Care of Small and Sick Newborns in SPECIAL NEWBORN CARE UNITS (SNCUs) OF INDIA

Two Year Report
April 2013 - March 2015

Ministry of Health & Family Welfare
Government of India

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सत्यमेव जयते

भारत सरकार
स्वास्थ्य एवं परिवार कल्याण मंत्रालय
निर्माण भवन, नई दिल्ली – 110011
Government of India
Ministry of Health & Family Welfare
Nirman Bhavan, New Delhi - 110011

PREFACE

Government of India is committed to bringing about a significant decline in the neonatal mortality as it constitutes 57 percent of the under -5 deaths, most of which occur within the first week of life. While it is well known that majority of neonatal deaths can be prevented with low technology, low cost interventions yet facility based newborn care forms an important component for the care of the small and sick newborns especially in the first week of life.

To address this, Government of India's strategy of having the Special Newborn Care Units (SNCUs) at district level to reduce the case fatality among sick newborns, either born within the hospital or outside including home delivery, is a very positive measure. A mechanism of online reporting from these units has been put in place to track the progress and service utilization with support of UNICEF. It is being rolled out in a phased manner across the country and more than 75% of the units have started reporting online. It is proposed that by April 2016 all SNCUs shall be reporting online and the facility may extend to include the private sector.

This biennial report is the second in the series developed by Save the Children, the last one depicting the progress for the years 2011-2013. This report provides detailed analysis of the progress made by the States in operationalizing SNCUs, service utilization and the related outputs. This feedback will provide guidance to the States on scaling-up of the facility based neonatal care through SNCUs. The data would be very useful for taking informed decisions related to program implementation, monitoring and evaluation.

I am hopeful that this report will be useful in strengthening the clinical services within the health care system which is aimed at reducing neonatal deaths in the country.

(Dr. Rakesh Kumar)
Joint Secretary(RCH)

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Acknowledgment

Government of India supports state annual plans for establishing Special Newborn Care Units at District Hospitals and sub district hospitals to provide comprehensive care for the small and sick newborns under NHM. A system of regular reporting from states has been established wherein monthly reports submitted by individual SNCUs are compiled and collated at State Level to be shared at the National level on a quarterly basis.

This two year report for the period of April 2013-March 2015 provides a comprehensive overview of operational status, bed strength, human resource availability and service utilization of the units state wise progress in terms of establishment and functionality of SNCUs, with detailed analysis. In addition, it provides statistics at a glance for individual units to facilitate differential planning and better monitoring of these units. Quarterly reports shared by the States and SNCU online reporting data has been used to prepare this report.

I would like to thank Dr. P. K Prabhakar, DC (CH) and Dr. Renu Srivastava (National SNCU Coordinator) for taking the initiative of developing this biennial report. The State's Child Health Programme Managers deserve special mention for their untiring effort of sharing the reports regularly. I thank Saving Newborn Lives (SNL) team at Save the Children for their technical support in collating and synthesizing data, and developing a comprehensive report including state-specific factsheets. Dr Gagan Gupta and his team at UNICEF is acknowledged for providing full support in the roll out of online reporting by SNCU and this data has been critical for this report. We hope this report will be useful to both clinicians and programme managers in strengthening the SNCUs of their States.

(Dr Ajay Khera)
Deputy Commissioner & Incharge
(Child Health)
16/03/16

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IMPROVING CARE OF SMALL & SICK NEWBORNS AT SPECIAL NEWBORN CARE UNITS (SNCUs) IN INDIA

INDIA FACTSHEET

This report provides a comprehensive overview of the progress made by the country in terms of establishment and functionality of Special Newborn Care Units (SNCUs) during the two year period from **April 2013 to March 2015.** It describes the progress in the operational status (numbers, bed strength, human resource availability), the profile of babies admitted in these units and of those babies who died during stay. In addition it provides individual state specific statistics to facilitate differential planning and better monitoring of these units.

Special Newborn Care Units (SNCUs) are being established at district hospitals and sub-district hospitals with annual delivery load more than 3000 to provide care for sick newborns, that is, all type of neonatal care except assisted ventilation and major surgeries. It is a separate unit in close proximity to the labour room with 12 or more beds, and are managed by adequately trained doctors, staff nurses and support staff to provide 24*7 services.

This report has been prepared utilizing the information available from the routine monitoring system established in 2010-2011 by the Child Health Division, Ministry of Health and Family Welfare (MoHFW), Government of India. Monthly reports submitted by individual SNCUs were collated at the State level and then submitted to the National level on a quarterly basis. Data from the States was checked for completeness and accuracy, and a set of selected indicators calculated. Submission of records was considered an essential pre-requisite for SNCU to be considered as an operational unit, and units with less than 4 beds were not considered for the final analysis. In addition to the routine monitoring system, information for few selected indicators was taken from the national online reporting system (www.sncuindiaonline.org), and this is mentioned where ever used. The online reporting system is gradually being scaled up across the country, and the number of SNCUs reporting online has increased from 56 (from two states) in 2013 to 245 (from 10 states) in 2015.

OPERATIONAL STATUS

Distribution of SNCUs Across India

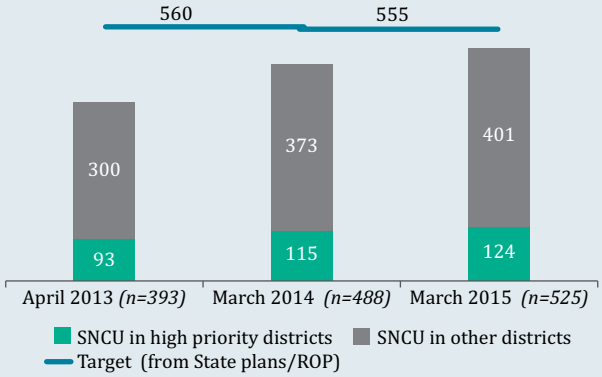
Dots representing SNCUs are plotted randomly within the district boundary.

NMR (India, SRS 2013)	28	
ENMR (India, SRS 2013)	22	
States & UTs*	32	
Districts*	622	
Total SNCUs*	525	
Districts without SNCU*	208	*79 districts had more than one SNCU*
High Priority Districts (HPDs)*	172	67 HPDs were without SNCUs
Tribal Districts*	73	22 Tribal districts were without SNCUs

**Reports not available for Chhattisgarh, Telangana, Manipur and Lakshadweep, hence excluded from analysis.*

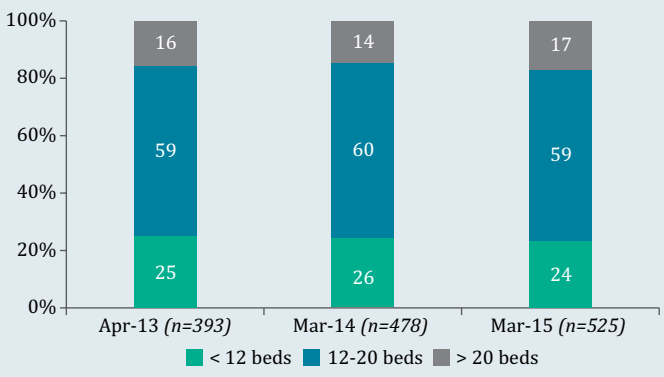
Planned versus Operational (N)

Nearly two-third of all districts (414/622) had an operational SNCU and these included 105 of the 172 HPDs; however, 39% of HPDs did not have an SNCU. In 2014-15, 37 new SNCUs had been operationalized with 24% of these in the HPDs.



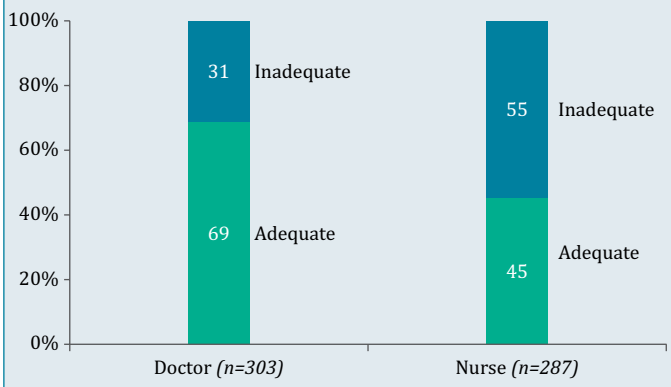
Bed-strength Distribution (%)

More than 75% of the SNCUs had the required bed strength of 12 or more beds. These included 17% units with more than 20 beds.



Adequacy of Human Resources (%)

More than two-thirds (69%) of the SNCUs had adequate number of doctors, but less than half (45%) of these units had adequate number of nurses.

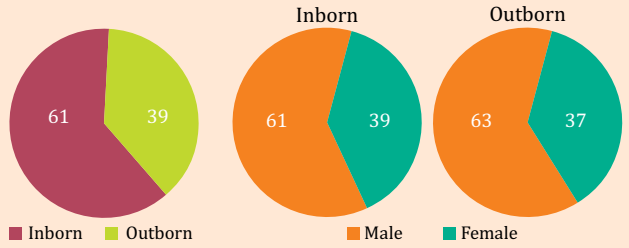


**No data available for Doctors for 222 SNCUs and for Nurses for 238 SNCUs.*

ADMISSION PROFILE

Place of Birth and Gender (%)

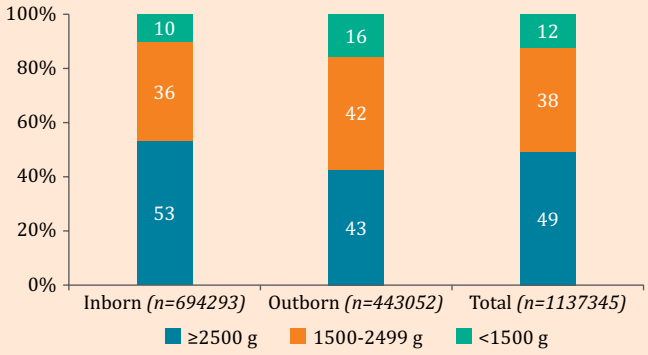
Inborn admissions were higher compared to outborn admissions (61% and 39% respectively). For both the inborn and the outborn admissions, proportion of female babies admitted in the units was lower than the male babies.



(Total admission= 1238382)

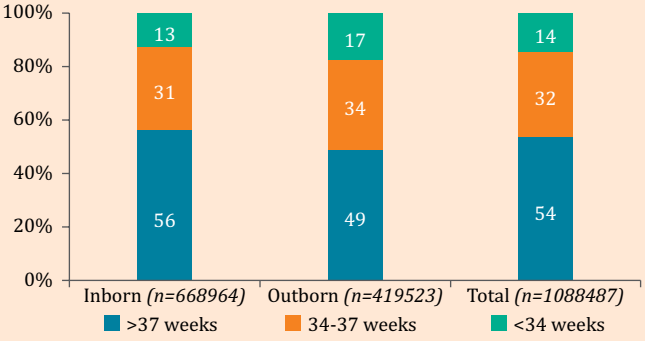
Birth Weight (%)

Nearly 50% of the admitted babies had birth weight ≥2500g, and more inborn babies were admitted with birth weight ≥2500g compared to outborn admissions (53% and 43% respectively).



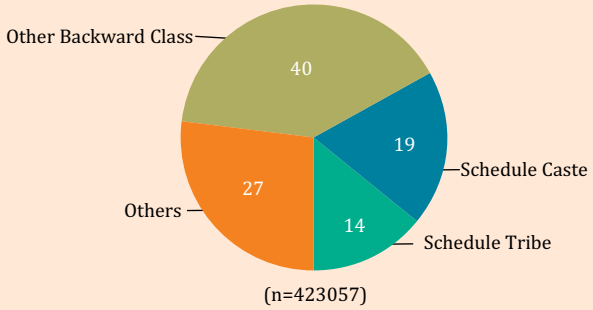
Gestational Age (%)

More than half (54%) of total admissions were full-term babies (> 37 weeks) with proportion of full-term inborn admissions higher than outborn admissions (56% and 49% respectively).



Caste (%)

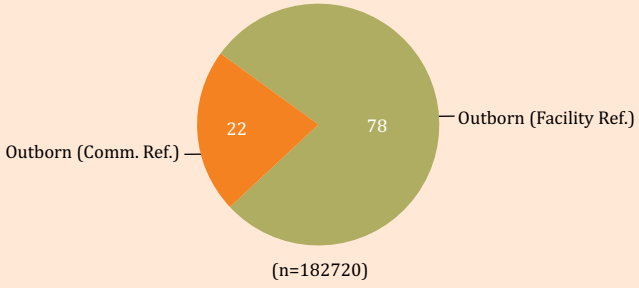
Nearly 75% of the babies admitted in SNCUs were from families belonging to underprivileged sections of society, that is, Schedule Castes (SC), Schedule Tribes (ST) and Other Backward Classes (OBC).



Source: SNCU online software.

Referral to SNCU : Place of Referral (%)

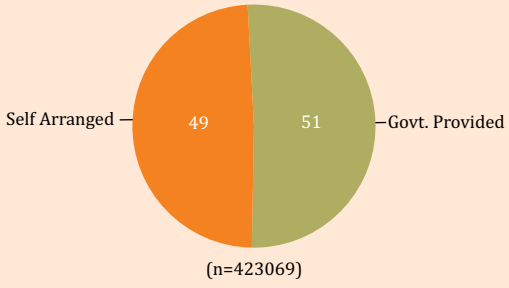
Majority of the outborn admissions (78%) were born in other Government health facilities and referred to SNCUs from there, while only 22% were referred from the community.



Source: SNCU online software.

Referral to SNCU : Transportation Used (%)

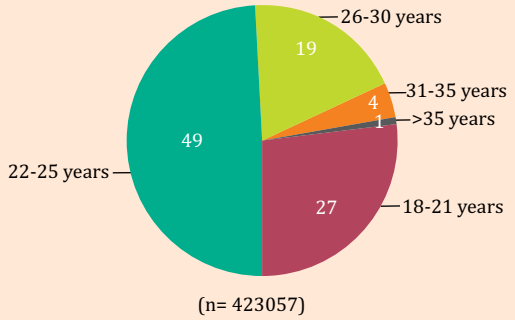
More than half (51%) of total outborn admissions used Government provided free transport under the JSSK scheme to reach SNCUs.



Source: SNCU online software.

Maternal Age at Baby's Admission (%)

At the time of baby's admission, mother's age was 21 years or less in 27% of cases while nearly 50% of mothers were in the age range of 22-25 years.

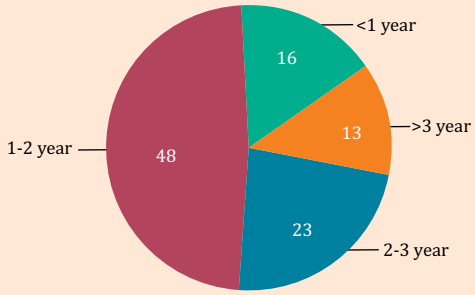


(n= 423057)

Source: SNCU online software.

Birth Spacing (%)

In about two-thirds of admissions, the birth interval was 2 years or less and these included 16% who were born with birth interval of less than 1 year.

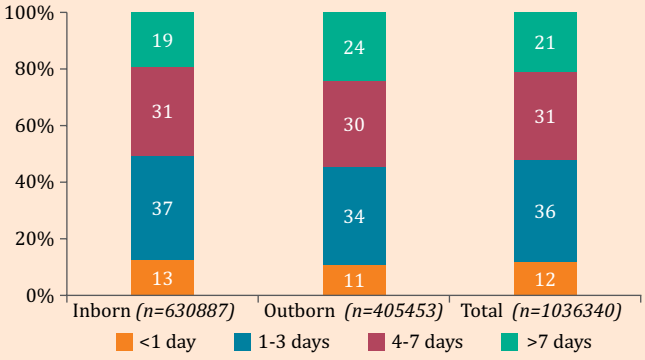


(n= 167899)

Source: SNCU online software.

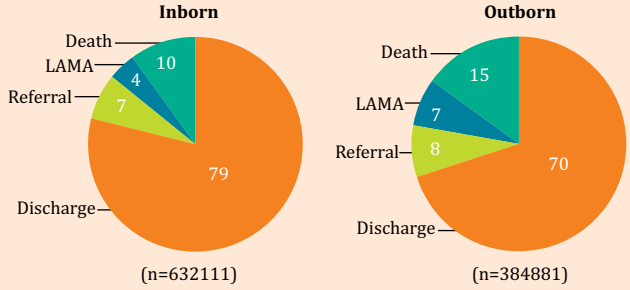
Duration of Stay (%)

Nearly half (48%) of the admissions stayed for 3 days or less in the SNCUs including 12% with less than 24 hours stay. There was not much variation in the duration of stay for inborn and outborn admissions.



Outcome (%)

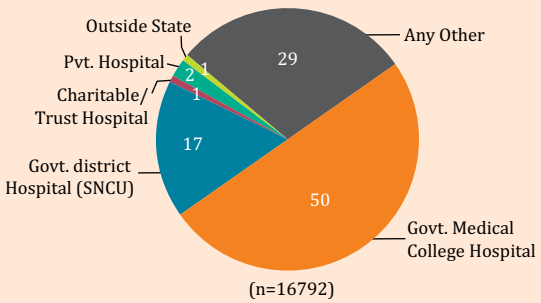
Adverse outcomes (Death + LAMA) were higher among outborn admissions compared to inborn admissions (22% vs. 14%). Percentage of referrals was similar for both the groups.



(n=632111) (n=384881)

Referral from SNCU: Place of Referral (%)

Two-thirds of the referral for further/advanced management of sick newborns was to Government Hospitals (at Medical College or District Hospital). In nearly 30% of cases, the exact place of referral was not confirmed by the family.

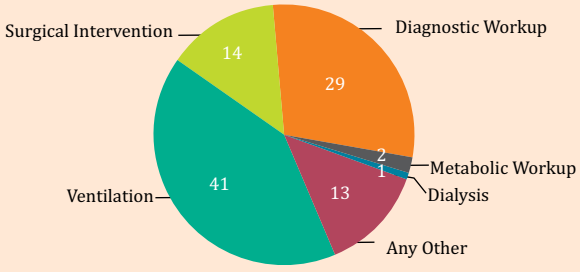


(n=16792)

Source: SNCU online software.

Referral from SNCU: Indications (%)

The major indications for referral from SNCU to higher facilities were the need for ventilation and surgical intervention in 55% cases, while another 31% were referred for further detailed investigations to rule out metabolic diseases and other rare conditions.



(n=35157)

Source: SNCU online software.

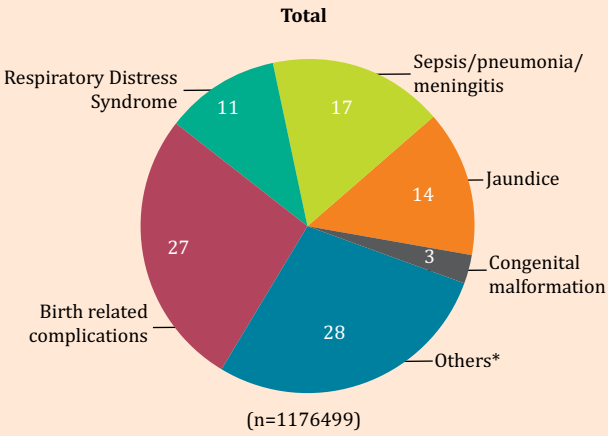
Causes of Admission (%)

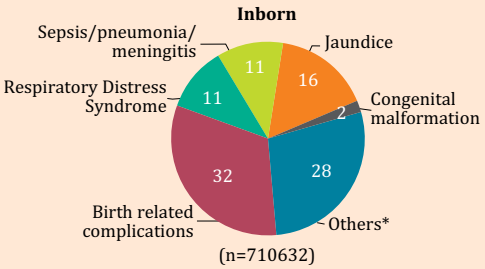
The three most common causes of admissions were birth related complications (27%), others* (28%) and sepsis (17%). Jaundice accounted for 14% of the admissions.

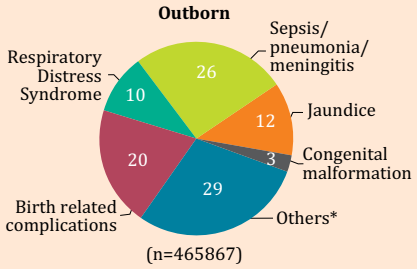
For Inborn admissions, the three most common diagnosis were birth related complications (32%), others* (28%) and jaundice (16%).

For Outborn admissions, the three most common diagnosis were others* (29%), sepsis (26%) and birth related complications (20%).

On comparing the morbidity distribution of inborn and outborn admissions, there was a higher incidence of birth related complications among inborn admissions (32% vs. 20% in outborn) while sepsis was found to be higher among outborn admissions (26% vs. 11% in inborn).







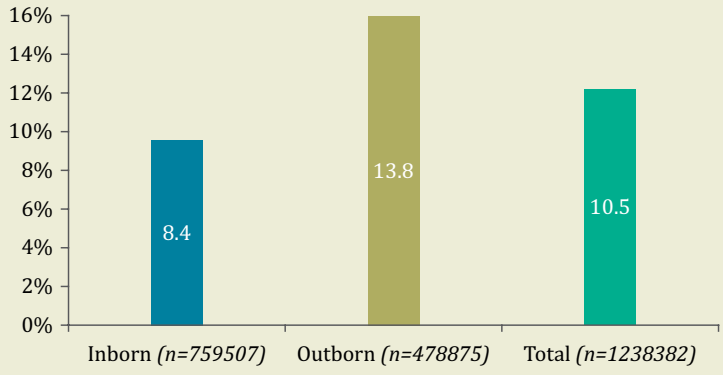
*'Others' include: Other causes of respiratory distress, Hypothermia, Hypoglycemia.

MORTALITY PROFILE

Mortality Rate (%)

The Mortality Rate in the SNCUs (i.e., percentage of babies that died in the SNCUs) was 10.5%.

The Mortality Rate among Outborns was more than 1.6 times of the Inborn Mortality Rate (13.8% and 8.4% respectively).

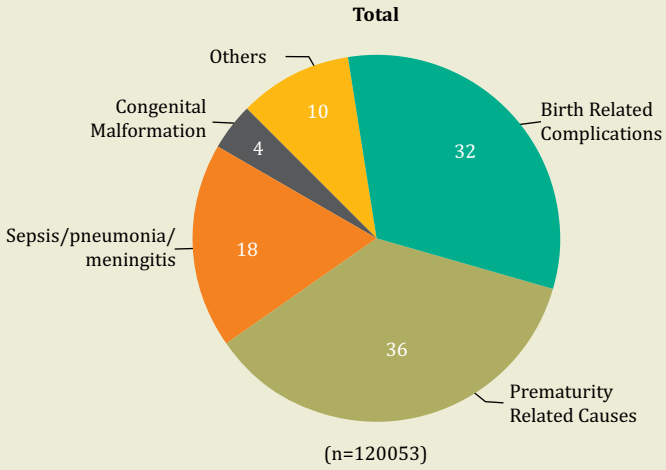


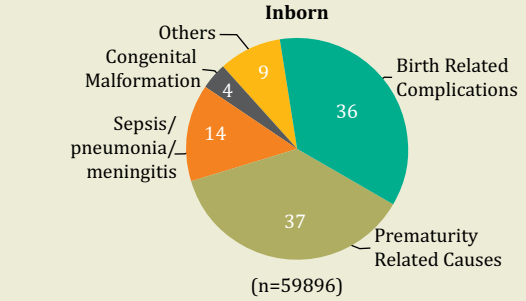
MORTALITY PROFILE

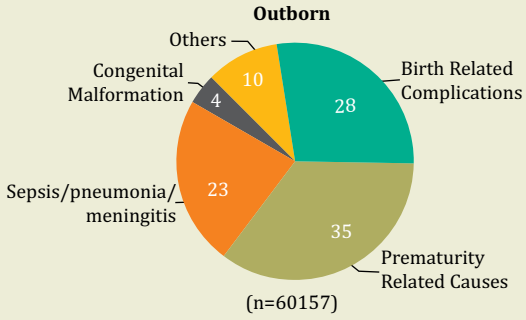
Causes of Mortality (%)

The three main causes of SNCU deaths were Prematurity related causes (36%), Birth related complications (32%) and Sepsis (18%). Together these three contributed to 86% of the total deaths.

