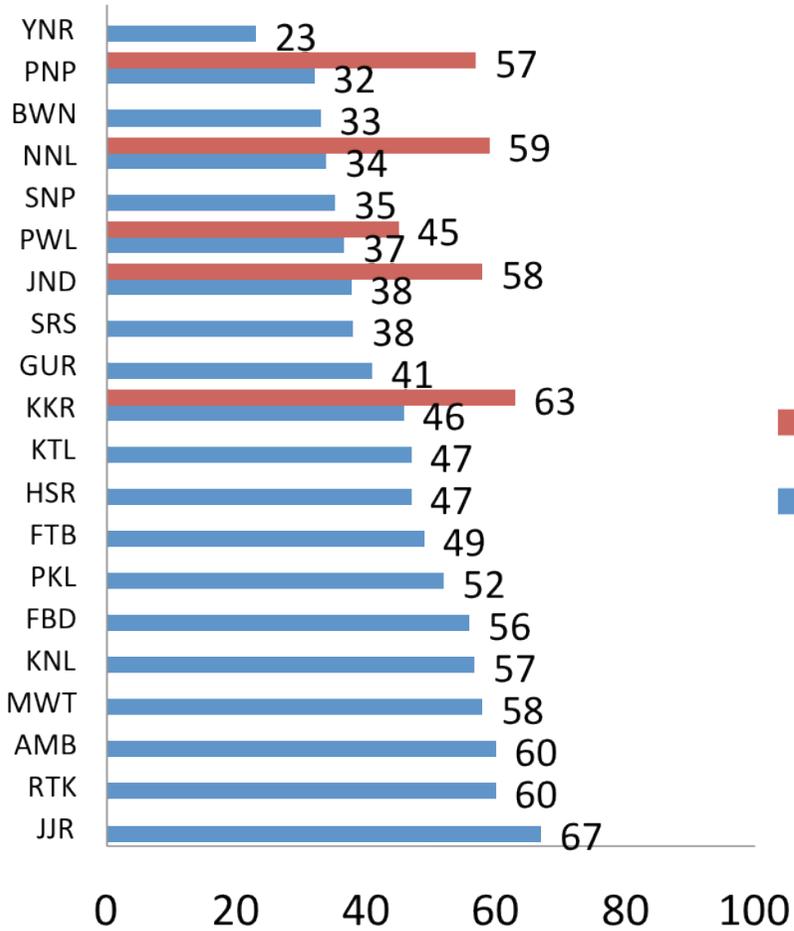


KNOWLEDGE ABOUT SIGN AND SYMPTOMS OF SEPSIS/INFECTION IN NEWBORN

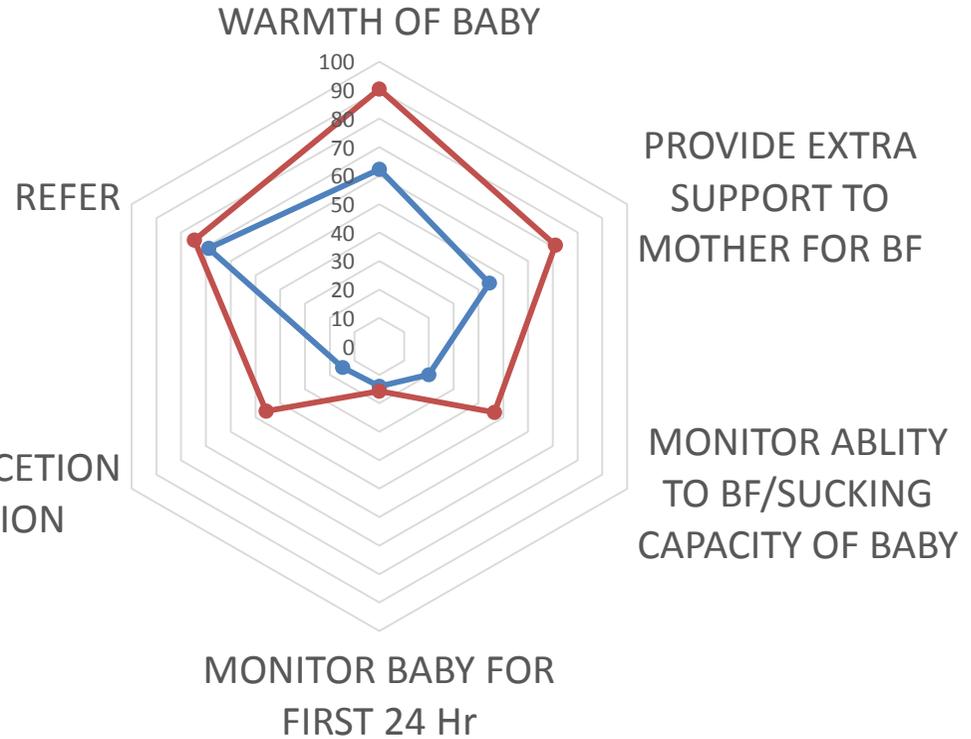




KNOWLEDGE ABOUT MANAGEMENT OF LBW (<2.5 KG) BABIES



■ ROUND 2
■ ROUND 1

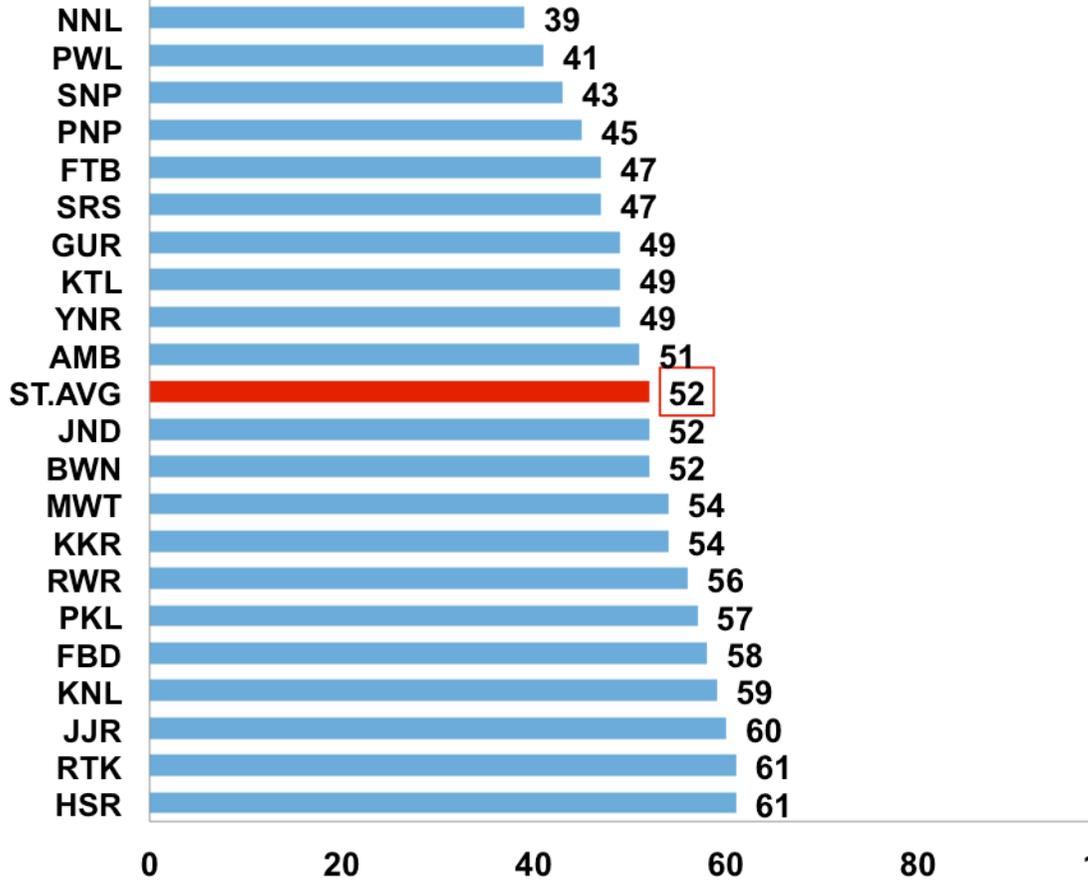




Essential Newborn Care District Average

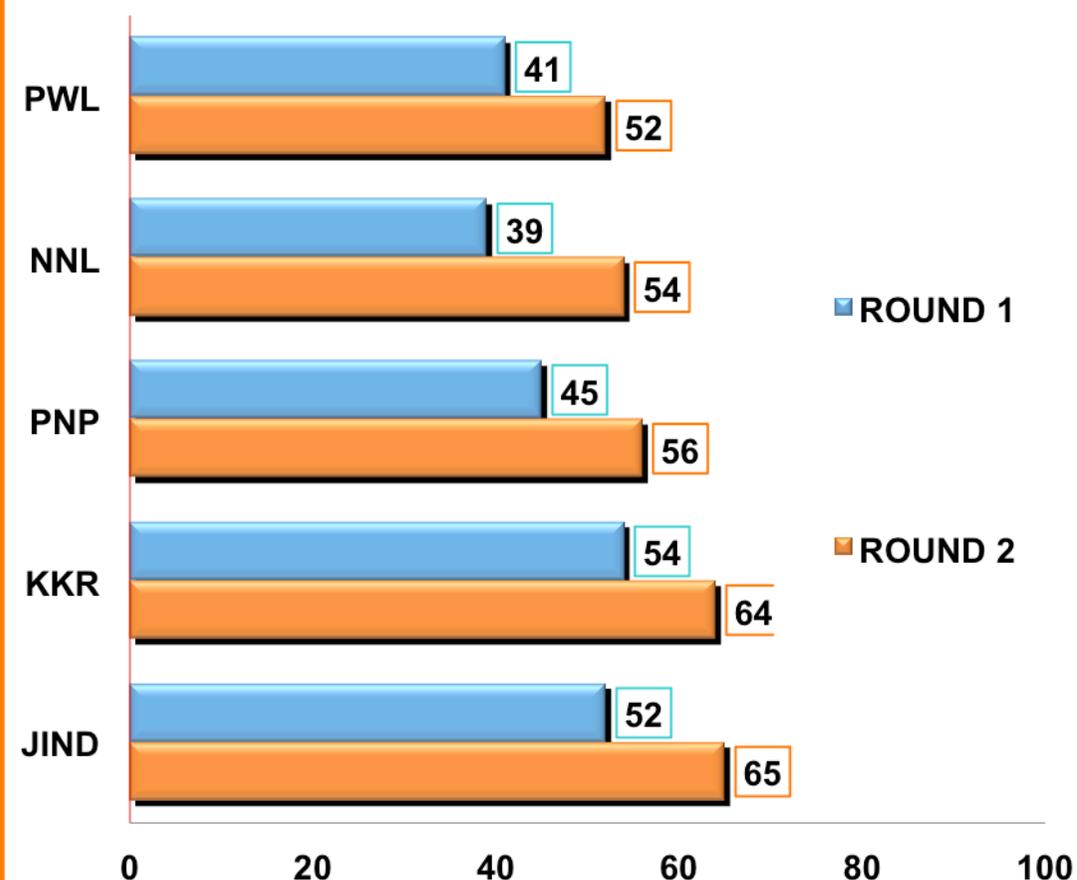


Districts Position after 1st ROUND



After 2nd ROUND

n = 5





Conclusion