Similar pattern of mortality causes was observed for both the inborn and outborn deaths, however there was difference in the contribution of Birth related complications (36% inborn vs. 28% outborn) and Sepsis (14% inborn vs. 23% outborn).



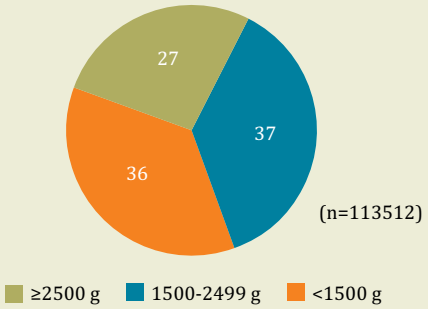




** 'Others' include: Cause not established.*

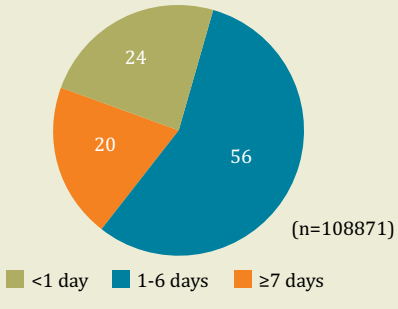
Weight at Birth (%)

About 75% of the total SNCU deaths were among babies with Low Birth Weight (weight <2500g), while the remaining 27% deaths had weight ≥2500g.



Age (%)

Nearly one-quarter (24%) of the deaths occurred on the first day of life and more than half (56%) between 1-6 days of life.



KEY FINDINGS

- During the two year period (2013-2015), the number of operational SNCUs increased by 34% across the country. There are still 33% districts without an SNCU including 40% HPDs, while 79 districts have more than one operational SNCU.
- More than two-third of the units have adequate number of doctors, but the situation for the nursing personnel still remains unfavorable with 55% units having inadequate number of nurses.
- Outborn admissions constituted 39% of the total admissions and this figure is similar to that seen in 2011-2012. Majority of the outborn admissions were referred from Government health facilities while only 22% were referred directly from the community.
- The proportion of female babies admitted was lower than that of male babies for both inborn and outborn admissions (39% in inborn, 37% in outborn). These figures are also lower compared to the female admissions seen during 2011-2012 (42% in inborn & 39% in outborn admissions)
- Babies with birth weight more than equal to 2500g made up nearly half of the total admissions (49%), while full term babies (> 37 weeks) constituted 54% of the total admissions. These proportion were even higher for inborn admissions compared to outborn admissions, with 53% inborn admissions having birth weight ≥2500g and 56% being full-term babies.
- Nearly three quarter of the admissions were from underprivileged sections of the society; only half of the admissions used free transport facility for referral as provided by the Government under the JSSK scheme.
- Maternal age was less than 21 years at the time of baby's admission in more than one-fourth of cases, and 16% of the babies admitted were born within one year of the previous delivery.
- Nearly half of the admissions stayed for 3 days or less with similar pattern of duration of stay seen for both inborn and outborn admissions. Outborn admissions had higher adverse outcomes than the inborn.
- The major indications for referral from SNCU was the need for ventilation and surgical intervention, with two-thirds of the referral for further/ advanced management made to Government Hospital.
- The morbidity profile of admissions indicated that while birth related complications featured prominently amongst inborn admissions, sepsis was a major cause for outborn admissions. Another significant cause of admission for both inborn and outborn babies was 'others' which correlates to difficulty in cause ascertainment.
- The mortality profile of the SNCUs was similar to that seen for the country with prematurity, birth related complications and sepsis contributing to majority of neonatal deaths (86%). Mortality from birth related complications was higher among inborns while sepsis was a more common cause of death among outborns.
- The SNCU mortality rate over the two-year period (April 2013- March 2015) was 10.5% which was lower than that observed during 2011-2012 (i.e., 11.7%). Low Birth Weight Babies contributed to nearly 75% of deaths while one-fourth of deaths occurred within 24 hours of life.

WAY FORWARD

- States need to establish SNCUs in districts (especially HPDs) that do not have such units, and make alternative arrangements for care of small and sick newborns till operationalization of such units.
- Review the operational status (numbers, bed strength, human resource availability) of the SNCUs in the districts for the care of sick newborns in terms of delivery load, accessibility of care, and quality of newborn health services.
- Adequacy of nursing personnel is essential for providing quality newborn care at the SNCUs. Efforts should be made to strengthen this through recruitment and retention.
- A high proportion of inborn admissions consisting of full term babies weighing more than 2500 gms and staying less than 72 hours suggest an immediate need to review the admission protocols being followed in these units.
- A higher proportion of birth related complications among inborn admissions suggest the need to review and focus on quality of intrapartum care in the labour rooms. This has to be supplemented with adequate planning for effective tracking, timely referral and follow-up of high risk pregnancies.
- Outborn admissions had higher incidence of sepsis and adverse outcomes compared to inborn admissions. About 20% of the outborns were referred from the community. It is important to strengthen community level interventions for early identification of sick newborns and their timely referral to SNCUs.
- Though majority of admissions were from underprivileged sections of the society, free transport facility for referral was being used sub-optimally. Efforts are required to increase utilization of the free transport facility and other entitlements available under the JSSK scheme.
- The capacity for diagnostic labelling at admission and cause ascertainment for mortality needs to be strengthened across SNCUs so that the frequency of the 'others' category is minimal and cause-specific salvage approaches are more data informed.
- The states should expedite the process of online reporting as real time monitoring data will be more useful to the service providers and managers at local level in monitoring and improving quality of care. This will also provide an opportunity to improve data quality, its collation and synthesis for improved programme performance.
- There is an emerging need to implement package of interventions at the health facility for management of preterm newborns. This includes use of antenatal corticosteroids during preterm labour, managing preterm delivery, timely support for respiratory distress using CPAP if needed, provision of Kangaroo Mother Care, and appropriate follow-up.
- It is important to develop opportunities for cross-learning and knowledge sharing of best practices between states/districts with well performing SNCUs and those states/districts with inadequate SNCU coverage and quality of care.

State Statistics at a Glance (April 2013-March-2015)

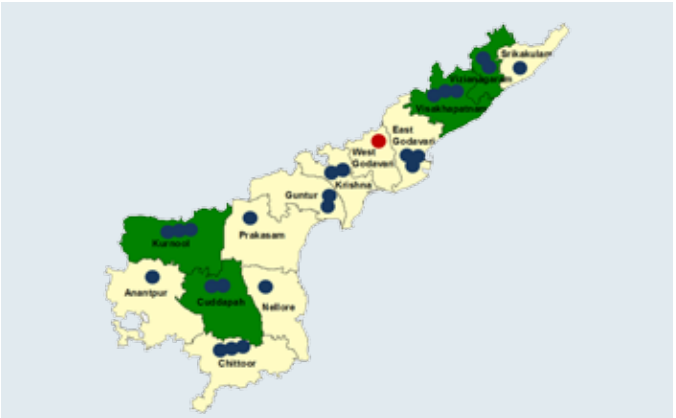
State	Bed strength (N)	Total admissions (N)	Inborn admission rate*	Female admissions (%)	Outborn admissions (%)	LBW admissions (%)	Duration of stay < 1 day (%)	Duration of stay ≥ 4 days (%)	Discharged (%)	Causes of Morbidity (%)			Mortality rate (%)	Causes of Mortality (%)		
										RDS	Birth related complication	Sepsis/ pneumonia/ meningitis		Prematurity related causes	Birth related complications	Sepsis/ pneumonia/ meningitis
ANDHRA PRADESH	470	58173	0.23	43	36	41	10	56	72	17	26	12	12	43	32	14
ASSAM	362	55864	0.19	41	33	47	11	50	71	5	31	16	11	22	49	18
BIHAR	212	26336	0.08	37	47	47	48	26	68	17	41	9	14	36	43	11
DELHI	245	31200	0.19	43	11	39	29	36	90	13	21	13	7	36	33	18
GUJARAT	490	56911	0.17	44	48	64	15	55	67	17	19	17	19	38	29	21
GOA	50	3728	0.17	30	29	59	11	44	86	7	7	8	6	52	16	18
HARYANA	222	37693	0.12	43	42	40	15	44	70	14	19	14	5	37	23	19
HIMACHAL PRADESH	195	11097	0.13	42	30	37	17	47	77	9	15	21	9	19	31	22
JHARKHAND	28	1407	0.04	43	66	69	6	70	75	11	17	30	16	35	22	29
JAMMU & KASHMIR	146	20558	0.18	40	23	33	35	26	70	15	25	12	3	36	38	21
KARNATAKA	483	82433	0.19	37	32	47	16	57	66	14	31	12	12	35	32	18
KERALA	126	9870	0.19	47	17	37	8	58	90	18	11	10	3	41	21	14
MADHYA PRADESH	1080	163240	0.14	39	51	61	4	56	79	10	25	18	11	37	26	20
MAHARASHTRA	1262	84942	0.19	44	34	62	10	51	76	12	25	9	12	50	23	14
PUNJAB	120	25251	0.23	43	27	44	14	53	76	23	19	20	6	40	23	31
ODISHA	428	77066	0.15	22	46	58	12	52	64	4	32	16	6	35	41	17
RAJASTHAN	471	102701	0.23	24	34	56	13	30	71	14	20	13	6	44	25	12

State	Bed strength (N)	Total admissions (N)	Inborn admission rate*	Female admissions (%)	Outborn admissions (%)	LBW admissions (%)	Duration of stay < 1 day (%)	Duration of stay ≥ 4 days (%)	Discharged (%)	Causes of Morbidity (%)			Mortality rate (%)	Causes of Mortality (%)		
										RDS	Birth related complication	Sepsis/ pneumonia/ meningitis		Prematurity related causes	Birth related complications	Sepsis/ pneumonia/ meningitis
TAMIL NADU	944	155384	0.26	44	38	45	9	65	83	8	32	24	9	35	29	19
UTTAR PRADESH	369	34048	0.32	37	40	49	20	41	72	14	26	17	14	34	31	19
UTTARAKHAND	60	4934	0.37	40	36	48	11	35	71	17	24	12	15	56	28	14
WEST BENGAL	1121	87183	0.10	41	40	52	8	60	79	6	34	18	15	27	42	22
UNION TERRITORIES	**132**	**10163**	**0.15**	**39**	**16**	**37**	**13**	**35**	**82**	**9**	**11**	**13**	**7**	**27**	**17**	**27**
A&N ISLANDS	18	1658	0.29	43	9	39	2	63	95	16	29	16	3	44	33	6
CHANDIGARH	78	6253	0.13	40	17	39	15	25	77	8	8	13	9	25	14	30
DAMAN & DIU	5	306	0.27	43	3	19	6	56	67	9	17	10	2	60	0	0
D&N HAVELI	11	556	0.05	0	50				0				0			
PUDUCHERRY	20	1390	0.18	45	7	29	19	28	97	11	18	6	4	30	30	17
NORTH EAST STATES	**143**	**7824**	**0.17**	**41**	**18**	**25**	**9**	**53**	**83**	**4**	**27**	**20**	**10**	**31**	**43**	**14**
ARUNACHAL PRADESH	9	148	0.23	43	9	27	25	32	78	4	19	24	5	13	63	25
MEGHALAYA	44	1677	0.09	44	28	32	15	50	75	8	28	21	20	32	47	13
MIZORAM	22	1028	0.13	17	21	34	5	56	75	8	5	20	4	18	27	27
NAGALAND	12	735	0.16	43	29	26	7	42	88	3	24	18	6	20	29	29
SIKKIM	26	1462	0.56	46	18	17	4	73	90	2	14	29	4	55	34	3
TRIPURA	30	2774	0.23	44	10	22	10	47	83	2	37	14	10	28	46	14

**Prapotion of live births in the same institution that were admitted to the SNCU.*

ANDHRA PRADESH

OPERATIONAL STATUS

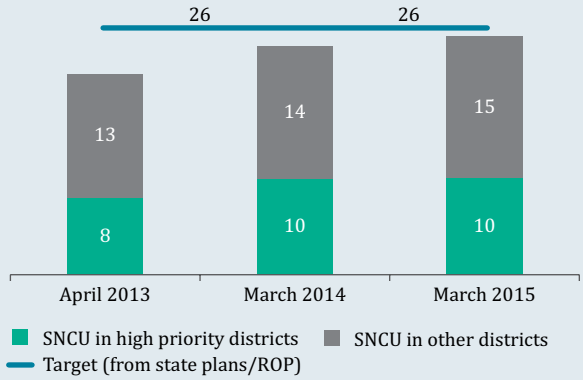


High priority district ● SNCU
Other district ● SNCU became operational in 2014-15

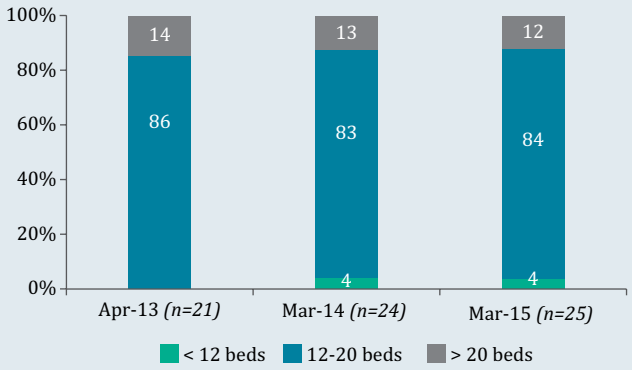
Dots representing SNCUs are plotted randomly within the district boundary.

NMR (SRS 2013)	25	
ENMR (SRS 2013)	21	
Districts	13	
Total SNCUs	25	Chitoor, East Godavari, Kurnool, Visakhapatnam districts had 3 SNCUs each and Cuddapah, Guntur, Krishna, Vizianagaram had 2 SNCUs each
Districts without SNCU	Nil	
High Priority Districts (HPDs)	4	No HPDs were without SNCUs

Planned versus Operational (N)



Bed-strength Distribution (%)



Adequacy of Human Resources (%)

DATA NOT REPORTED

Standard Norms

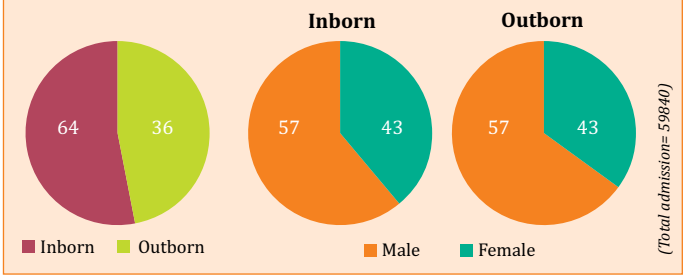
Establishment:
- Any health facility ≥ 3000 deliveries per year

Bed Strength:
- Minimum 12 beds/unit
- Additional 4 beds per 1000 deliveries/year

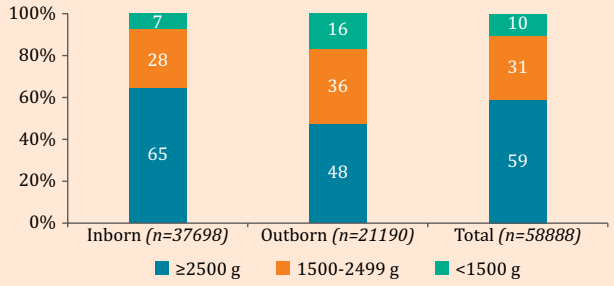
Human Resource:
- 1 doctor for 4 beds
- 2 nurses for 3 beds

ADMISSION PROFILE

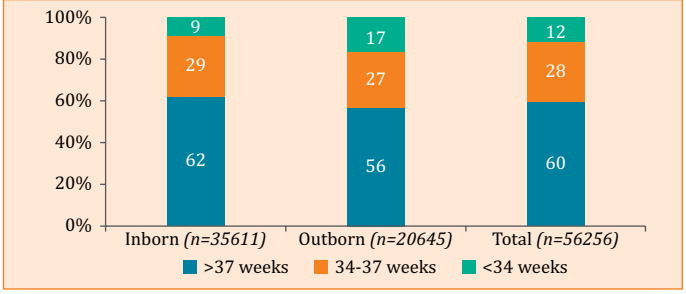
Place of Birth and Gender (%)



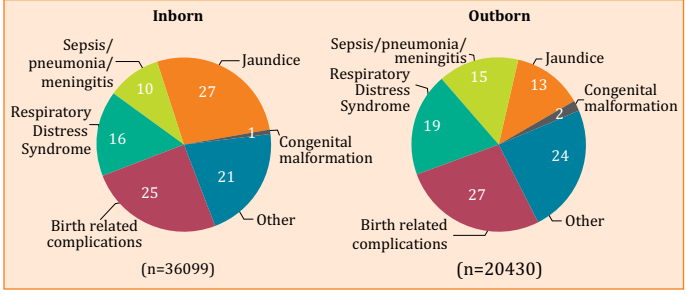
Birth Weight (%)



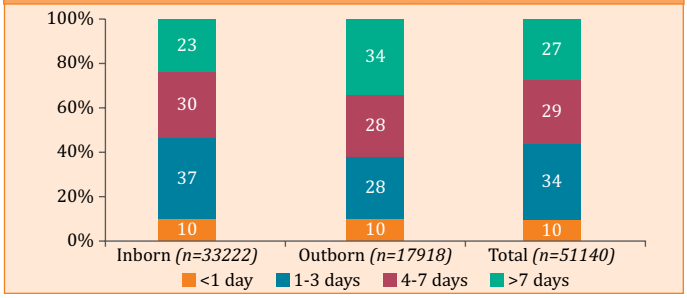
Gestational Age (%)



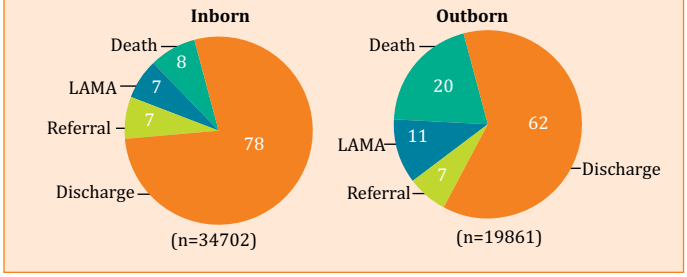
Causes of Admission (%)



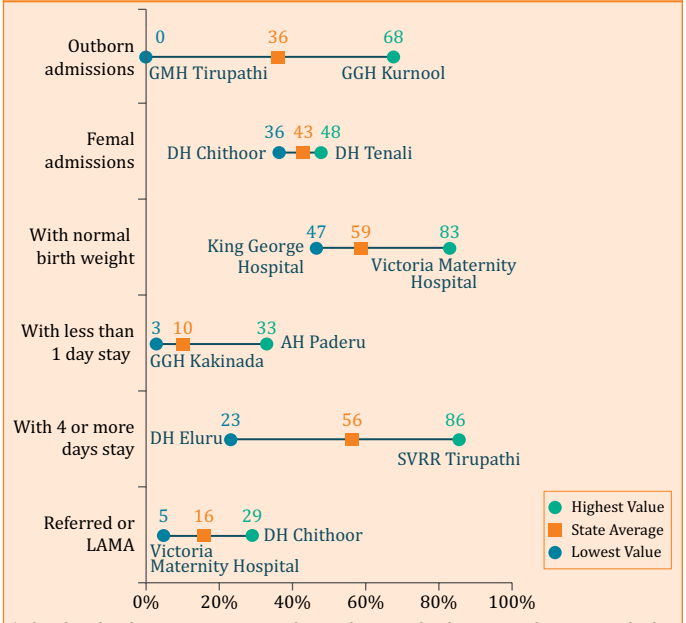
Duration of Stay (%)



Outcome (%)

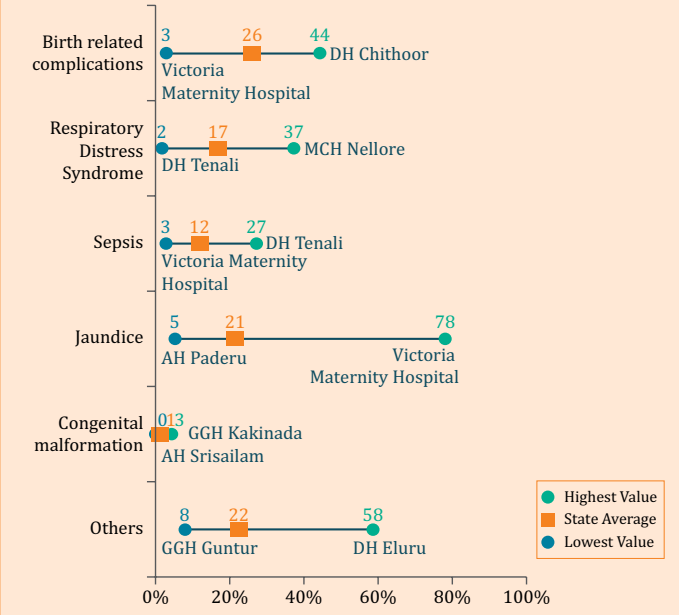


Variations in Key Admission Indicators (%)*



*When data distribution is not symmetrical, mean does not robustly represent the true central value.

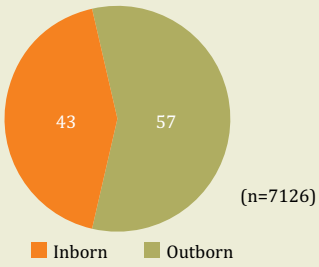
Variations in Causes of Admission (%)*



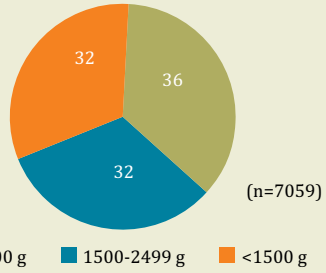
*When data distribution is not symmetrical, mean does not robustly represent the true central value.

MORTALITY PROFILE

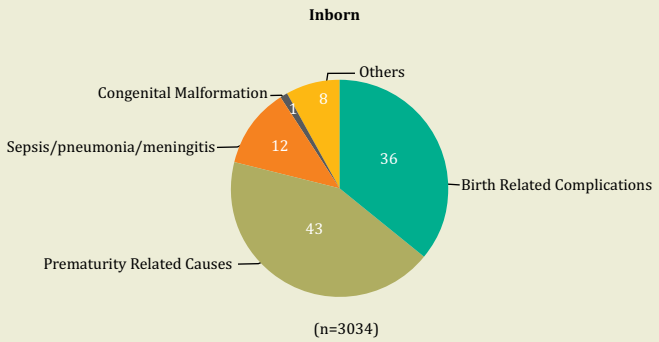
Place of Birth (%)

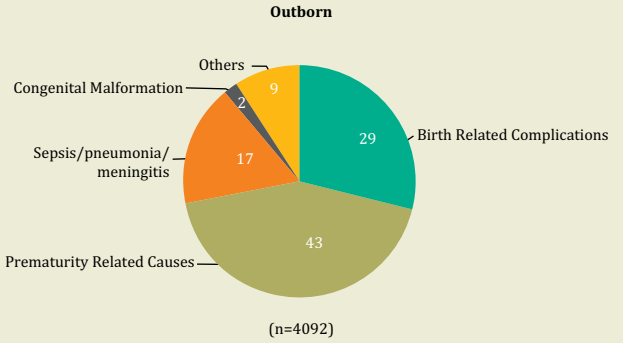


Weight at Birth (%)



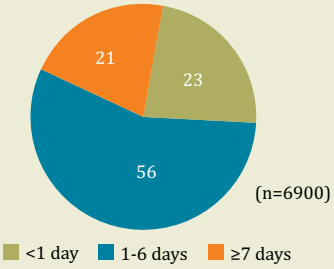
Causes of Mortality (%)



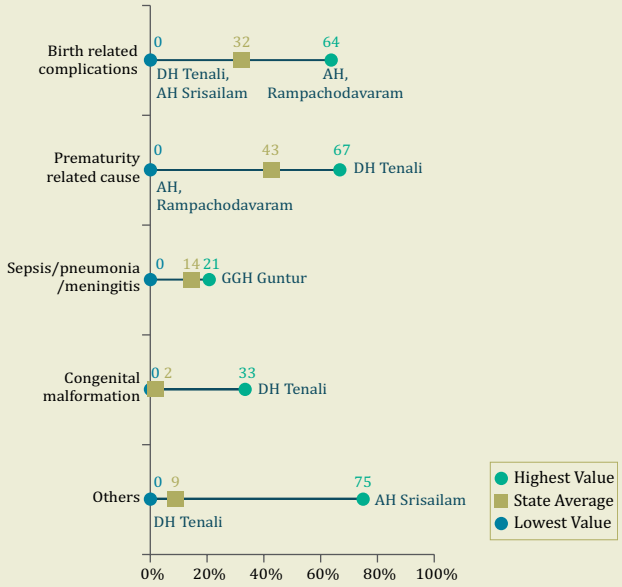


** 'Others' include:Other causes, Cause not established.*

Distribution by Age (%)



Variations in Causes of Mortality (%)*



**When data distribution is not symmetrical, mean does not robustly represent the true central value.*

KEY FINDINGS

- All the 13 districts have an operational SNCU; more than half of them have more than one operational unit.
- Compared to the inborn admissions, a higher proportion of outborn admission babies:
  - were LBW (52% vs 35%).
  - had SNCU Stay for > 4 days (62% vs 53%).
  - had adverse outcomes and referrals (38% vs 22%).

  Nearly 60% of all the deaths were among outborn admissions.
- Almost 40% of admitted babies were of LBW and these babies contributed to 2/3rd of total deaths.
- For Inborn admissions, jaundice and birth related complications were the main causes of admission.
- Prematurity related causes and birth related complications were the two main causes of death among both inborn and outborn admissions, intra-state variation is observed for both of these causes.

WAY FORWARD

- Review the existing requirement of the districts for effective care of sick newborns in terms of disease burden and operational effectiveness and efficiency.
- Focus on community level interventions for early identification of sick newborns (including LBW babies), their initial management and appropriate referral to higher facility.
- Regularly review the functioning of units showing great variation in morbidity mortality statistics, including their ability to follow admission/discharge protocols and data recording and reporting processes. Facility specific plans can be developed and followed.
- Higher proportion of birth related complications among both inborn and outborn admissions suggest need to focus on quality of intrapartum care.

Statistics at a Glance (April 2013-March-2015)

SNCU	Bed strength (N)	Total admissions (N)	Inborn admission rate	Female admissions (%)	Out-born admissions (%)	LBW admissions (%)	Duration of stay < 1 day (%)	Duration of stay ≥ 4 days (%)	Discharged (%)	Causes of Morbidity (%)			Mortality rate (%)	Causes of Mortality (%)		
										RDS	Birth related complication	Sepsis/ Pneumonia/ Meningitis		Prematurity related causes	Birth related	Sepsis/ pneumonia/ meningitis
ANANTHAPURAMU	20	2303	0.11	44	45	47	10	49	78	11	34	13	12	52	32	14
DH CHITHOOR	20	1195	0.15	36	24	33	17	62	69	9	44	6	2	35	45	5
GMH, TIRUPATHI	20	1651	0.09	40	0	36	12	66	74	31	28	7	2	50	26	15
SVRR TIRUPATHI	20	1662		42	64	51	3	86	84	10	29	24	5	36	41	20
KADAPA DISTRICT HOSPITAL PRODDATUR	20	2220		46	26	43	7	58	70	14	24	13	12	46	27	14
KADAPA, APVVP DIST. HOSPITAL.	20	1031	0.40	44	29	43	10	57	79	8	26	10	10	53	24	14
AH, RAMPACHODAVARAM	12	928	0.53	47	23	43	16	30	74	2	36	7	1	0	64	18
DH RAJAHMUNDRY	20	2780	0.43	45	9	36	14	51	75	10	30	20	2	45	40	7
RANGARAYA MEDICAL COLLEGE, (GGH) KAKINADA	20	4985	0.19	40	45	44	3	81	72	9	36	12	21	36	36	12
DH, TENALI	20	1768	0.52	48	20	23	27	42	91	2	8	27	0	67	0	0
GGH GUNTUR	23	4402	0.18	43	50	44	9	72	60	34	20	17	27	49	29	21
DH MACHILIPATNAM	20	2051	0.34	42	17	30	8	76	75	8	15	5	6	45	27	17
SIDDHARTHA MEDICAL COLLEGE VIJAYAWADA	16	2484		43	48	47	13	48	64	24	26	12	25	53	21	14
AH, SRISAILAM	10	120	0.35	39	13	27	25	29	68	36	26	3	3	25	0	0
DH NANDYAL	20	2953	0.26	43	31	45	6	53	71	18	13	6	9	43	23	11
GGH, KURNOOL	20	5285	0.10	42	68	53	6	60	65	21	33	17	17	42	32	17
MCH, NELLORE	20	1757	0.12	40	35	52	6	73	72	37	24	6	11	54	27	12
RIMS ONGOLE	24	1449	0.27	44	27	40	11	62	76	20	17	20	4	29	40	6
RIMS SRIKAKULAM	20	2415	0.19	44	46	43	9	62	67	6	35	10	19	26	42	14
AH, PADERU	12	696	0.23	39	44	52	33	26	70	16	35	7	7	63	27	0
KING GEORGE HOSPITAL	20	4553		43	52	53	15	57	56	20	30	11	22	41	36	14
VICTORIA MATERNITY HOSPITAL	20	2324	0.16	46	0	17	5	27	95	7	3	3	0	0	0	0
AH, PARVATHIPURAM	12	1189	0.13	42	58	43	8	60	73	10	18	11	10	30	18	3
MATERNITY HOSPITAL	21	4523	0.36	44	17	22	10	26	77	21	35	8	5	38	48	4
DH, ELURU	20	1449	0.33	42	13	35	25	23	80	6	15	12	0	29	29	0

The numbers highlighted indicate the upper & lower limit for the variable.

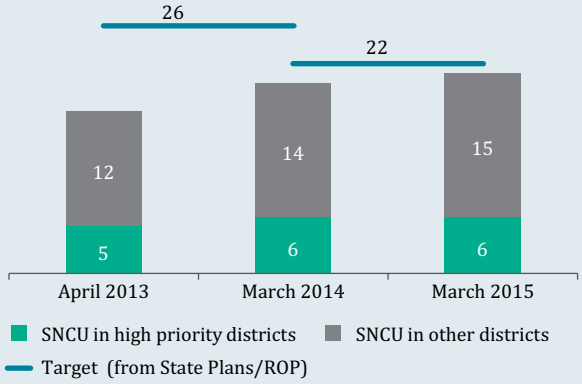
ASSAM

OPERATIONAL STATUS

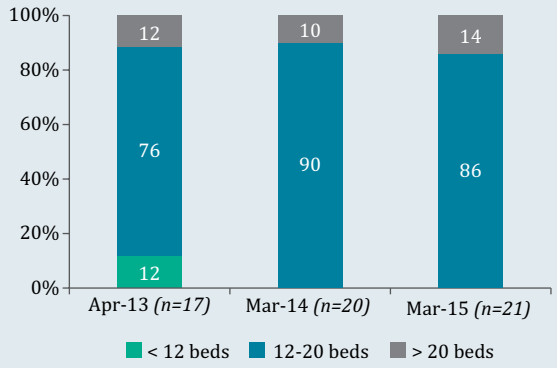
Dots representing SNCUs are plotted randomly within the district boundary.

NMR (SRS 2013)	27	
ENMR (SRS 2013)	21	
Districts	27	
Total SNCUs	21	Kamrup (M) district had 2 SNCUs
Districts without SNCU	7	
High Priority Districts (HPDs)	6	No HPDs was without SNCU

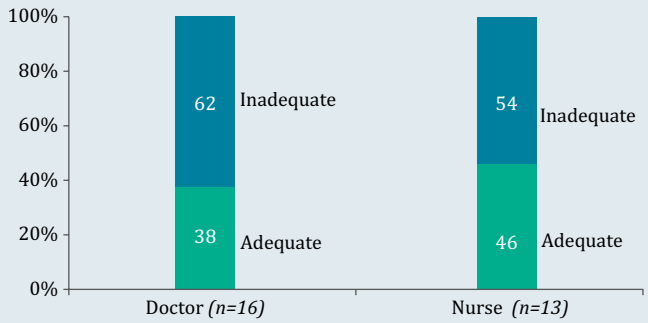
Planned versus Operational (N)



Bed-strength Distribution (%)



Adequacy of Human Resources (%)



**No data available for doctors in 5 SNCUs and for nurses in 8 SNCUs.*

Standard Norms

Establishment:

- Any health facility ≥ 3000 deliveries per year

Bed Strength:

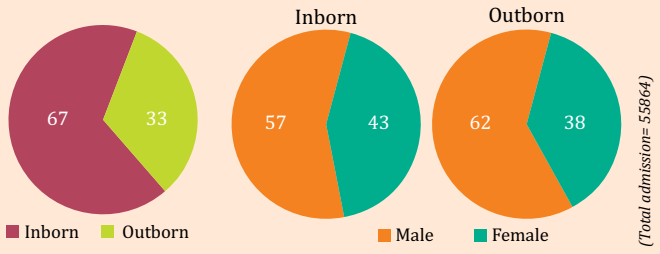
- Minimum 12 beds/unit
- Additional 4 beds per 1000 deliveries/year

Human Resource:

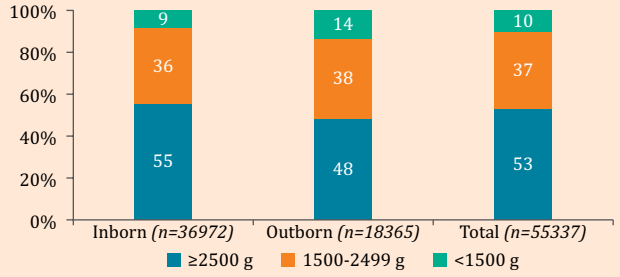
- 1 doctor for 4 beds
- 2 nurses for 3 beds

ADMISSION PROFILE

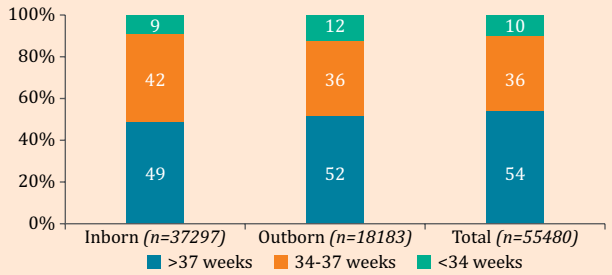
Place of Birth and Gender (%)



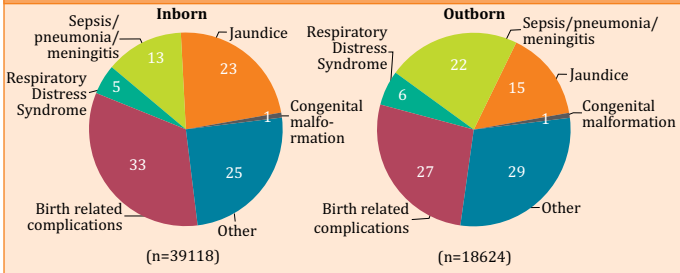
Birth Weight (%)



Gestational Age (%)

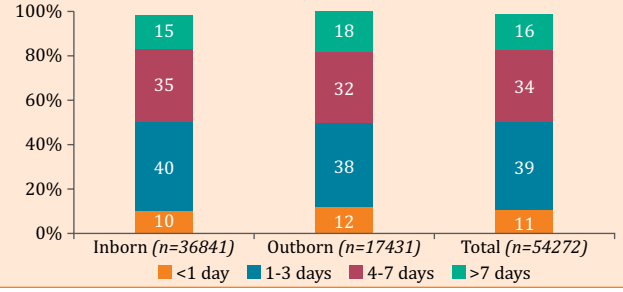


Causes of Admission (%)

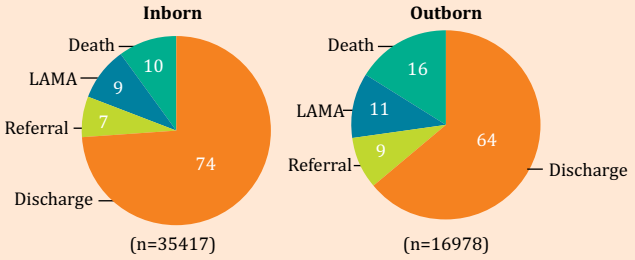


*'Others' include: Other causes of respiratory distress, Hypothermia, Hypoglycemia, Others.

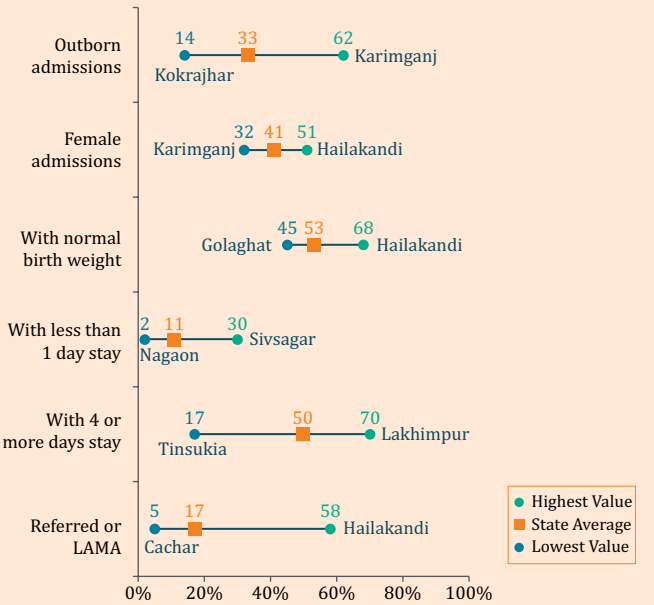
Duration of Stay (%)



Outcome (%)

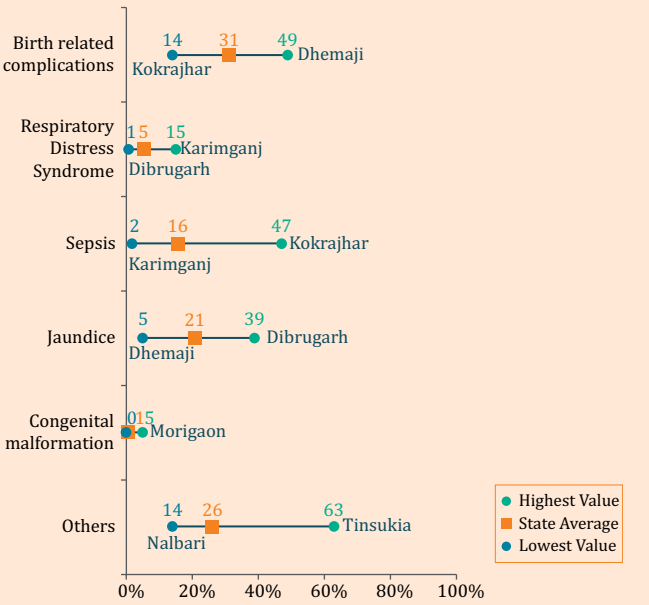


Variations in Key Admission Indicators (%)*



*When data distribution is not symmetrical, mean does not robustly represent the true central value.

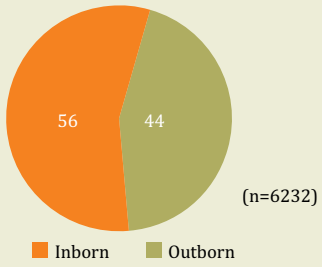
Variations in Causes of Admission (%)*



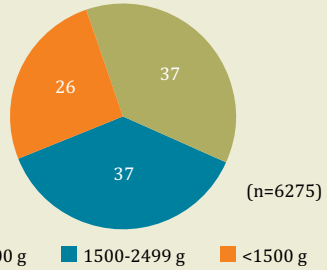
*When data distribution is not symmetrical, mean does not robustly represent the true central value.

MORTALITY PROFILE

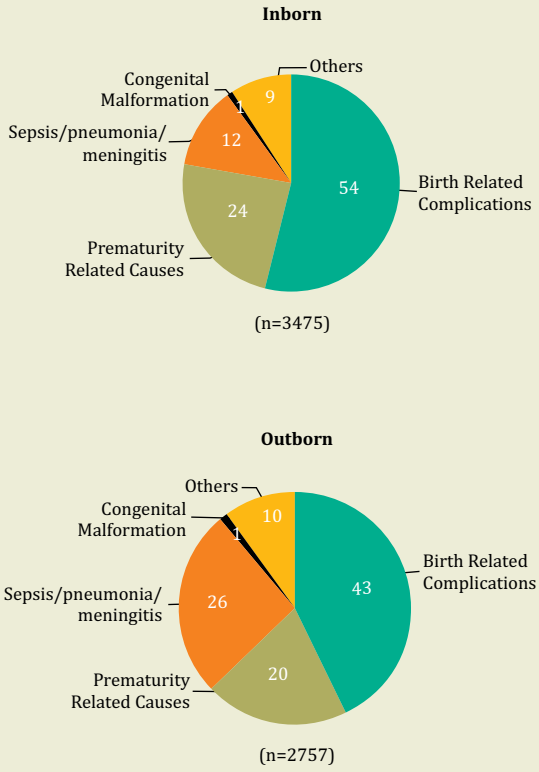
Place of Birth (%)



Weight at Birth (%)

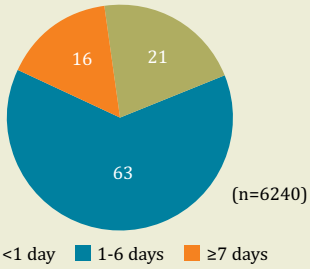


Causes of Mortality (%)

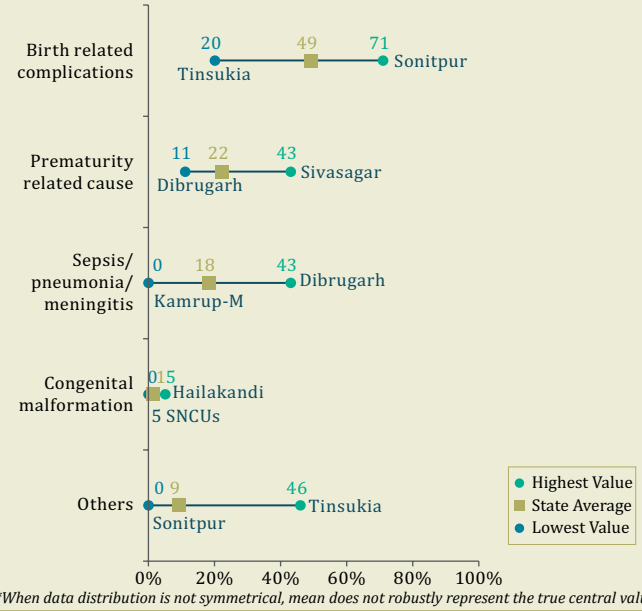


** 'Others' include:Other causes, Cause not established.*

Distribution by Age (%)



Variations in Causes of Mortality (%)*



**When data distribution is not symmetrical, mean does not robustly represent the true central value.*

KEY FINDINGS

- SNCUs were operational in 74% districts (20/27). All HPDs had an SNCU (6/6). More than 50% of the units had inadequate number of doctors and nurses.
- Percentage of inborn admissions (67%) was twice that of outborn admissions (33%). For both inborn and outborn admissions female admissions were lower than male admissions.
- More than half of admitted babies had normal birth weight (53%) and more than half (54%) were full term.
- Nearly 11% babies stayed in the SNCUs for less than one day of admission.
- Birth related complications were the most common cause of death for both inborn and outborn admissions. Prematurity related causes for inborn and sepsis for outborn were the second most common cause of death.

WAY FORWARD

- State needs to prioritize establishment of new units or make arrangements for alternate mechanisms for care of small and sick newborns in the districts without SNCU.
- Higher proportion of birth related complications among both inborn and outborn admissions suggest need to focus on quality of intrapartum care.
- Regularly review the functioning of units showing great variation in morbidity and/or mortality statistics, including their ability to follow admission/discharge protocols and data recording and reporting processes.

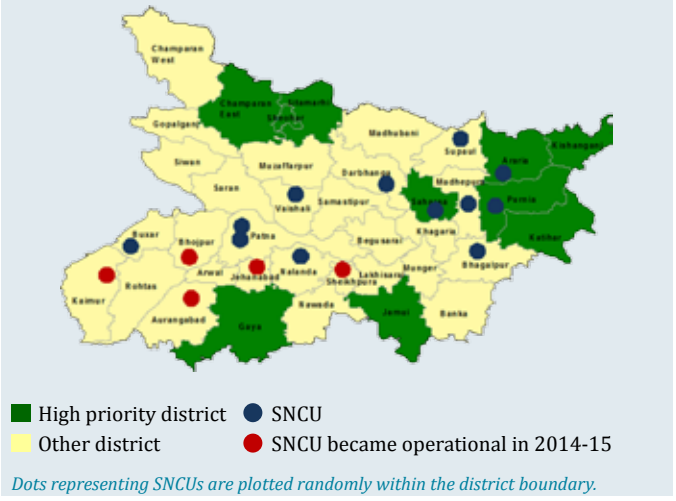
Statistics at a Glance (April 2013-March-2015)

SNCU	Bed strength (N)	Total admissions (N)	Inborn admission rate	Female admissions (%)	Out-born admissions (%)	LBW admissions (%)	Duration of stay < 1 day (%)	Duration of stay ≥ 4 days (%)	Discharged (%)	Causes of Morbidity (%)			Mortality rate (%)	Causes of Mortality (%)		
										RDS	Birth related complication	Sepsis/ Pneumonia/ Meningitis		Prematurity related causes	Birth related complications	Sepsis/ pneumonia/ meningitis
BONGAIGAON	16	1034	0.20	41	28	43	13	59	56	2	43	8	16	12	61	5
SILCHAR MEDICAL COLLEGE, CACHAR	15	6464	0.21	38	39	55	6	64	71	11	33	11	21	26	51	13
DARRANG	13	2295	0.11	39	40	50	14	41	58	2	44	7	10	21	58	3
DHEMAJI	12	1450	0.13	38	21	44	5	38	78	6	49	3	13	24	46	5
DHUBRI	17	2743	0.11	36	46	53	14	25	54	3	45	18	20	17	57	20
DIBRUGARH	40	6345	0.27	43	32	55	12	48	81	1	18	15	9	11	38	43
GOALPARA	14	2249	0.21	40	34	41	20	37	63	6	47	6	14	26	62	6
GOLAGHAT	15	2230	0.12	39	33	55	5	54	74	5	22	10	12	32	34	17
HAILAKANDI	14	2187	0.16	51	47	32	25	28	28	4	42	32	11	18	51	18
JORHAT	24	5322	0.32	44	24	43	3	63	84	4	23	25	8	16	32	42
KOKRAJHAR	14	1728	0.24	42	14	43	26	32	86	10	14	47	4	13	30	30
LAKHIMPUR	15	2459	0.17	40	29	41	6	70	71	6	36	30	16	18	55	12
KAMRUP(M)	39	5113	0.18	42	38	43	11	61	65	6	24	15	13	24	44	24
MMCH KAMRUP(M)	12	104	0.09	48	33	45	17	50	66	1	24	11	6	17	50	0
NAGAON	14	3527	0.14	40	47	44	2	51	84	11	47	14	4	29	56	15
NALBARI	15	2843	0.23	42	21	41	8	48	76	2	29	22	5	27	57	12
SONITPUR	16	3092	0.28	42	23	42	7	51	72	4	41	3	10	25	71	3
SIVASAGAR	14	2085	0.23	42	23	44	30	36	62	3	31	14	4	43	44	11
KARIMGANJ	15	1040	0.12	32	62	52	19	42	69	15	23	2	10	41	38	3
TINSUKIA	14	940	0.12	45	21	54	27	17	67	5	21	3	4	34	20	0
MORIGAON	14	614	0.10	43	27	51	25	41	60	11	25	4	3	41	29	6

**The numbers highlighted indicate the upper & lower limit for the variable.*

BIHAR

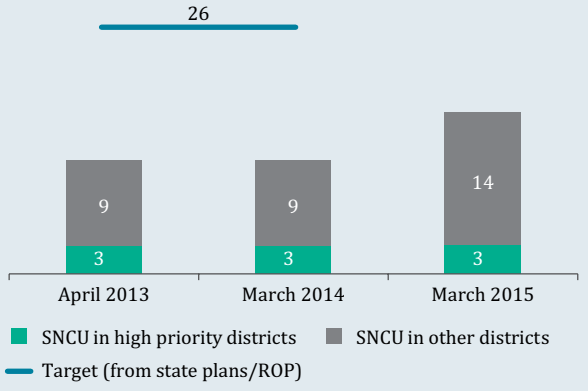
OPERATIONAL STATUS



Dots representing SNCUs are plotted randomly within the district boundary.