- Essential Newborn care and resuscitation is key strategy to save newborn lives.
- Improved skills led improves service provision at each delivery point.
- Health care providers take supportive supervision very positively
- District health leaders are empowered with information & data to take local conscious corrective actions
- Lead to integration of drugs procurement, equipment procurement division and biomedical engineering cell
- Lead to felt sense of responsibility and urge to contribute among health care providers
- Regular follow up lead to improvement health systems overall



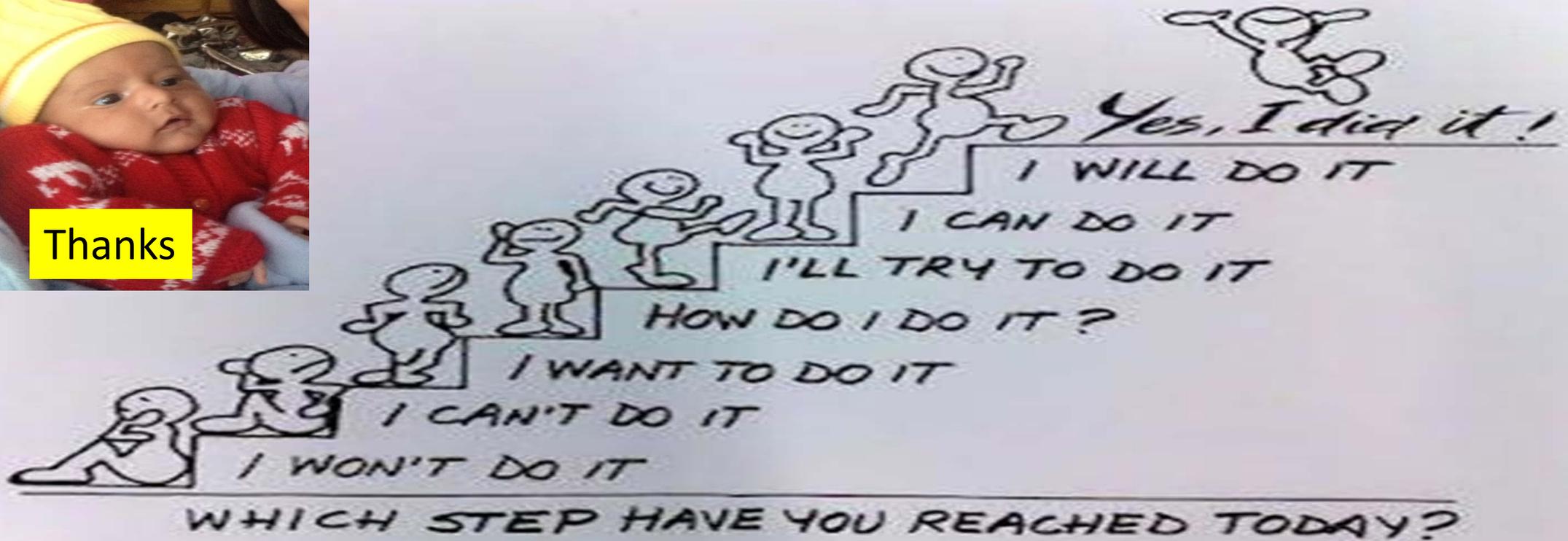
Way Forward



- Plan of expansion and repeat exercise in all 21 districts
- Integration with maternal health, immunization, hospital management and quality monitoring teams
- Documentation and appraisal of success stories



Thanks



Dr Suresh Kumar Dalpath DD Child Health (sureshdalpath@yahoo.com)
Dr Rakesh Gupta, MD NHM Haryana (rguptaias@gmail.com)