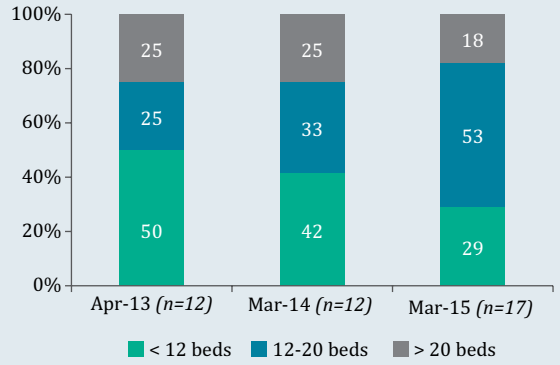
NMR (SRS 2013)	28	
ENMR (SRS 2013)	23	
Districts	38	
Total SNCUs	17	Patna district had 2 SNCUs
Districts without SNCU	22	
High Priority Districts (HPDs)	10	7 HPDs were without SNCUs viz., Champaran East, Gaya, Jamui, Katihar, Kishanganj, Seohar and Sitamarhi

Planned versus Operational (N)

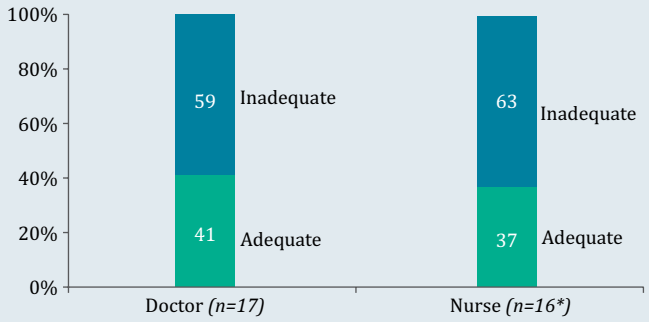


** No target for 2014-15*

Bed-strength Distribution (%)



Adequacy of Human Resources (%)



**No data available for Nurses in 1 SNCU.*

Standard Norms

Establishment:

- Any health facility ≥ 3000 deliveries per year

Bed Strength:

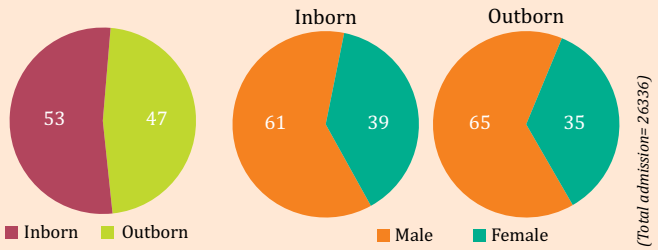
- Minimum 12 beds/unit
- Additional 4 beds per 1000 deliveries/year

Human Resource:

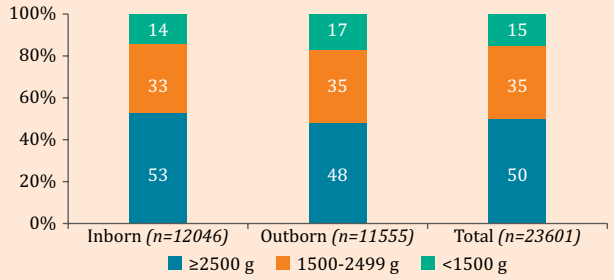
- 1 doctor for 4 beds
- 2 nurses for 3 beds

ADMISSION PROFILE

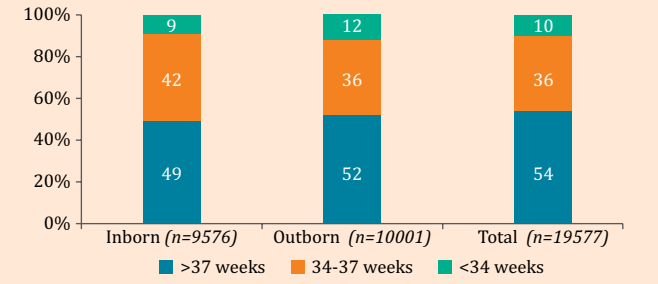
Place of Birth and Gender (%)



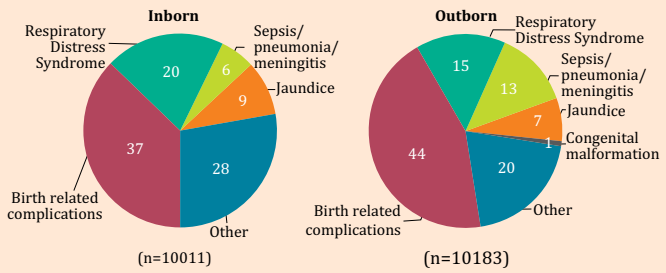
Birth Weight (%)



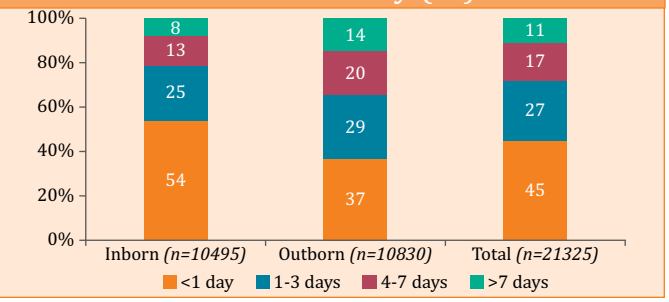
Gestational Age (%)



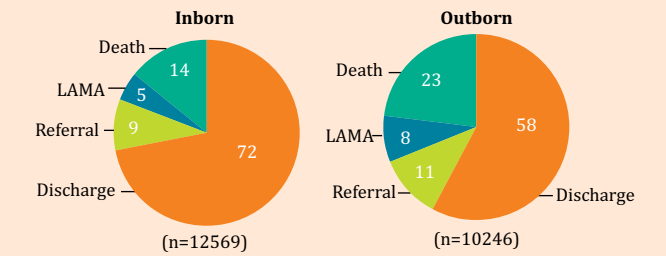
Causes of Admission (%)



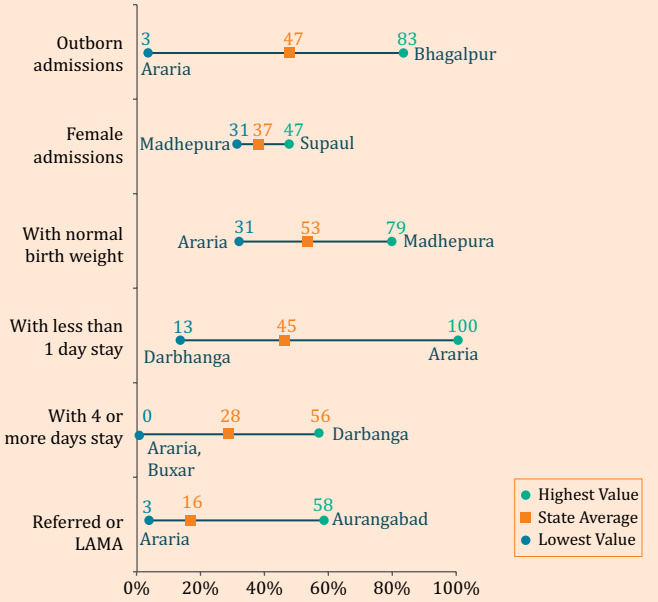
Duration of Stay (%)



Outcome (%)

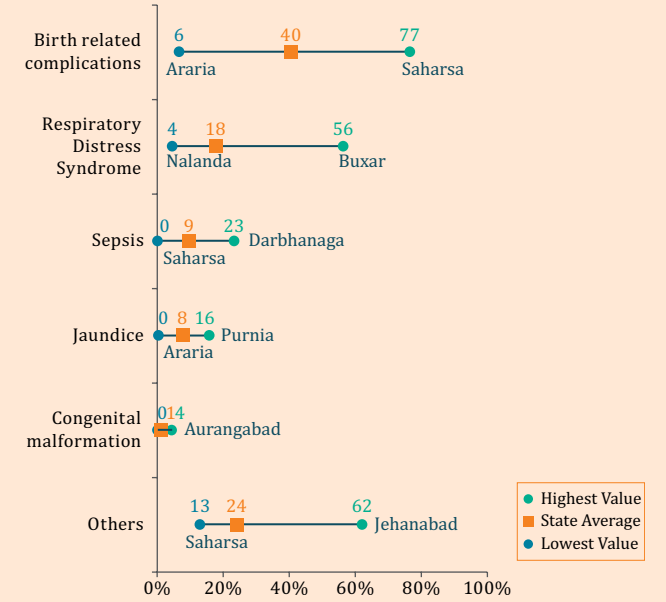


Variations in Key Admission Indicators (%)*



*When data distribution is not symmetrical, mean does not robustly represent the true central value.

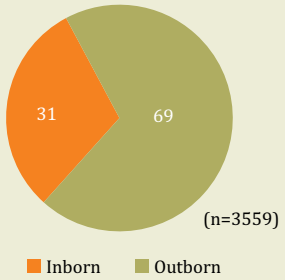
Variations in Causes of Admission (%)*



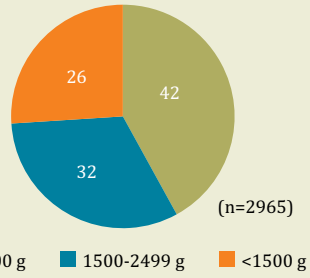
*When data distribution is not symmetrical, mean does not robustly represent the true central value.

MORTALITY PROFILE

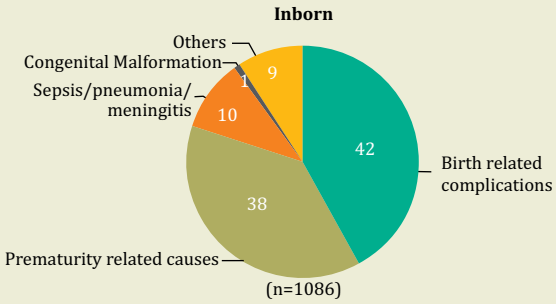
Place of Birth (%)

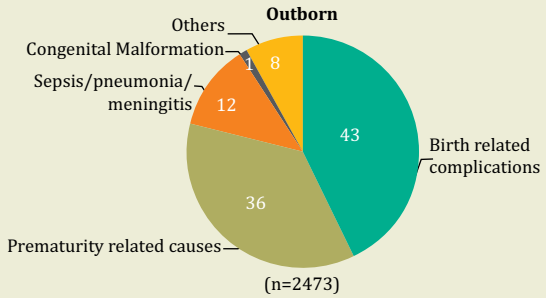


Weight at Birth (%)



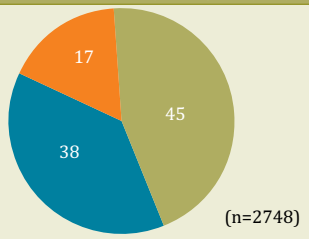
Causes of Mortality (%)



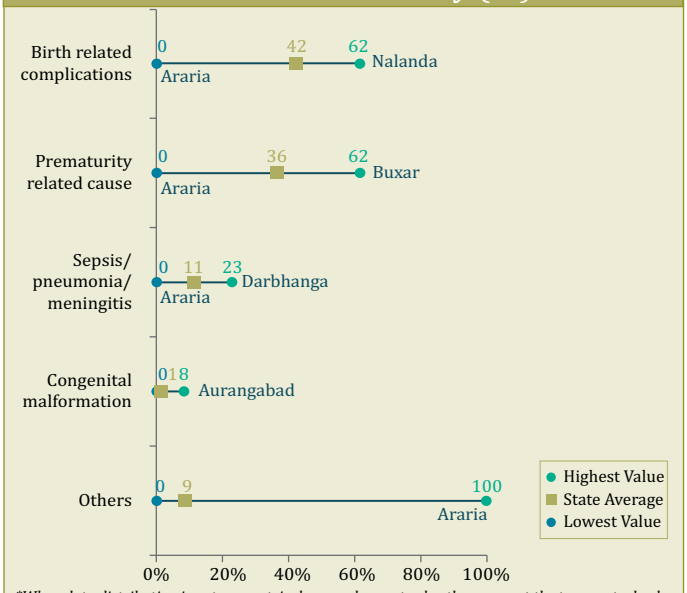


** 'Others' include:Other causes, Cause not established.*

Distribution by Age (%)



Variations in Mortality (%)



**When data distribution is not symmetrical, mean does not robustly represent the true central value.*

KEY FINDINGS

- Of all districts, 58% (22/38) including 70% of high priority districts, were without an operational SNCU. Of the 17 functional units in the state, 5 units had bed strength of 12 or less and 60% of units have less than adequate number of doctors and nurses.
- Half of the total admissions had birth weight ≥2500g and nearly half stayed in the SNCUs for less than 24 hours.
- Birth complication was the most common diagnosis at the time of admission and also the major cause of mortality for both inborn and outborn admission.
- The second most common diagnosis at admission was 'others' followed by RDS for both inborn and outborn admission.
- Intra-state variation was observed for the major causes of morbidity and mortality.
- More than half of the deaths occurred among LBW babies and 45% of deaths occurred in babies <1 day old.

WAY FORWARD

- Prioritize developing a mechanism for facility care of sick newborn in each district, particularly in the HPDs till the new units are established.
- Urgently review the quality of delivery practices/intrapartum care in labor rooms and Quality of Care at functional SNCUs including criteria for admission, discharge and reporting/recording.
- Develop plan of action for each SNCU and regular review and monitor their functioning including providing mentoring support.
- Need to strengthen community to facility linkages and emergency transportation and referral of sick newborn.
- Strengthen community level interventions for early identification and management of sick newborns and develop linkages between community and facility.

Statistics at a Glance (April 2013-March-2015)

SNCU	Bed strength (N)	Total admissions (N)	Inborn admission rate	Female admissions (%)	Out-born admissions (%)	LBW admissions (%)	Duration of stay < 1 day (%)	Duration of stay ≥4 days (%)	Discharged alive (%)	Causes of Mortality (%)			Mortality rate (%)	Causes of Mortality (%)		
										RDS	Birth related complications	Sepsis/ Pneumonia/ Meningitis		Prematurity related causes	Birth related complications	Sepsis/pneumonia/ meningitis
SDH, NALANDA	12	1514	0.06	39	33	56	17	42	67	4	56	7	5	25	62	12
SDH, PURNIYA	6	3607	0.13	37	43	51	67	11	86	17	38	2	4	48	36	8
SDH, ARARIA	6	2112	0.07	43	3	43	100	0	97	41	6	1	1	0	0	0
SDH, MADHEPURA	5	992	0.04	31	53	21	73	3	53	15	51	2	5	26	55	8
SDH, SUPAUL	5	2196	0.11	47	12	36	95	0	93	3	37	9	1	0	100	0
SDH, SAHARASA*	6	1773	0.06	32	47	39	30	19	57	8	77	0	13	33	53	11
SDH,DARBHANGA	16	2128	0.09	34	56	43	13	56	68	13	36	23	25	29	42	23
SDH,BHAGALPUR	24	1469	0.07	33	83	63	27	41	63	27	35	8	27	38	34	8
SDH,VAISHALI	12	2707	0.06	33	49	47	30	39	53	9	59	10	12	32	54	8
PATNA NMCH	24	2166	0.17	39	56	60	44	30	65	19	38	15	18	37	41	7
PATNA PMCH	24	4112	0.09	37	71	52	43	40	47	17	37	22	31	39	42	11
SDH, BUXAR	12	210	0.01	40	54	44	67	0	53	56	15	7	45	62	14	5
SDH,JEHANABAD	12	539	0.04	41	59	48	77	0	60	13	22	0	3	14	43	0
SDH, SHEIKHPURA	12	213	0.10	37	24	45	13	38	70	19	10	13	9	40	45	10
SDH, AURANGABAD	12	250	0.06	35	44	53	53	10	38	11	27	7	5	17	58	17
SDH, KAIMUR	12	181	0.09	35	25	28	26	20	71	28	13	7	8	43	7	14
SDH, ARA	12	167	0.09	35	33	69	No data	No data	74	22	48	1	10	56	44	0

The numbers highlighted indicate the upper & lower limit for the variable.

DELHI

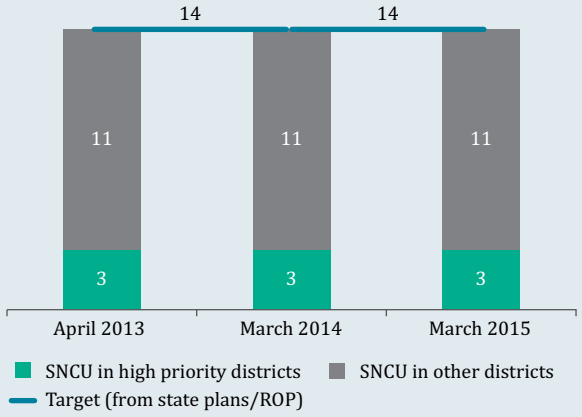
OPERATIONAL STATUS

High priority district ● SNCU
Other district ● SNCU became operational in 2014-15

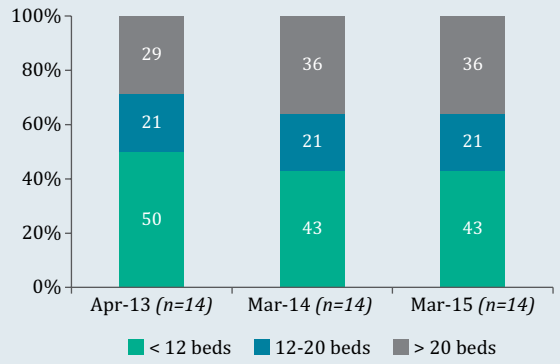
Dots representing SNCUs are plotted randomly within the district boundary.

NMR (SRS 2013)	16	
ENMR (SRS 2013)	11	
Districts	9	
Total SNCUs	14	East Delhi District had 4 SNCUs, New Delhi and North-West District had 2 SNCUs each
Districts without SNCU	Nil	
High Priority Districts (HPDs)	2	No HPD was without SNCUs

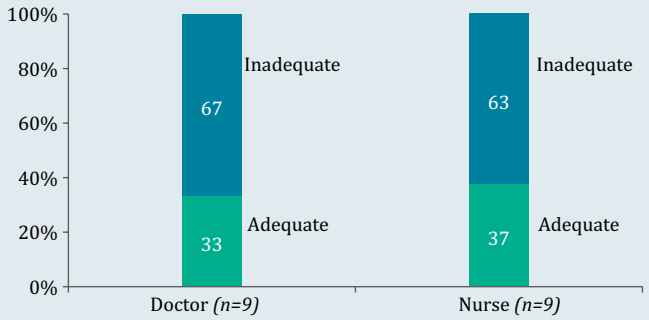
Planned versus Operational (N)



Bed-strength Distribution (%)



Adequacy of Human Resources* (%)



**No data available for Doctors and for Nurses for 5 SNCUs each.*

Standard Norms

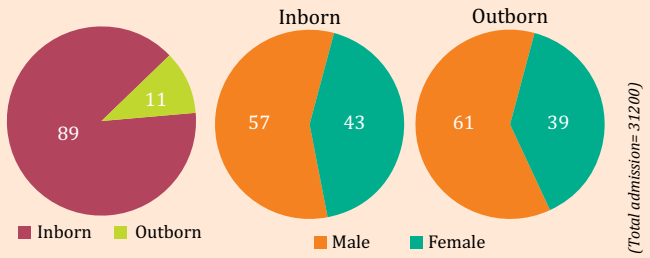
Establishment:
- Any health facility ≥ 3000 deliveries per year

Bed Strength:
- Minimum 12 beds/unit
- Additional 4 beds per 1000 deliveries/year

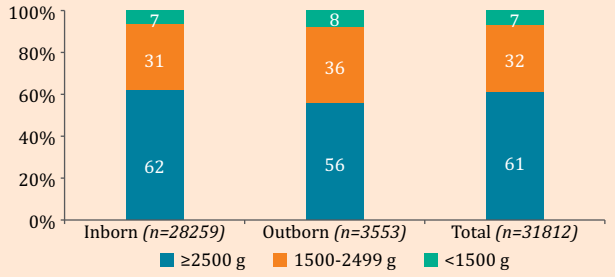
Human Resource:
- 1 doctor for 4 beds
- 2 nurses for 3 beds

ADMISSION PROFILE

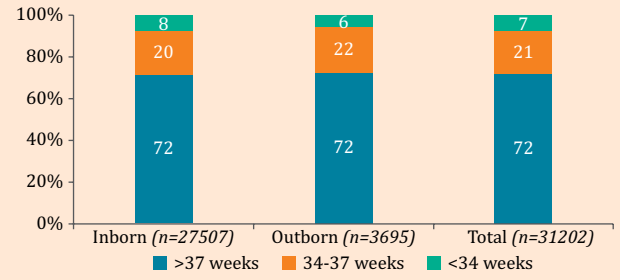
Place of Birth and Gender (%)



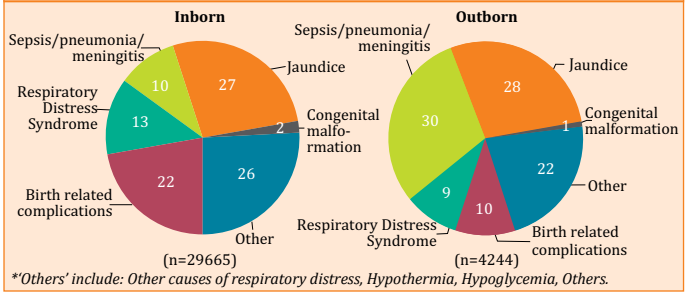
Birth Weight (%)



Gestational Age (%)

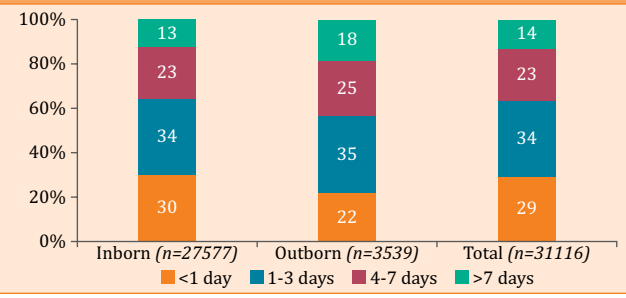


Causes of Admission (%)

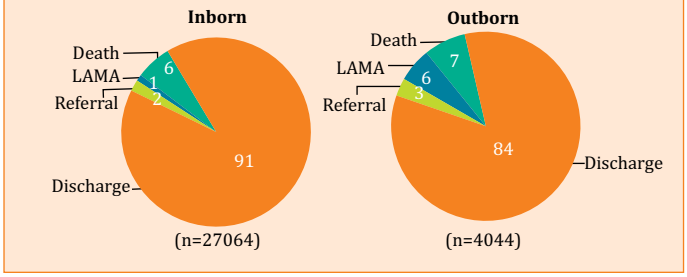


'Others' include: Other causes of respiratory distress, Hypothermia, Hypoglycemia, Others.

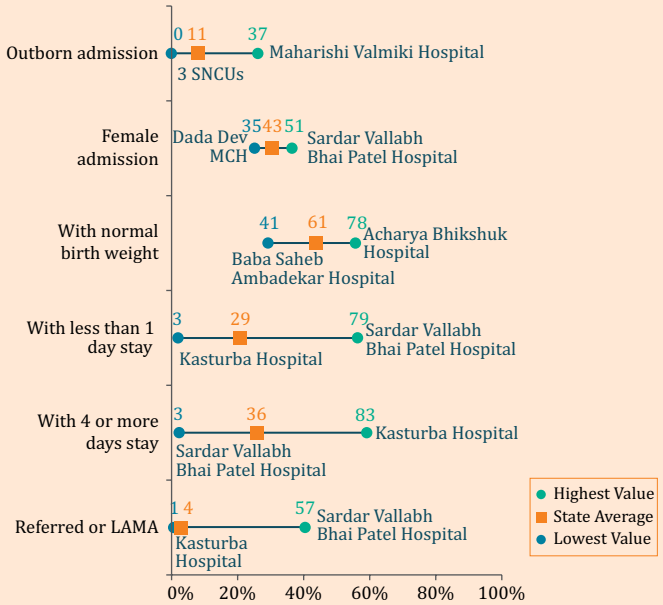
Duration of Stay (%)



Outcome (%)

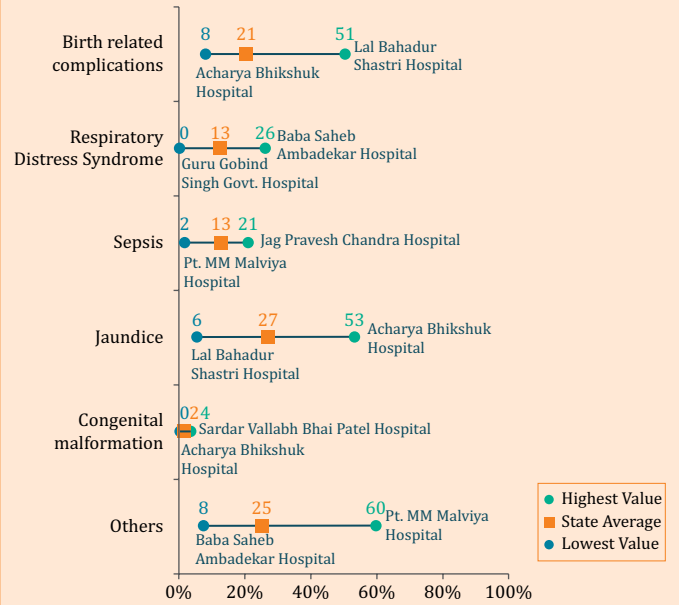


Variations in Key Admission Indicators (%)*



When data distribution is not symmetrical, mean does not robustly represent the true central value.

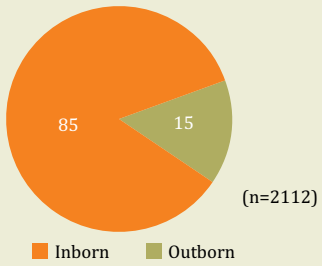
Variations in Causes of Admission (%)*



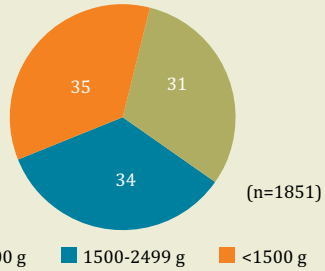
When data distribution is not symmetrical, mean does not robustly represent the true central value.

MORTALITY PROFILE

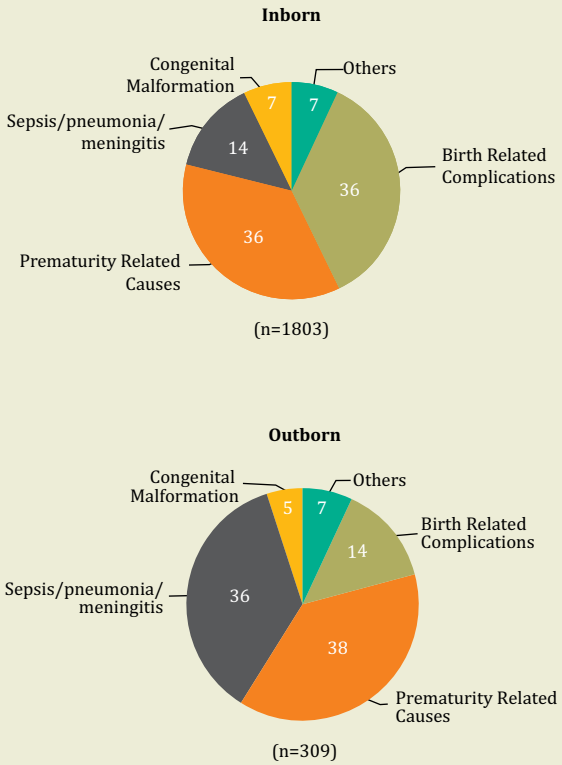
Place of Birth (%)



Weight at Birth (%)

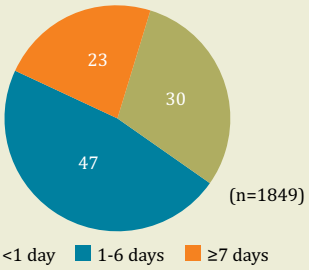


Causes of Mortality (%)

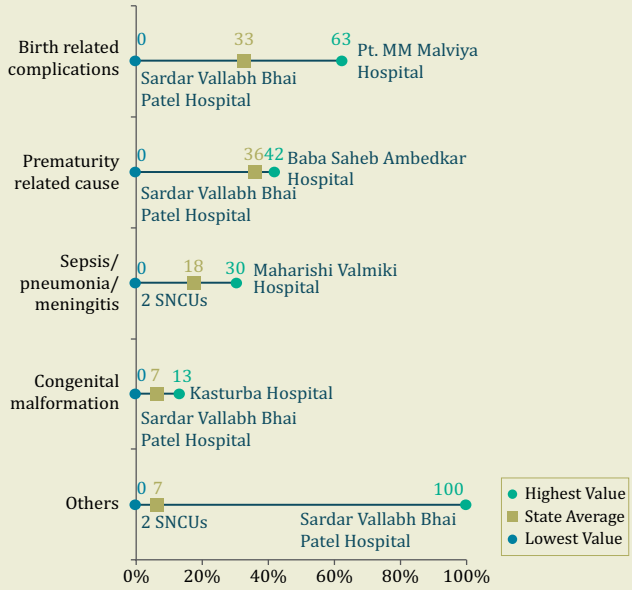


'Others' include: Other causes, Cause not established.

Distribution by Age (%)



Variations in Causes of Mortality (%)*



When data distribution is not symmetrical, mean does not robustly represent the true central value.

KEY FINDINGS

- Although the state had operationalized 14 SNCUs as per plan without exclusion of any of the nine districts, 43% units had <12 beds and almost two-thirds had inadequate doctor and nurses.
- Admissions were predominated by those inborn (89%), males (~60%), babies with birth weight ≥2500g (~60%) and gestational age >37 weeks (72%).
- Most of the admissions were due to jaundice, sepsis (especially, among outborns), birth related complications and 'others'. Discharge rates were very high (84-91%) with most babies leaving on the 1st day (29%) or 1-3 days (34%) of admission.
- Most of the deaths occurred in newborns with birth weight <2500g and of younger age (30% in <1 old babies). Deaths were mostly due to birth related complications and prematurity related causes.
- The proportion of 'others' category as a cause of admission and mortality showed considerable difference across SNCUs.

WAY FORWARD

- The proportion of LBW babies was low at admission but high at mortality. This was likely to be masked by the overall high rate of discharge from the SNCUs. There is a need to review admission and discharge protocols and make arrangements for vulnerable sub-groups of sick newborns like LBW.
- The 'others' label at admission and death shows considerable intra-state variation. Capacity for diagnosis and cause ascertainment needs to be improved and standardized.
- Birth related complications figure among the common causes for admission and mortality although majority of SNCU admissions are inborn. This highlights the need to strengthen institutional care at labour.
- The state needs to improve bed strength and HR in the SNCUs as per norms for operational efficiency and quality of care.

Statistics at a Glance (April 2013-March-2015)

SNCU	Bed strength (N)	Total admissions (N)	Inborn admission rate	Female admissions (%)	Out-born admissions (%)	LBW admissions (%)	Duration of stay < 1 day (%)	Duration of stay ≥ 4 days (%)	Discharged (%)	Causes of Morbidity (%)			Mortality rate (%)	Causes of Mortality (%)		
										RDS	Birth related complication	Sepsis/ Pneumonia/ Meningitis		Prematurity related causes	Birth related complications	Sepsis/ pneumonia/ meningitis
BABA SAHEB AMBADEKAR HOSPITAL	28	3170	0.11	41	31	59	21	45	80	26	26	15	18	42	29	15
MAHARISHI VALMIKI HOSPITAL	23	1764	0.33	42	37	35	8	40	93	3	11	17	5	30	21	30
SHRI DADA DEV MARTI AVUM SHISHU CHIKITSALAYA	12	1613	0.12	35	2	35	21	22	90	25	16	7	5	24	30	26
GURU GOBIN SINGH GOVT. HOSPITAL	22	2861	0.26	41	20	31	54	10	89	0	12	20	2	28	30	22
SANJAY GANDHI MEMORIAL HOSPITAL	20	3251	0.16	43	19	50	35	27	85	12	22	6	12	42	34	13
DR. HEDGEWAR AROGYA SANSTHAN	8	2019	0.21	44	0	23	16	45	95	19	19	5	3	33	42	15
JAG PRAVESH CHANDRA HOSPITAL	16	4659	0.76	48	4	25	52	22	97	13	33	21	2	32	34	25
LAL BAHADUR SHASTRI HOSPITAL	8	798	0.06	39	11	51	10	62	84	16	51	8	14	36	50	7
SWAMY DAYANAND HOSPITAL	8	2037	0.18	40	4	34	21	49	90	7	23	17	6	27	42	23
PT. MADAN MOHAN MALAVIYA HOSPITAL	5	1553	0.21	44	0	28	59	14	95	6	10	2	1	25	63	0
ACHARYABHIKSHUKHOSPITAL	10	1313	0.51	41	3	22	17	27	97	11	8	5	1	20	30	20
SARDAR VALLABH BHAI PATEL HOSPITAL	5	88	0.03	51	11	27	79	3	41	4	37	7	2	0	0	0
KASTURBA HOSPITAL	50	3470	0.21	44	0	53	3	83	93	15	18	12	6	32	37	12
HINDU RAO HOSPITAL	30	2604	0.14	42	11	49	28	32	87	6	24	18	12	34	28	26

The numbers highlighted indicate the upper & lower limit for the variable.

GOA

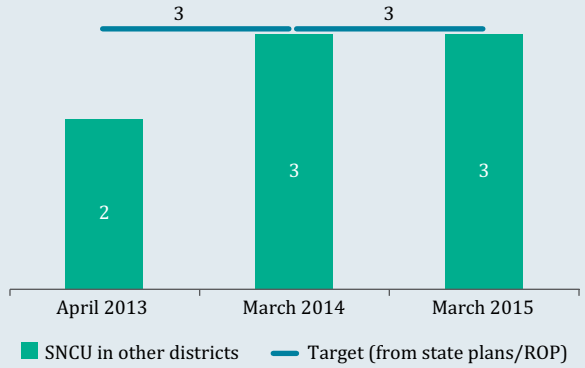
OPERATIONAL STATUS

High priority district
Other district
SNCU
SNCU became operational in 2014-15

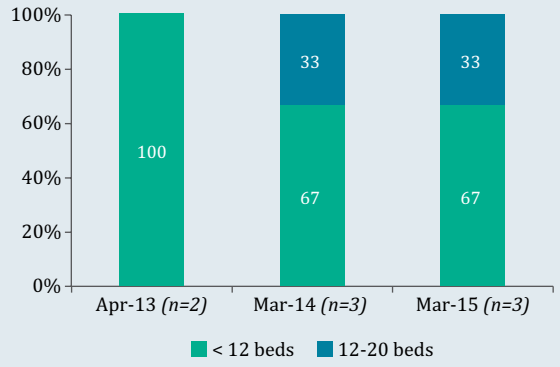
Dots representing SNCUs are plotted randomly within the district boundary.

NMR (SRS 2013)	NA	
ENMR (SRS 2013)	NA	
Districts	2	
Total SNCUs	3	North Goa district had 2 SNCUs
Districts without SNCU	Nil	
High Priority Districts (HPDs)	Nil	

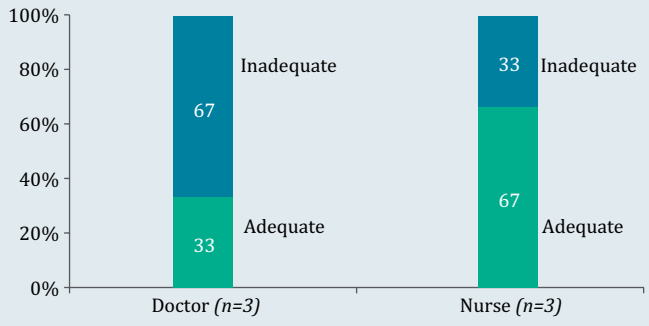
Planned versus Operational (N)



Bed-strength Distribution (%)



Adequacy of Human Resources (%)



Standard Norms

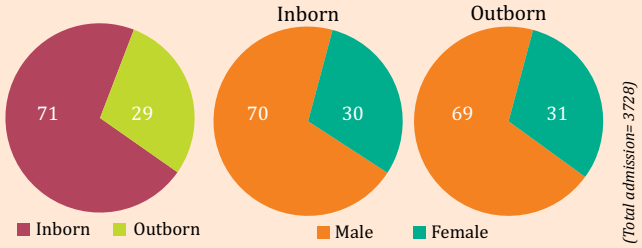
Establishment:
- Any health facility ≥ 3000 deliveries per year

Bed Strength:
- Minimum 12 beds/unit
- Additional 4 beds per 1000 deliveries/year

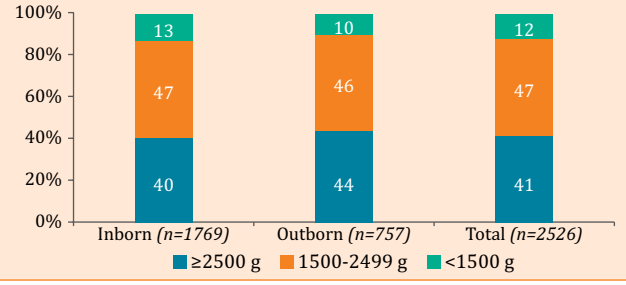
Human Resource:
- 1 doctor for 4 beds
- 2 nurses for 3 beds

ADMISSION PROFILE

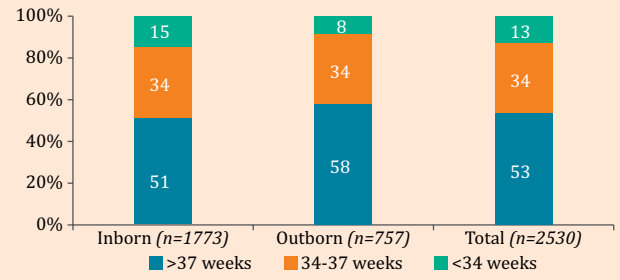
Place of Birth and Gender (%)



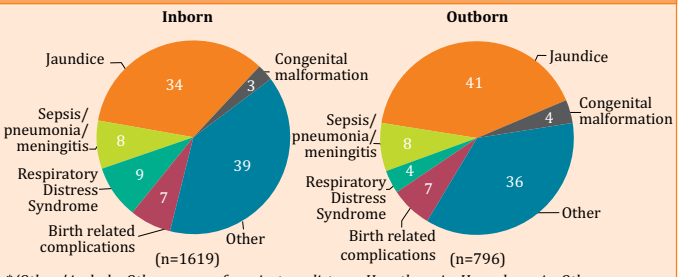
Birth Weight (%)



Gestational Age (%)

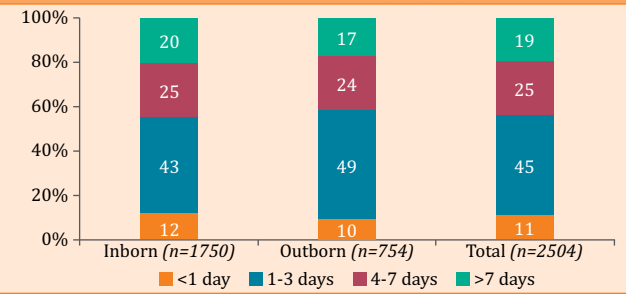


Causes of Admission (%)

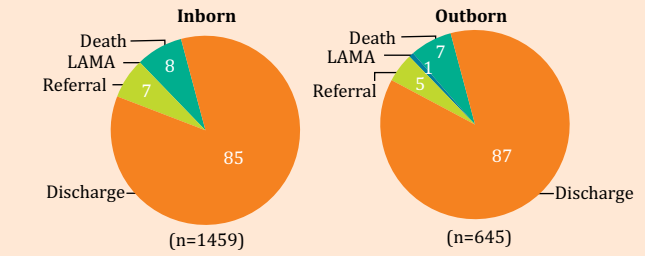


** 'Others' include: Other causes of respiratory distress, Hypothermia, Hypoglycemia, Others.*

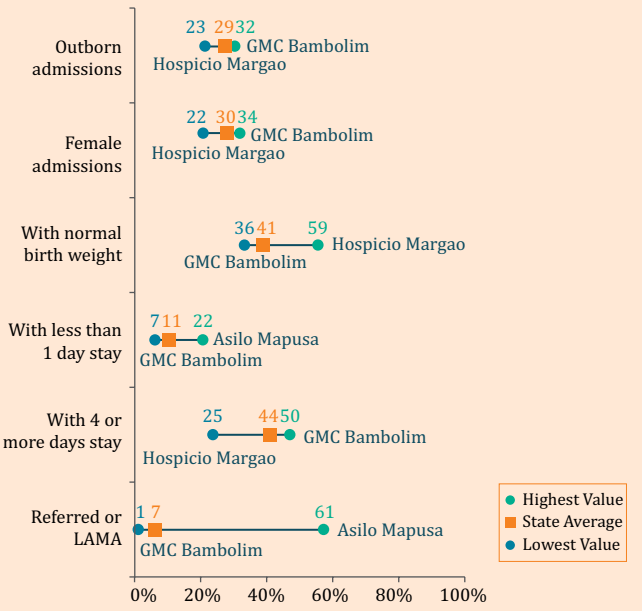
Duration of Stay (%)



Outcome (%)

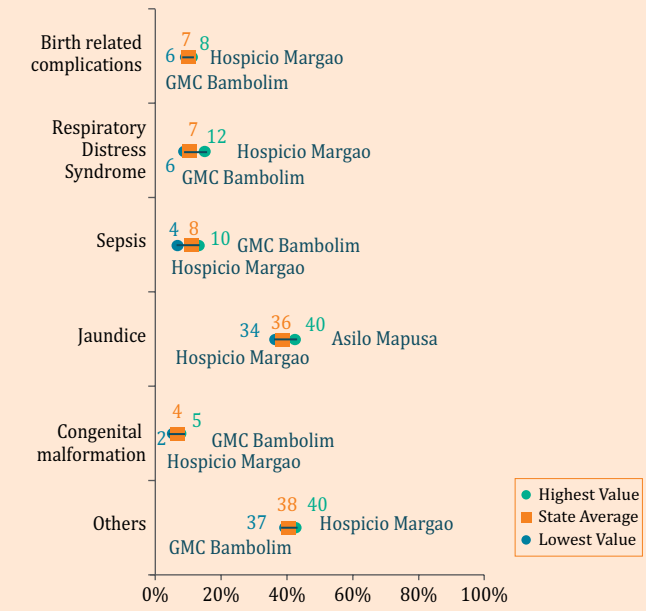


Variations in Key Admission Indicators (%)*



**When data distribution is not symmetrical, mean does not robustly represent the true central value.*

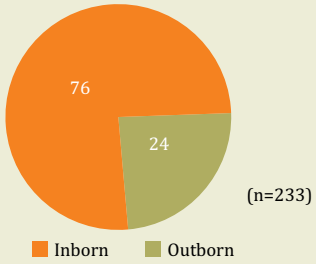
Variations in Causes of Admission (%)*



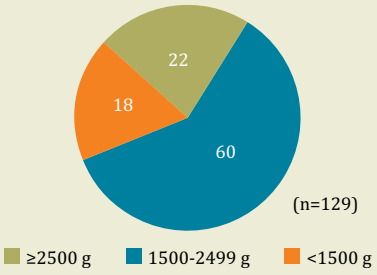
**When data distribution is not symmetrical, mean does not robustly represent the true central value.*

MORTALITY PROFILE

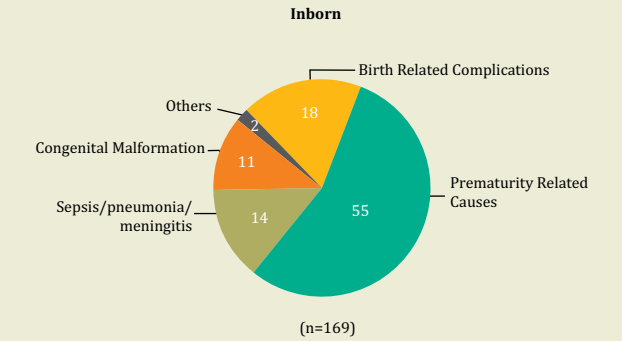
Place of Birth (%)

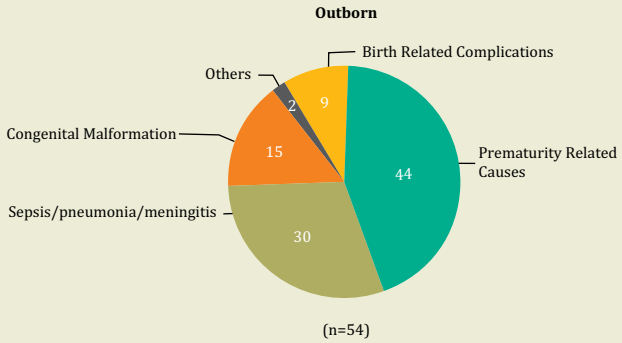


Weight at Birth (%)



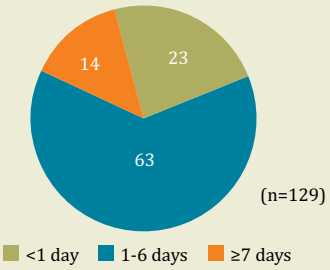
Causes of Mortality (%)



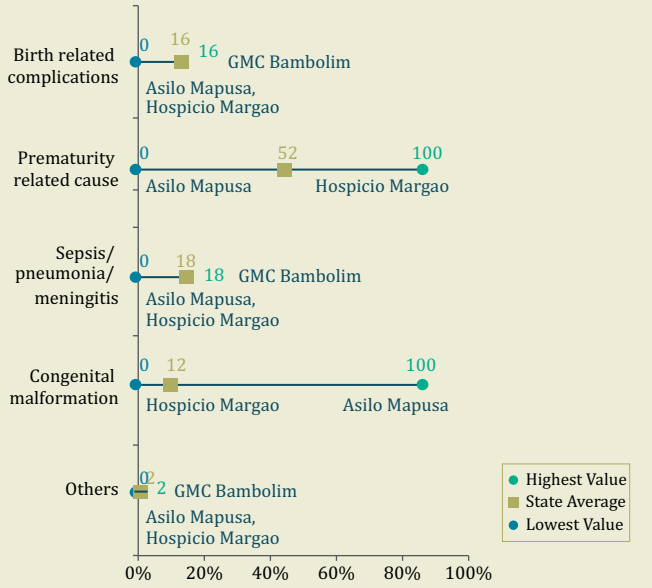


** 'Others' include: Other causes, Cause not established.*

Distribution by Age (%)



Variations in Causes of Mortality (%)*



**When data distribution is not symmetrical, mean does not robustly represent the true central value.*

KEY FINDINGS

- The state had only two districts and none was a HPD. There were three operational SNCUs. Only one had adequate bed strength and doctor: bed ratio (1 doctor for every 4 beds).
- Of all admissions to the SNCUs, 71% were inborn and 29% outborn. The female: male ratio in either categories of admissions and overall was ~3:7.
- Profile of inborn and outborn admissions were almost similar for distribution according to gender, birth weight, gestational age, cause of admission, duration of stay and outcome profile.
- Majority of the deaths were among LBW babies and those 1-6 day old. Prematurity related causes were the most common reason for death followed by birth related complications in inborn babies and sepsis in those born outside. There was inter-SNCU variation for cause of mortality.

WAY FORWARD

- The SNCU efficiency needs to be strengthened with adequate bed strength and staffing.
- Capacity for diagnosis at admission and for management of prematurity related causes of mortality needs to be improved.
- There is a need to develop plan of action for each SNCU and regularly review and monitor their functioning including providing mentoring support.

Statistics at a Glance (April 2013-March-2015)

SNCU	Bed strength (N)	Total admissions (N)	Inborn admission rate	Female admissions (%)	Out-born admissions (%)	LBW admissions (%)	Duration of stay < 1 day (%)	Duration of stay ≥ 4 days (%)	Discharged (%)	Causes of Morbidity (%)			Mortality rate (%)	Causes of Mortality (%)		
										RDS	Birth related complication	Sepsis/ Pneumonia/ Meningitis		Prematurity related causes	Birth related complications	Sepsis/pneumonia/ meningitis
ASILO HOSPITAL MAPUSA	5	542	0.10	27	29	53	22	35	39	6	8	5	0	0	0	0
GMC BAMBOLIM	40	2191	0.25	34	32	64	7	50	89	6	6	10	10	52	16	18
HOSPICIO HOSPITAL MARGAO	5	995	0.14	22	23	41	20	25	76	12	8	4	0	100	0	0

The numbers highlighted indicate the upper & lower limit for the variable.

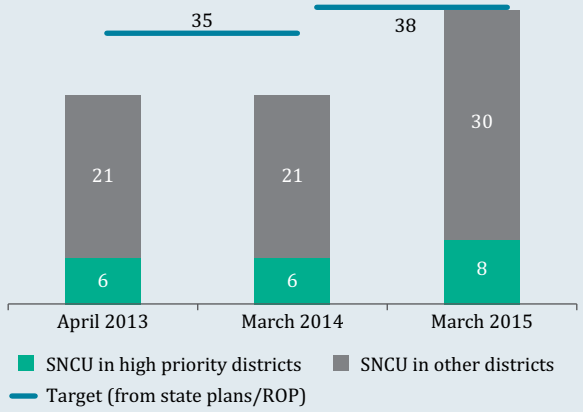
GUJARAT

OPERATIONAL STATUS

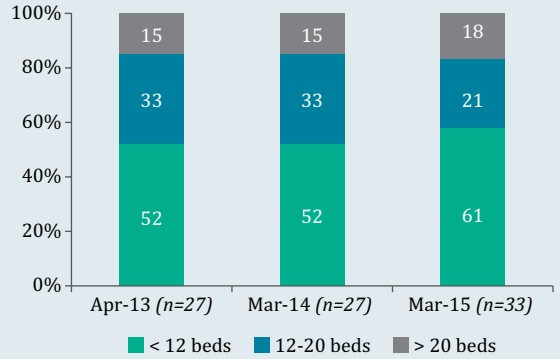
Dots representing SNCUs are plotted randomly within the district boundary.

NMR (SRS 2013)	26	
ENMR (SRS 2013)	20	
Districts	33	
Total SNCUs	38	Ahmedabad district had 5 SNCUs; Vadodara had 3 SNCUs; Anand, Navsari, Patan, Rajkot, Surat, Valsad each had 2 SNCUs
Districts without SNCU	7	
High Priority Districts (HPDs)	8	No HPDs was without SNCUs

Planned versus Operational (N)

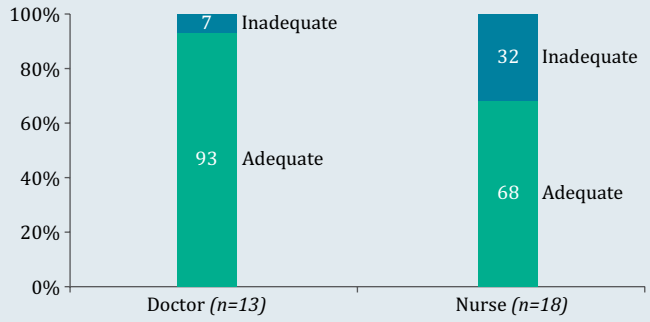


Bed-strength Distribution* (%)



** No data available for 5 SNCUs in 2014-2015.*

Adequacy of Human Resources* (%)



**No data available for Doctors in 25 SNCUs and for Nurses in 20 SNCUs.*

Standard Norms

Establishment:

- Any health facility ≥ 3000 deliveries per year

Bed Strength:

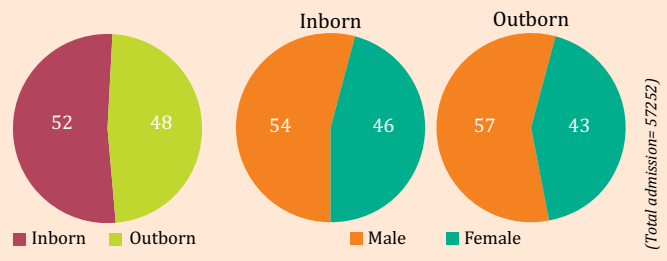
- Minimum 12 beds/unit
- Additional 4 beds per 1000 deliveries/year

Human Resource:

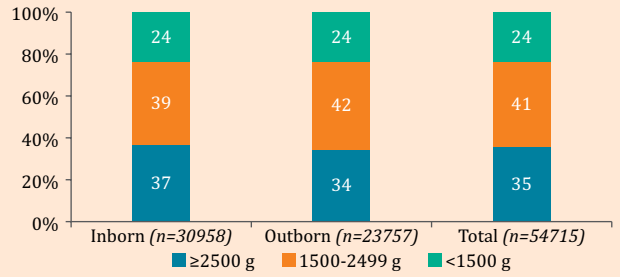
- 1 doctor for 4 beds
- 2 nurses for 3 beds

ADMISSION PROFILE

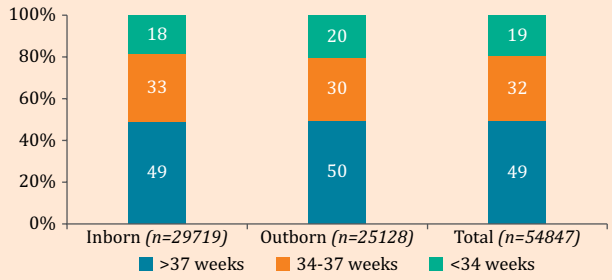
Place of Birth and Gender (%)



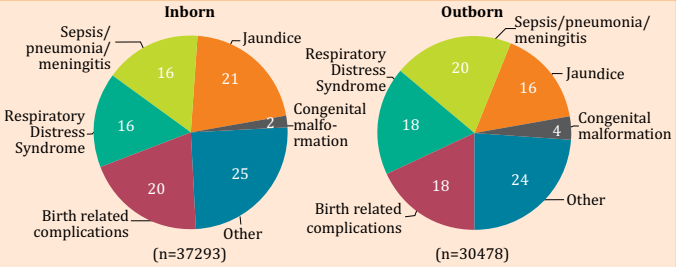
Birth Weight (%)



Gestational Age (%)

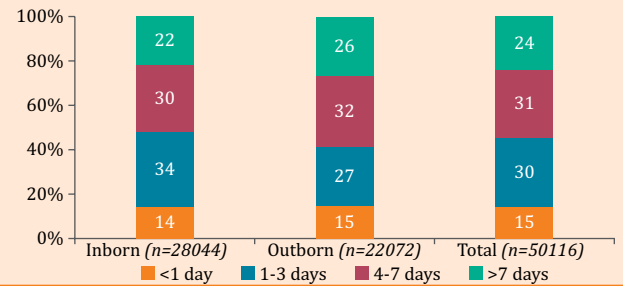


Causes of Admission (%)

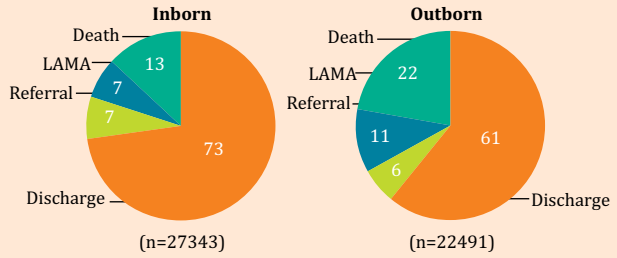


*'Others' include: Other causes of respiratory distress, Hypothermia, Hypoglycemia, Others.

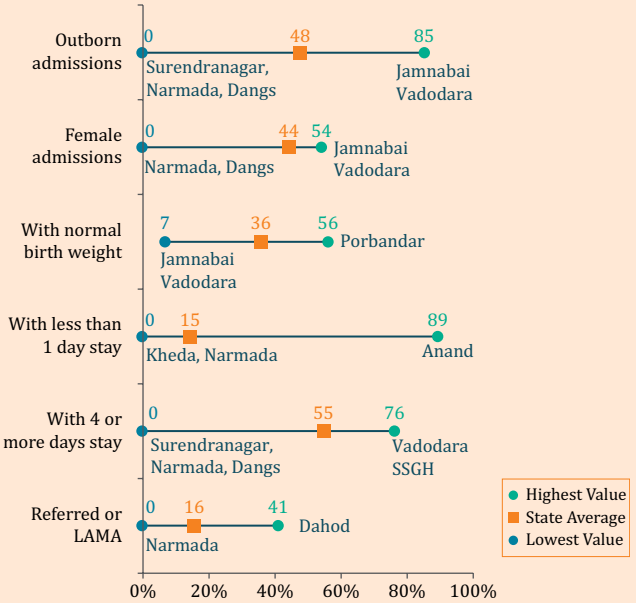
Duration of Stay (%)



Outcome (%)

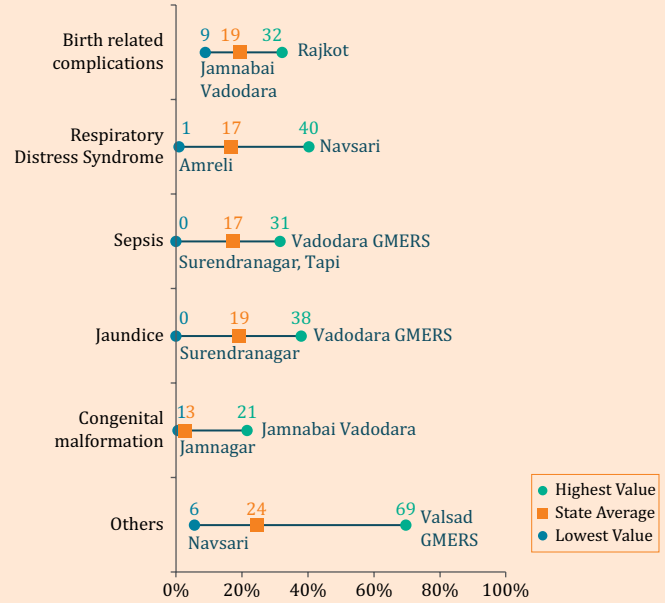


Variations in Key Admission Indicators (%)*



*When data distribution is not symmetrical, mean does not robustly represent the true central value.

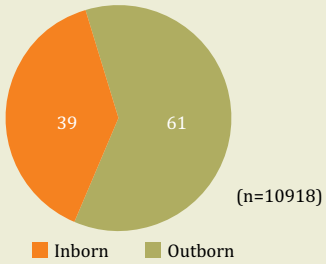
Variations in Causes of Admission (%)*



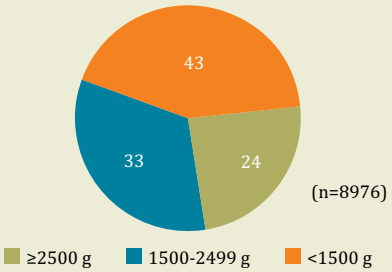
*When data distribution is not symmetrical, mean does not robustly represent the true central value.

MORTALITY PROFILE

Place of Birth (%)

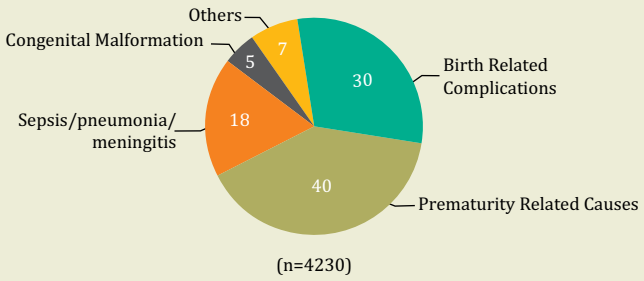


Weight at Birth (%)



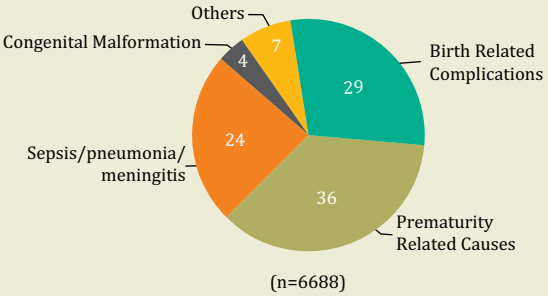
Causes of Mortality (%)

Inborn



(n=4230)

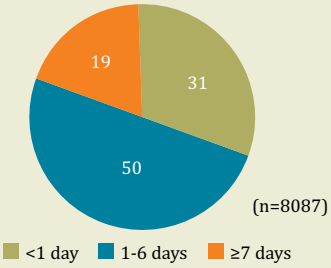
Outborn



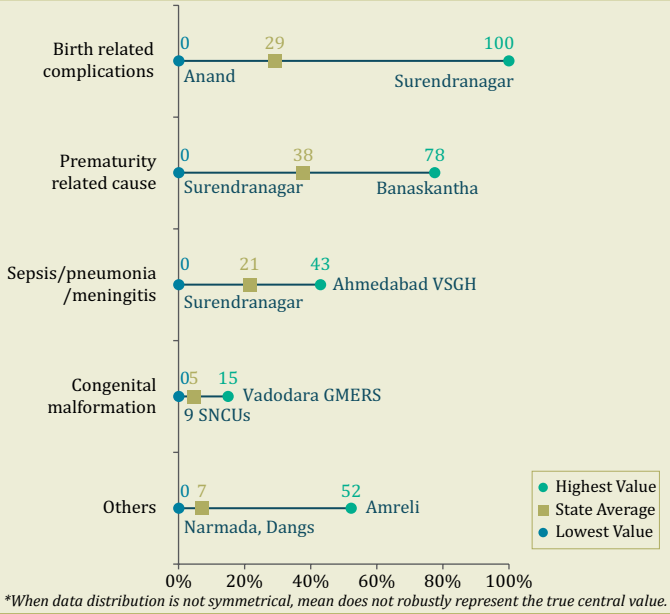
(n=6688)

** 'Others' include:Other causes, Cause not established.*

Distribution by Age (%)



Variations in Causes of Mortality (%)*



**When data distribution is not symmetrical, mean does not robustly represent the true central value.*

KEY FINDINGS

- SNCUs were operational in 79% of the districts with at least one SNCU in every HPD. However, 60% units had bed strength less than 12 and 1/3rd had inadequate nursing staff.
- Inborn and outborn admissions were of near-equal proportions and had similar profiles: males out-numbered females, almost 2/3rd were low birth weight, half were preterm, 'others' was the most common diagnosis at admission, and about three-fourth stayed in the SNCU for less than a week.
- About a third of the deaths in SNCUs were among newborn less than one day of age. Another 50% of deaths were accounted by babies that were 1-6 day old. Prematurity related causes and birth related complications were the most common cause of mortality.
- Intra-state variations were obvious for rate of outborn admissions, admission of female babies and low birth weight babies, duration of stay, and for 'others' as the frequent cause of mortality.

WAY FORWARD

The state has achieved the operationalization of SNCUs as per targeted number. The focus now needs to be on quality of services rendered at these centres by:

- Improving the bed strength of the SNCUs and staffing them adequately [with improvement in bed-strength, gaps in personnel adequacy (nurses and doctors) is imminent].
- Enhancing capacity of centres for diagnostic labelling at admission and cause ascertainment for mortality.
- Reducing between-SNCU variations in performance and sustaining optimal services by developing and implementing quality benchmark (logistics and care protocols) with contextual attention to case load and profile of the SNCUs.
- Strengthening intrapartum care for centres that have extremely high inborn admission rates.
- Ensuring data availability on quality indicators.

Statistics at a Glance (April 2013-March-2015)

SNCU	Bed strength (N)	Total admissions (N)	Inborn admission rate	Female admissions (%)	Out-born admissions (%)	LBW admissions (%)	Duration of stay < 1 day (%)	Duration of stay ≥ 4 days (%)	Discharged (%)	Causes of Morbidity (%)			Mortality rate (%)	Causes of Mortality (%)		
										RDS	Birth related complication	Sepsis/ Pneumonia/ Meningitis		Prematurity related causes	Birth related complications	Sepsis/pneumonia/ meningitis
AHEMDABAD VSGH	33	2418	0.13	45	34	61	7	62	76	7	13	23	13	29	15	43
AHMEDABAD CIVIL HOSPITAL	5	5698	0.23	39	66	66	16	62	63	18	26	26	28	31	34	32
LGH MANINAGAR AHMEDABAD	14	2273	0.13	43	39	64	11	65	73	14	16	19	21	38	24	30
SHARDABEN MGH AHMEDABAD	6	1202	0.18	39	20	50	10	57	85	12	11	22	32	47	21	28
GMERS MEDICAL COLLEGE, SOLA AHMEDABAD	5	1965	0.30	44	33	58	20	47	69	10	22	13	13	30	34	28
GENERAL HOSPITAL PATAN	8	347	0.15	43	52	62	14	59	72	7	17	23	6	18	18	41
GMERS MEDICAL COLLEGE, DHARPUR, PATAN	26	837	0.84	49	20	47	7	41	80	9	11	5	9	23	37	15
SHREE KRISHNA HOSPITAL ANAND	20	386	0.21	39	48	67	20	53	56	13	22	22	6	27	14	27
S.S. HOSPITAL PETLAD	4	508	0.27	50	4	47	89	6	77	24	30	3	0	50	0	0
GMERS MEDICAL COLLEGE HOSPITAL, VALSAD	6	1008	0.30	46	57	71	18	46	44	6	10	4	21	50	23	16
STATE HOSPITAL DHARMAPUR, VALSAD	10	625	0.21	43	26	82	18	69	60	3	14	3	9	62	29	0
GENERAL HOSPITAL PALANPUR	2	277	0.17	44	55	79	22	31	58	27	10	10	18	78	2	14
GRAM SEVA TRUST KHAREL NAVSARI	6	405	0.12	48	12	66	4	56	83	40	9	17	57	17	40	2
M. G. GENERAL HOSPITAL NAVSARI	11	852	0.17	46	29	51	15	55	77	6	19	20	10	38	30	8
GENERAL HOSPITAL GODHARA	6	2677	0.64	41	55	71	28	39	56	33	23	14	13	44	26	19
G G HOSPITAL JAMNAGAR	20	5046	0.23	47	37	64	7	68	77	18	21	23	7	33	39	24
GENERAL HOSPITAL GANDHINAGAR	12	1357	0.16	45	30	72	16	57	50	18	24	6	16	39	29	11
GENERAL HOSPITAL AMRELI	6	423	0.11	40	20	59	34	30	54	1	30	5	11	20	22	7

SNCU	Bed strength (N)	Total admissions (N)	Inborn admission rate	Female admissions (%)	Out-born admissions (%)	LBW admissions (%)	Duration of stay < 1 day (%)	Duration of stay ≥ 4 days (%)	Discharged (%)	Causes of Morbidity (%)			Mortality rate (%)	Causes of Mortality (%)		
										RDS	Birth related complication	Sepsis/ Pneumonia/ Meningitis		Prematurity related causes	Birth related complications	Sepsis/pneumonia/ meningitis
SMIMER MEDICAL COLLEGE, SURAT	25	1220	0.07	45	46	66	16	55	51	19	20	10	40	30	23	18
NEW CIVIL HOSPITAL, SURAT		2595	0.11	43	48	50	12	58	59	15	19	25	29	34	28	27
GENERAL HOSPITAL JUNAGADH	14	1579	0.09	45	39	63	10	52	62	17	18	14	14	57	21	8
P K HOSPITAL RAJKOT	6	612	0.27	48	9	49	11	26	83	12	32	5	25	58	24	12
PDU MEDICAL COLLEGE, RAJKOT	120	6818	0.23	44	55	64	12	59	65	24	18	14	26	53	27	11
GENERAL HOSPITAL HIMMATNAGAR	4	936	0.19	41	74	73	23	42	61	26	21	5	14	47	26	12
GENERAL HOSPITAL PORBANDAR	4	466	0.08	30	15	44	35	18	54	7	12	4	4	41	29	6
GENERAL HOSPITAL DAHOD	6	543	0.03	44	41	60	41	28	43	17	28	8	18	34	29	12
GENERAL HOSPITAL SURENDRANAGAR	5	201	0.59	41	0	46	55	0	99	18	13	0	16	0	100	0
SIR T HOSPITAL BHAVNAGAR		3400	0.25	46	52	59	10	66	80	12	18	8	14	46	34	10
GENERAL HOSPITAL MEHSANA	4	614	0.15	46	57	67	21	37	67	29	18	16	44	48	16	13
SEVA RURAL JAGADIYA, BHARUCH	13	1148	0.23	45	10	59	7	11	81	9	13	18	13	49	22	19
JAMNABAI HOSPITAL VADODARA		3839	0.16	54	85	93	7	61	79	3	9	1	18	11	41	38
S S G HOSPITAL VADODARA	28	2579	0.11	43	68	73	6	76	63	18	17	26	21	30	22	32
GMERS MEDICAL COLLEGE, GOTRI, VADODARA	17	691	0.28	46	31	64	15	57	74	8	9	31	24	18	48	15
G. K. GENERAL HOSPITAL, KUTCH-BHUJ	32	380	0.26	49	37	63	17	51	51	20	30	3	18	35	43	12
GENERAL HOSPITAL NADIAD	6	841	0.22	37	53	75	22	43	63	23	26	8	8	64	24	4
GENERAL HOSPITAL RAJPIPLA		0	0.00						100	0	0	0		60	20	20
DISTRICT HOSPITAL AHWA- DANG		0								0	0	0		44	56	0
DISTRICT HOSPITAL VYARA	6	145	0.13	50	1	53	30	32	68	23	24	0	44	73	25	0

The numbers highlighted indicate the upper & lower limit for the variable.

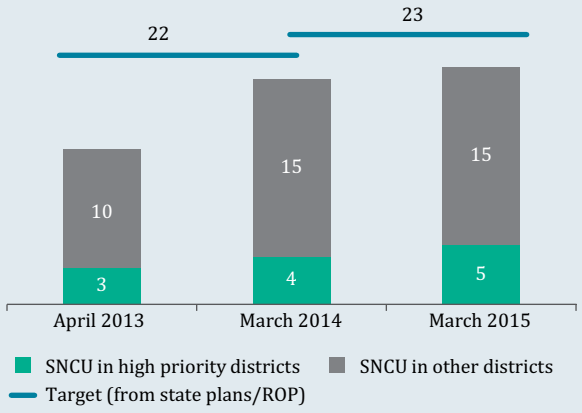
HARYANA

OPERATIONAL STATUS

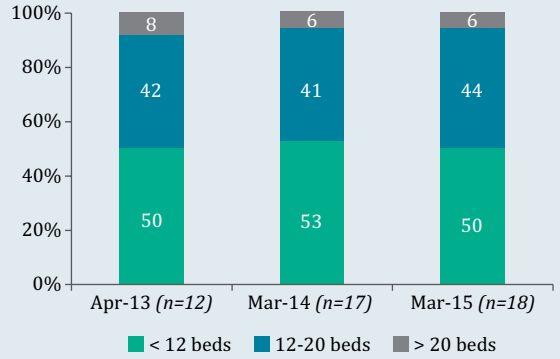
Dots representing SNCUs are plotted randomly within the district boundary.

NMR (SRS 2013)	26	
ENMR (SRS 2013)	19	
Districts	21	
Total SNCUs	20	
Districts without SNCU	1	
High Priority Districts (HPDs)	5	No HPD was without SNCU

Planned versus Operational (N)

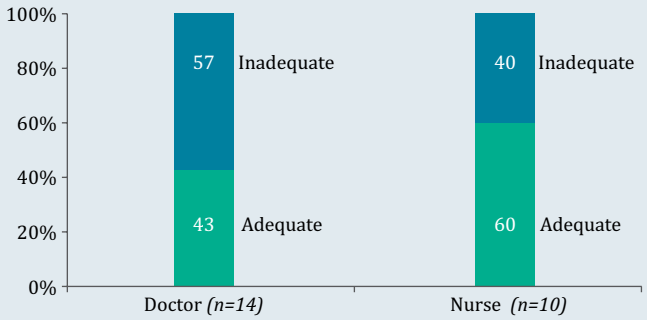


Bed-strength Distribution (%)



**Target data from State Plans (ROP).*

Adequacy of Human Resources* (%)



**No data available for Doctors in 6 SNCUs and for Nurses in 10 SNCUs.*

Standard Norms

Establishment:

- Any health facility ≥ 3000 deliveries per year

Bed Strength:

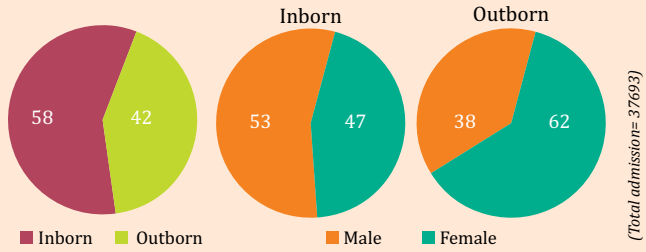
- Minimum 12 beds/unit
- Additional 4 beds per 1000 deliveries/year

Human Resource:

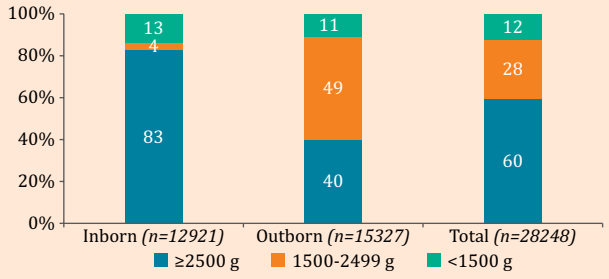
- 1 doctor for 4 beds
- 2 nurses for 3 beds

ADMISSION PROFILE

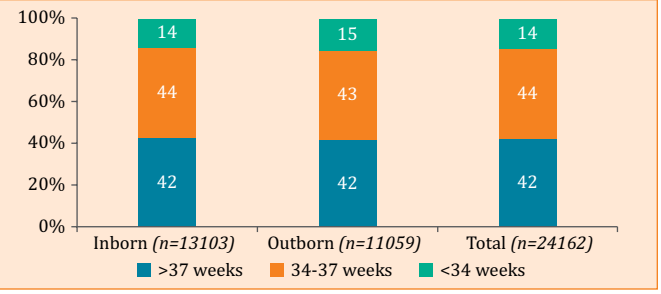
Place of Birth and Gender (%)



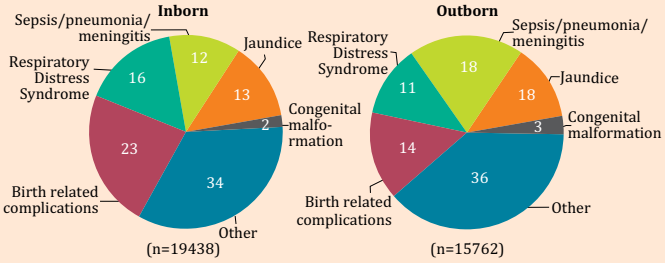
Birth Weight (%)



Gestational Age (%)

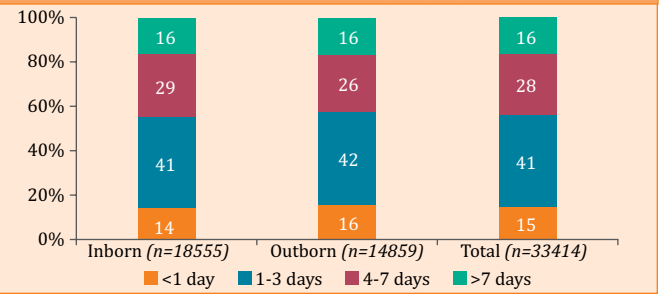


Causes of Admission (%)

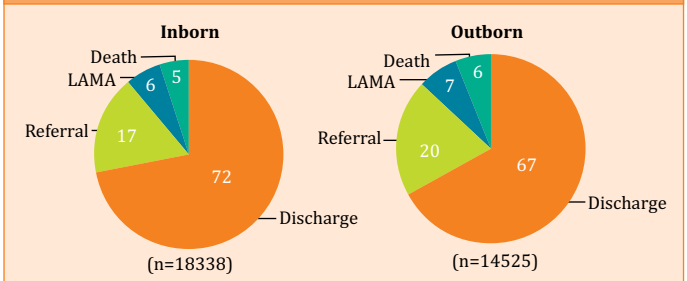


** 'Others' include:Other causes of respiratory distress, Hypothermia, Hypoglycemia, Others.*

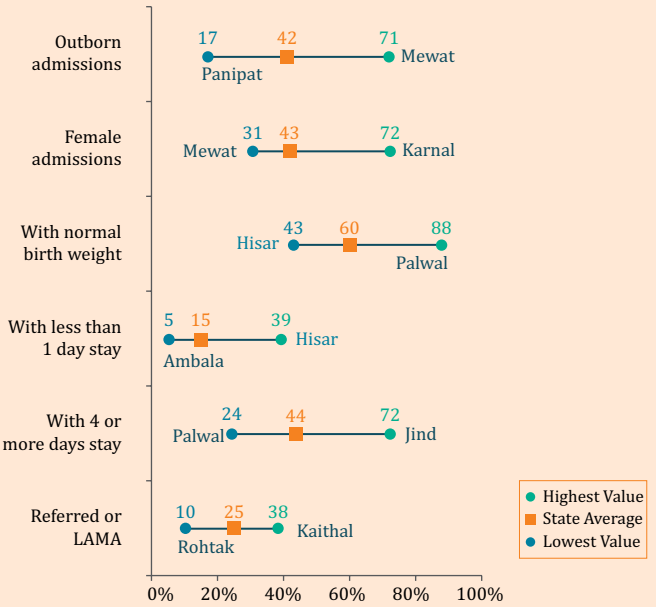
Duration of Stay (%)



Outcome (%)

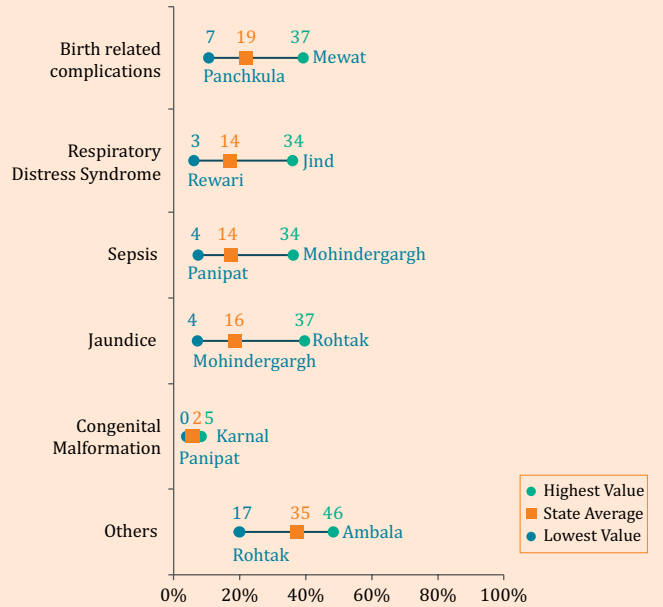


Variations in Key Admission Indicators (%)*



**When data distribution is not symmetrical, mean does not robustly represent the true central value.*

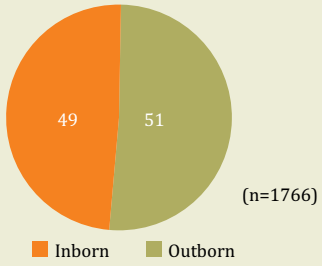
Variations in Causes of Admission (%)*



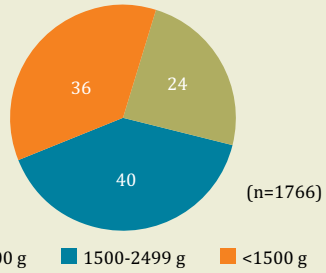
**When data distribution is not symmetrical, mean does not robustly represent the true central value.*

MORTALITY PROFILE

Place of Birth (%)

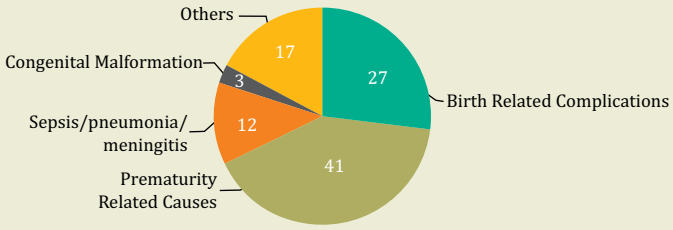


Weight at Birth (%)



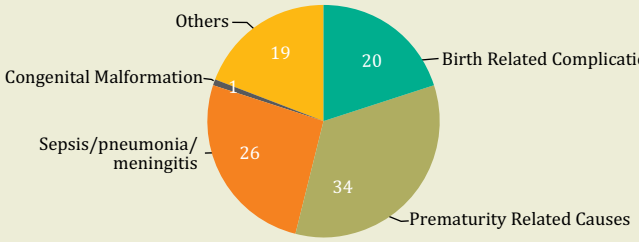
Causes of Mortality (%)

Inborn



(n=874)

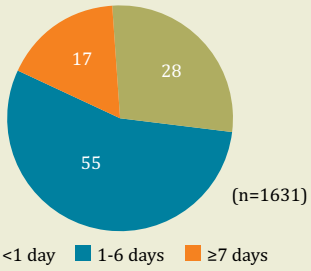
Outborn



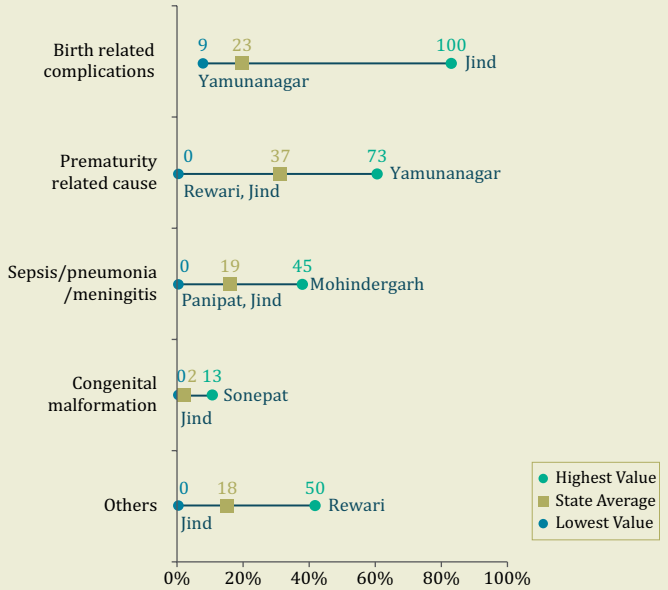
(n=892)

** 'Others' include:Other causes, Cause not established.*

Distribution by Age (%)



Variations in Causes of Mortality (%)*



**When data distribution is not symmetrical, mean does not robustly represent the true central value.*

KEY FINDINGS

- The state had 20 SNCUs against a target of 23 and only one of the 21 districts did not have a SNCU (all HPDs had a SNCU). However, half of the units had bed strength less than 12.
- Inborn admissions made up for 58% of all admissions. While proportion of male newborns predominated (53%) among inborn admissions, females accounted for 62% in outborns.
- About 58% of both inborn and outborn admissions were preterm but 83% of inborns were of adequate birth weight in contrast to 40% among outborns.
- Most of the admissions in either group were attributed to 'other' causes followed by 'birth related complications' among inborns and 'sepsis/ pneumonia/ meningitis' in outborns. A high proportion of babies were referred to other places. Outcomes were marginally better among inborns.
- Most of the deaths in SNCUs were among babies with low to very low birth weights and among those 1-6 day old or even younger (<1 day old), most commonly due to prematurity related causes.

WAY FORWARD

- The bed strength and staff recruitment (doctors and nurses) in the SNCUs needs to be improved.
- Capacity for diagnostic labelling at admission will help characterize the 'others' category and enable informed decision making.
- Admission protocols and peripartum care for inborns needs to be reviewed as majority of these were of normal birth weight with admission due to birth related complications.
- Develop plan of action for each SNCU and regularly review and monitor their functionality including providing mentoring support.

Statistics at a Glance (April 2013-March-2015)

SNCU	Bed strength (N)	Total admissions (N)	Inborn admission rate	Female admissions (%)	Out-born admissions (%)	LBW admissions (%)	Duration of stay < 1 day (%)	Duration of stay ≥ 4 days (%)	Discharged (%)	Causes of Morbidity (%)			Mortality rate (%)	Causes of Mortality (%)		
										RDS	Birth related complication	Sepsis/ Pneumonia/ Meningitis		Prematurity related causes	Birth related complications	Sepsis/ pneumonia/ meningitis
AMBALA	17	1775	0.11	42	47	35	5	47	88	4	17	11	2	44	19	6
BHIWANI	15	2209	0.16	39	46	40	13	47	68	18	9	7	2	31	22	11
FARIDABAD		3423	0.15	39	41	46	8	59	62	5	33	23	11	27	23	35
GURGAON	21	2069	0.07	38	52	54	12	41	74	19	23	20	10	26	18	23
HISAR	7	2735	0.13	39	65	57	39	27	53	16	17	9	8	53	25	16
KAITHAL	11	2232	0.10	39	58	49	21	40	55	24	12	8	7	57	22	3
MEWAT	8	874	0.06	31	71	51	10	57	62	9	37	19	10	24	31	27
MOHINDERGARH NNL	20	1982	0.08	37	37	54	11	55	71	8	21	34	1	36	18	45
PALWAL	14	1359	0.10	31	33	12	12	24	79	5	23	14	3	51	35	7
PANCHKULA	10	1709	0.10	39	32	30	14	39	73	19	7	26	3	27	23	2
ROHTAK	6	784	0.06	37	42	23	5	64	90	3	11	28	0			
SONIPAT	18	1479	0.08	40	38	37	7	65	81	8	31	7	4	21	34	21
YAMUNANAGAR	14	2316	0.13	43	32	34	21	30	65	19	28	4	5	73	9	4
SIRSA	12	2127	0.14	43	42	43	8	60	76	11	15	11	2	18	44	15
FATEHABAD	17	2169	0.17	43	47	47	18	46	75	16	16	11	9	44	18	18
KARNAL	10	4351	0.42	72	22	46	11	37	74	12	11	14	2	27	25	23
KURUKSHETRA		1363	0.10	43	45	39	19	36	64	20	21	10	5	23	40	5
PANIPAT	10	1196	0.08	43	17	28	18	42	60	31	18	4	1	19	56	0
REWARI	8	1321	0.17	41	39	21	12	27	72	3	10	24	0	0	17	33
JIND		220	0.05	35	54	32	13	72	73	34	19	14	0	0	100	0

The numbers highlighted indicate the upper & lower limit for the variable.

HIMACHAL PRADESH

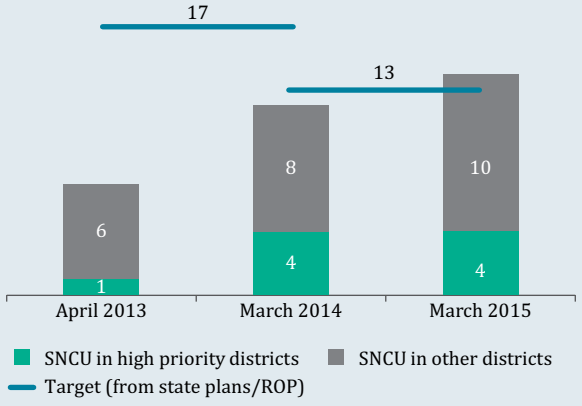
OPERATIONAL STATUS

High priority district ● SNCU
Other district ● SNCU became operational in 2014-15

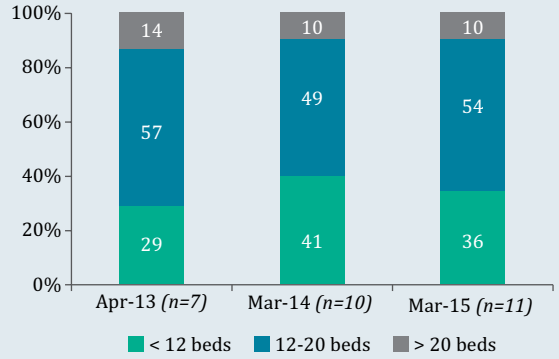
Dots representing SNCUs are plotted randomly within the district boundary.

NMR (SRS 2013)	25	
ENMR (SRS 2013)	17	
Districts	12	Shimla district had 3 SNCUs and Mandi had 2 SNCUs
Total SNCUs	14	
Districts without SNCU	1	
High Priority Districts (HPDs)	4	1 HPD was without SNCU (Lahul & Spiti)

Planned versus Operational (N)



Bed-strength Distribution (%)



**No data available from 23% of the SNCUs in 2013-14 and from 15% of the SNCUs in 2014-15.*

Adequacy of Human Resources (%)

DATA NOT REPORTED

Standard Norms

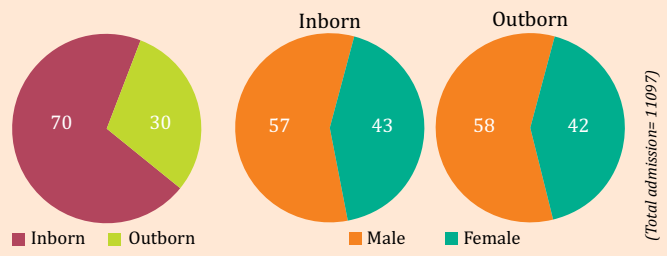
Establishment:
- Any health facility ≥ 3000 deliveries per year

Bed Strength:
- Minimum 12 beds/unit
- Additional 4 beds per 1000 deliveries/year

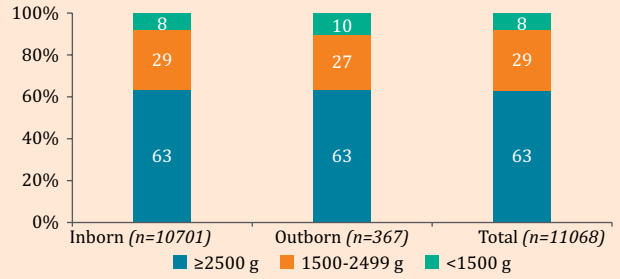
Human Resource:
- 1 doctor for 4 beds
- 2 nurses for 3 beds

ADMISSION PROFILE

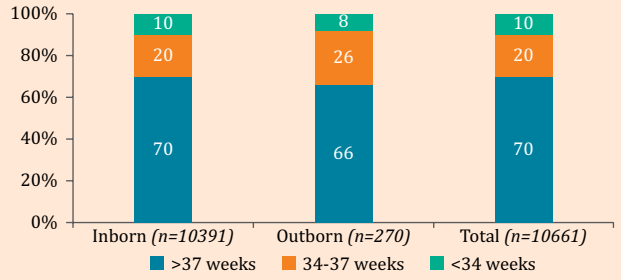
Place of Birth and Gender (%)



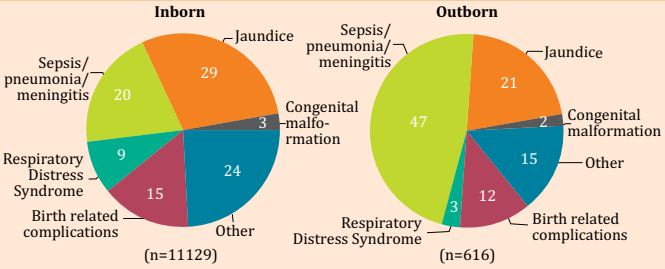
Birth Weight (%)



Gestational Age (%)

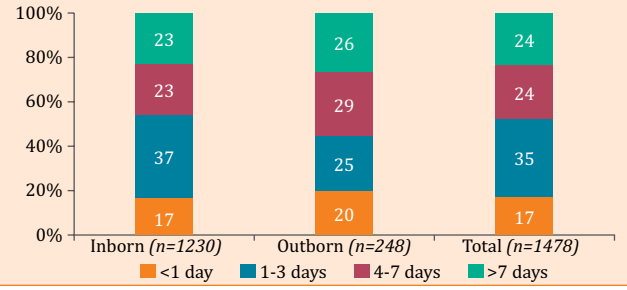


Causes of Admission (%)

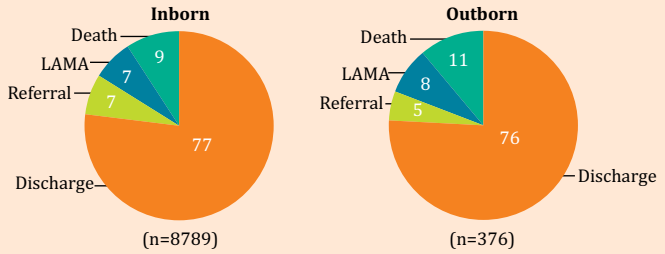


** 'Others' include: Other causes of respiratory distress, Hypothermia, Hypoglycemia, Others.*

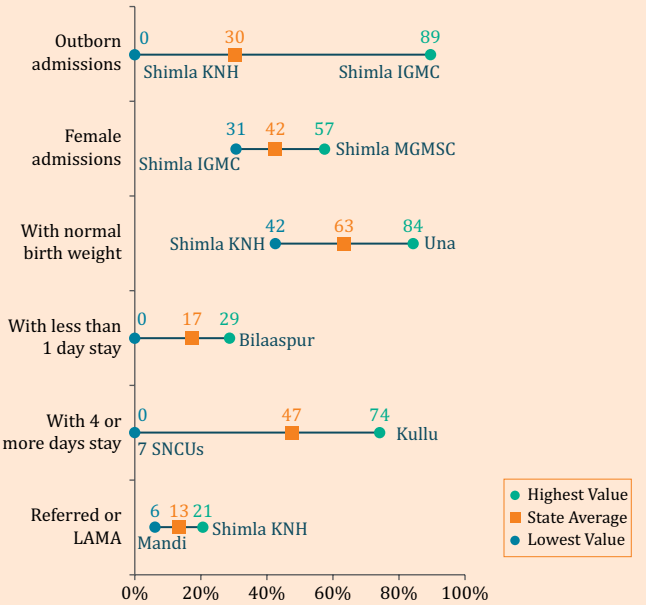
Duration of Stay (%)



Outcome (%)

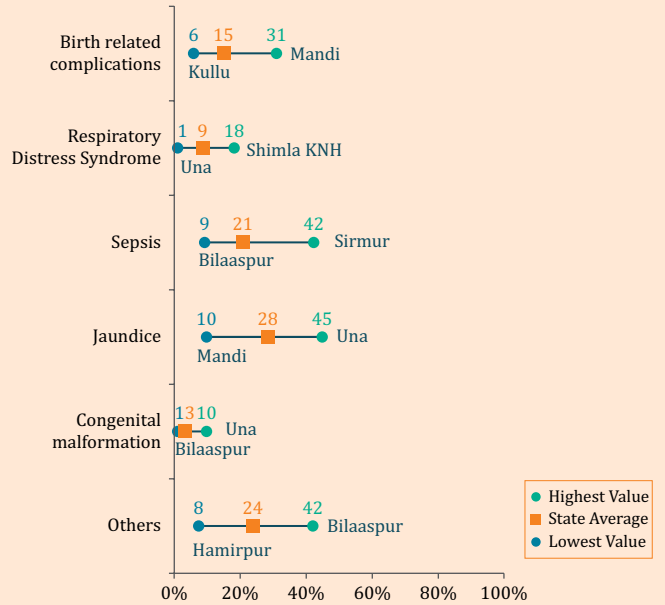


Variations in Key Admission Indicators (%)*



**When data distribution is not symmetrical, mean does not robustly represent the true central value.*

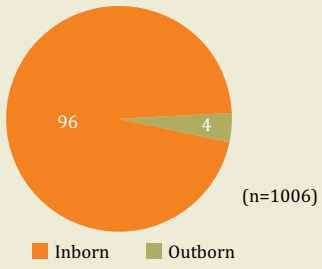
Variations in Causes of Admission (%)*



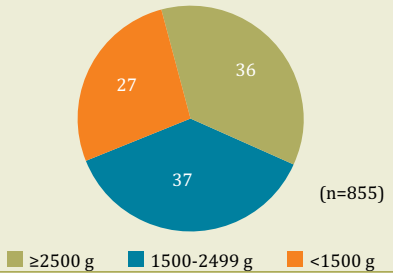
**When data distribution is not symmetrical, mean does not robustly represent the true central value.*

MORTALITY PROFILE

Place of Birth (%)

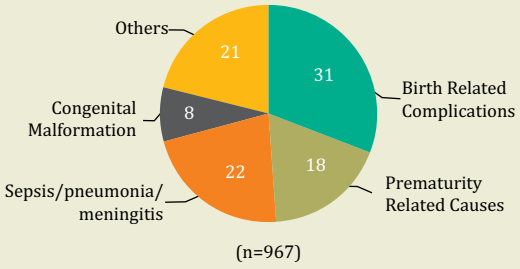


Weight at Birth (%)



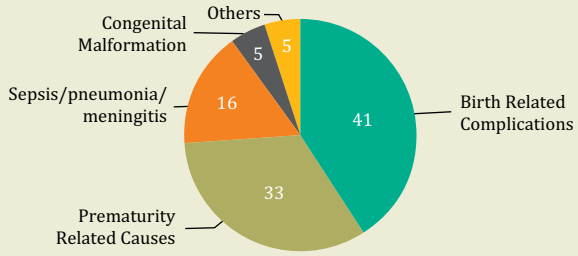
Causes of Mortality (%)

Inborn



(n=967)

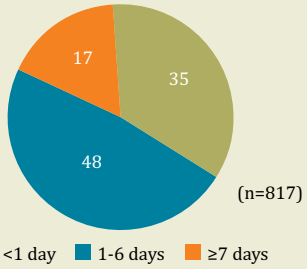
Outborn



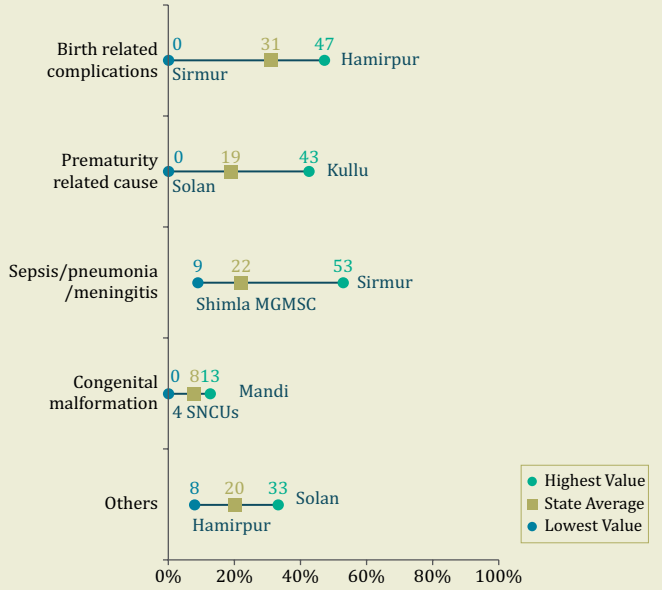
(n=39)

** 'Others' include: Other causes, Cause not established.*

Distribution by Age (%)



Variations in Causes of Mortality (%)*



**When data distribution is not symmetrical, mean does not robustly represent the true central value.*

KEY FINDINGS

- There were 13 SNCUs in the state as per the set target. Still, one district did not have a SNCU despite being a HPD. About 31% of the SNCUs had <12 beds.
- Inborn admissions were higher than outborn admissions (~70:30). Both groups were predominated by newborns that were male, full term, and of normal birth weight.
- Inborn admissions were mostly due to jaundice followed by 'other' causes. Outborn admissions were majorly for sepsis and jaundice. Outcomes in both groups were similar. As much as 17% of the newborns left the SNCUs on the 1st day followed by another 35% between 1-3 days.
- Nearly all the deaths were seen in inborn admissions with birth related complications and prematurity related causes accounting for almost 50% of these.
- Intra-state variations were prominent for proportion of outborns admitted to the SNCUs and duration of stay.

WAY FORWARD

- The state must prioritize developing a mechanism for facility care of sick newborns in HPDs till new units are established.
- There is a need to review the quality of intrapartum care in labour rooms and quality of care at functional SNCUs including criteria for admission, discharge and reporting.
- Intra-state variations in indicator performance of the SNCUs calls for standardization of services and for building robust capacity for data management and monitoring.

Statistics at a Glance (April 2013-March-2015)

SNCU	Bed strength (N)	Total admissions (N)	Inborn admission rate	Female admissions (%)	Out-born admissions (%)	LBW admissions (%)	Duration of stay < 1 day (%)	Duration of stay ≥ 4 days (%)	Discharged (%)	Causes of Morbidity (%)			Mortality rate (%)	Causes of Mortality (%)		
										RDS	Birth related complication	Sepsis/ Pneumonia/ Meningitis		Prematurity related causes	Birth related complications	Sepsis/ pneumonia/ meningitis
KANGRA (DR. RPGMC TANDA)	20	2947	0.15	43	33	43	28	46	72	4	15	12	13	15	30	20
UNA (RH UNA)	10	696	0.10	40	21	16	4	13	78	1	10	20	5	6	42	36
IGMC (SHIMLA)	15	924		31	89	44			72	10	13	32	9	23	20	28
KNH (SHIMLA)	18	1271	0.19	46	0	58			71	18	14	16	8	22	36	22
MGMSC KHANERI		667	0.10	57	21	43	20	47	80	17	14	17	17	28	36	9
MANDI (CH S/NAGAR)		104	0.04	39	19	23			86	5	31	13	7	0	29	43
ZH MANDI	56	1278	0.14	44	21	30	16	53	84	5	23	15	7	17	28	16
RH KULLU	8	578	0.09	42	50	34	12	74	80	7	6	29	8	43	23	17
RH HAMIRPUR	12	1314	0.15	41	20	21	16	67	84	6	22	32	3	11	47	32
RH BILASPUR	12	369	0.11	39	5	24	29	71	75	12	14	9	12	23	32	20
RH CHAMBA	8	551	0.11	43	52	34			75	11	16	39	10	13	35	38
KIN (RH KINNAUR)*	14	9	0.60	33	33	0			100	0	0	25	0	0	0	0
SIRMOUR (CH PAONTA)	10	110	0.02	43	45	34			68	4	6	42	15	18	0	53
RH SOLAN	12	279	0.06	42	32	31			88	6	13	38	1	0	33	33

The numbers highlighted indicate the upper & lower limit for the variable.
**No report received from Kinnaur in 2014-15.*

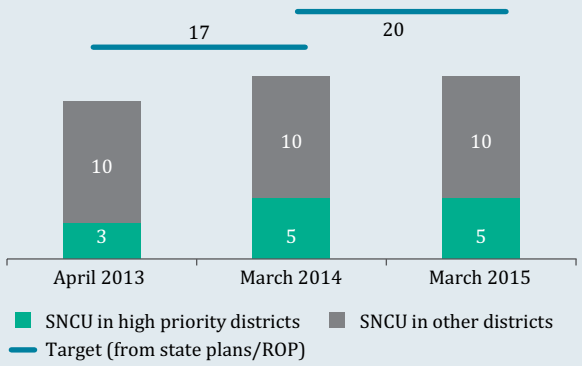
JAMMU & KASHMIR

OPERATIONAL STATUS

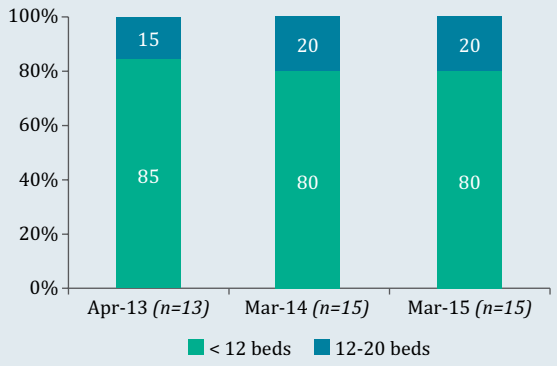
Dots representing SNCUs are plotted randomly within the district boundary.

NMR (SRS 2013)	29	
ENMR (SRS 2013)	24	
Districts	22	
Total SNCUs	15	
Districts without SNCU	7	
High Priority Districts (HPDs)	6	1 HPD was without SNCU i.e., Ramban

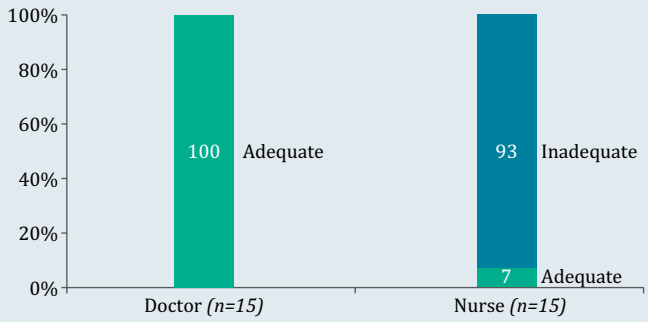
Planned versus Operational (N)



Bed-strength Distribution (%)



Adequacy of Human Resources* (%)



Standard Norms

Establishment:

- Any health facility ≥ 3000 deliveries per year

Bed Strength:

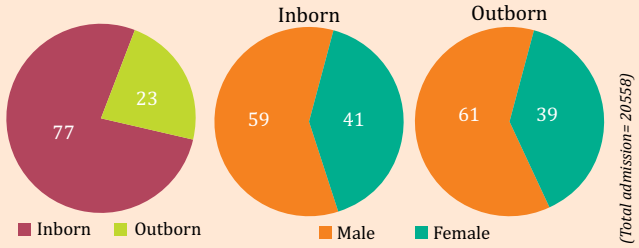
- Minimum 12 beds/unit
- Additional 4 beds per 1000 deliveries/year

Human Resource:

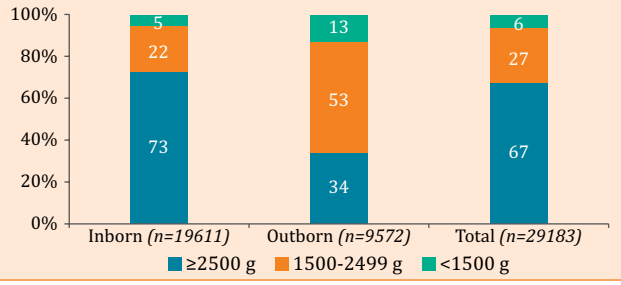
- 1 doctor for 4 beds
- 2 nurses for 3 beds

ADMISSION PROFILE

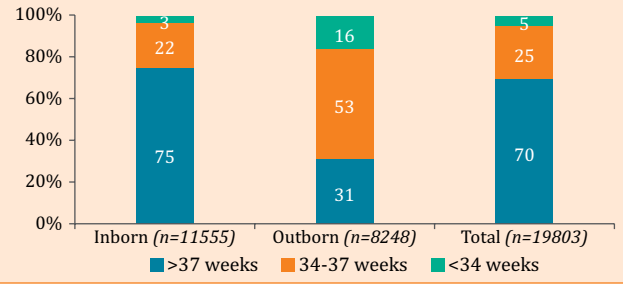
Place of Birth and Gender (%)



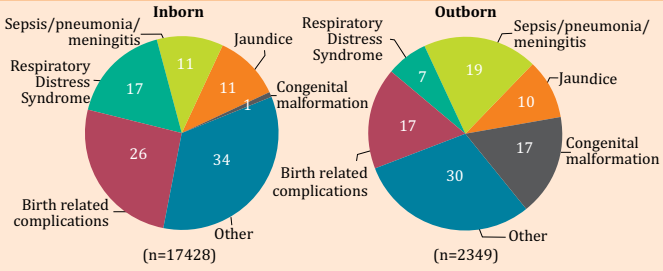
Birth Weight (%)



Gestational Age (%)

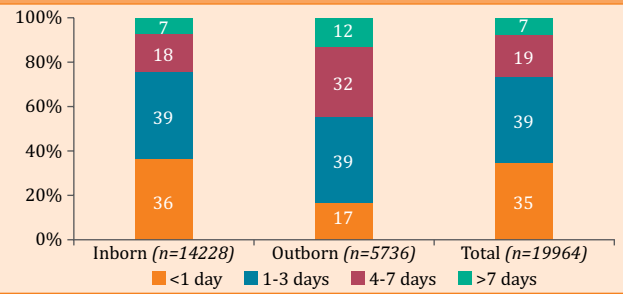


Causes of Admission (%)

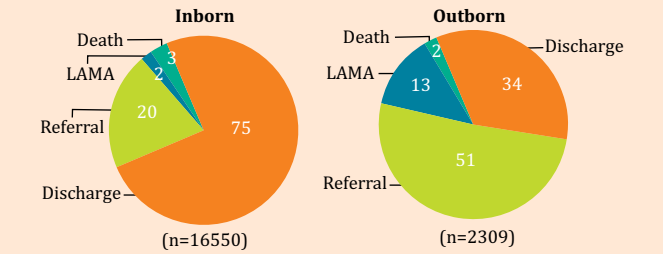


*'Others' include: Other causes of respiratory distress, Hypothermia, Hypoglycemia, Others.

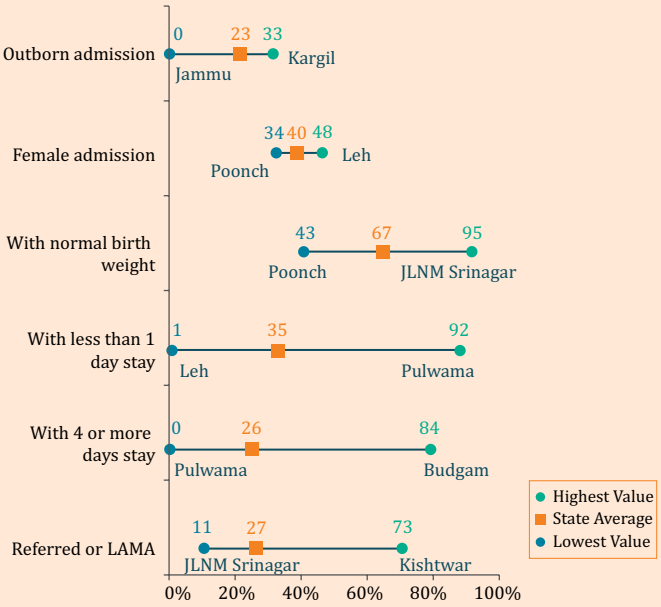
Duration of Stay (%)



Outcome (%)

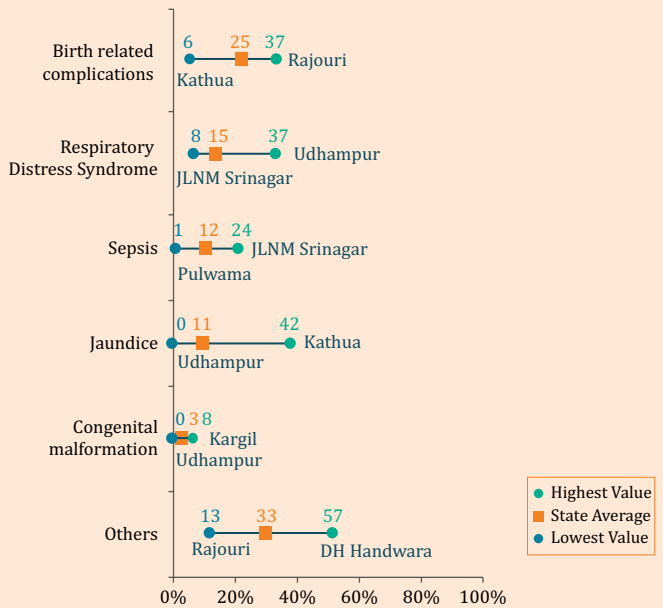


Variations in Key Admission Indicators (%)*



*When data distribution is not symmetrical, mean does not robustly represent the true central value.

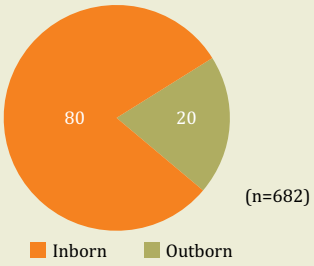
Variations in Causes of Admission (%)*



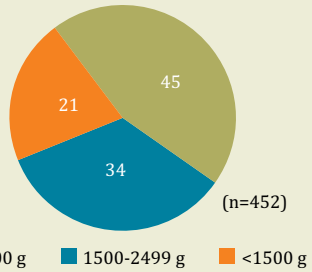
*When data distribution is not symmetrical, mean does not robustly represent the true central value.

MORTALITY PROFILE

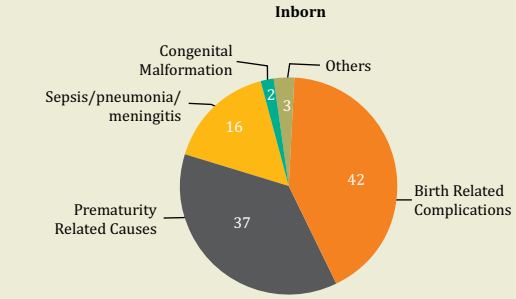
Place of birth (%)

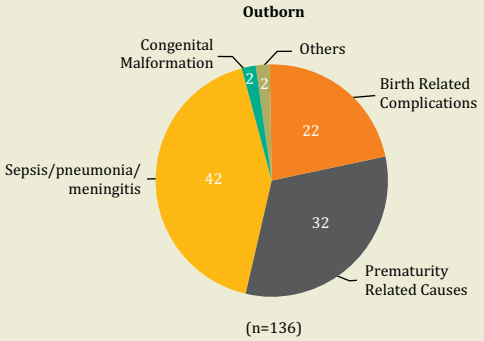


Weight at Birth (%)



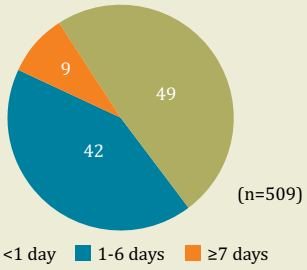
Causes of Mortality (%)



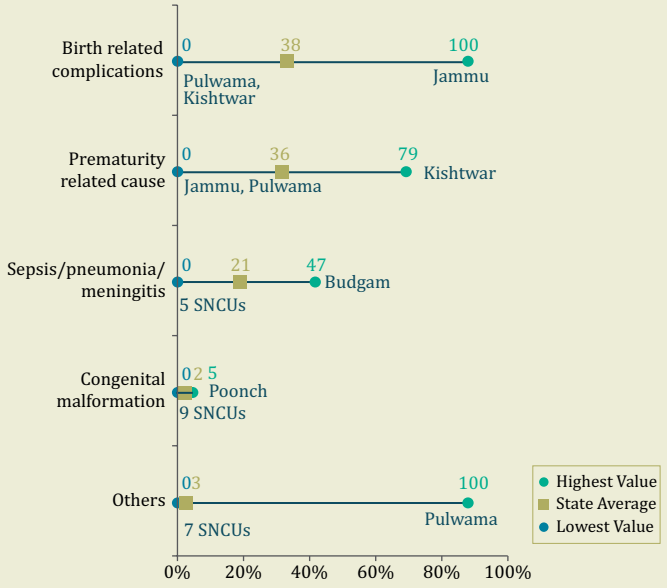


** 'Others' include: Other causes, Cause not established.*

Distribution by Age (%)



Variations in Causes of Mortality (%)*



**When data distribution is not symmetrical, mean does not robustly represent the true central value.*

KEY FINDINGS

- About one-third districts in the state did not have a SNCU (including one of the seven HPDs). The state has 15 SNCUs against the set target of 20 with most having <12 beds and inadequate nursing staff.
- Most of the admissions were inborn (77%) with more than two-thirds of these having birth weight ≥2500g and being term babies.
- Cause of admission was mostly cited as 'others' or 'birth related complications'. Duration of stay in the SNCU was short for most babies, especially those inborn.
- Mortality among both Inborn and Outborn admissions was low but there was high proportion of referral, especially among the Outborns (>50%).
- Intra-state variations were high for duration of stay, rates of referral and LAMA, and causes for mortality. Many SNCUs had reported NIL deaths for some of the causes of mortality e.g., no deaths were reported by 5 SNCUs for sepsis, and by 7 SNCUs for 'other' causes.

WAY FORWARD

- Prioritize developing a mechanism for facility care of sick newborn in each district, particularly in the HPDs till the new units are established.
- Urgently review the quality of delivery practices/intrapartum care in labor rooms and Quality of Care at functional SNCUs including criteria for admission, discharge and reporting/recording.
- Develop plan of action for each SNCU and regular review and monitor their functioning including providing mentoring support.
- Need to strengthen community to facility linkages and emergency transportation and referral of sick newborn.
- Strengthen community level interventions for early identification and management of sick newborns and develop linkages between community and facility.

Statistics at a Glance (April 2013-March-2015)

SNCU	Bed strength (N)	Total admissions (N)	Inborn admission rate	Female admissions (%)	Out-born admissions (%)	LBW admissions (%)	Duration of stay < 1 day (%)	Duration of stay ≥ 4 days (%)	Discharged (%)	Causes of Morbidity (%)			Mortality rate (%)	Causes of Mortality (%)		
										RDS	Birth related complication	Sepsis/ Pneumonia/ Meningitis		Prematurity related causes	Birth related complications	Sepsis/ pneumonia/ meningitis
ANANTNAG	12	5371	0.18	40	32	39	29	6	70	11	33	12	3	27	39	27
JAMMU	10	449	0.08	41	0	16	17	34	55	8	29	7	0	0	100	0
KATHUA	8	512	0.07	35	26	28	20	36	65	9	6	3	0			
LEH	10	830	0.23	48	8	32	1	65	75	16	16	13	2	59	18	18
UDHAMPUR	10	436	0.05	42	18	24	63	14	50	37	22	13	1	50	50	0
KARGIL	10	850	0.19	40	33	32	7	43	72	16	24	18	11	37	48	11
POONCH	9	1426	0.14	34	15	57	8	55	74	25	23	13	11	46	36	13
DH HANDWARA	9	1809	0.35	44	30	25	56	15	74	14	14	8	2	42	29	23
BARAMULLA	12	1879	0.21	42	30	32	36	16	61	10	24	10	1	61	32	0
RAJOURI	10	2475	0.25	37	18	32	33	20	68	25	37	12	3	22	62	16
JLNM HOSPITAL SRINAGAR	10	1197	0.28	44	0	5	42	6	89	8	12	24	0			
BUDGAM	10	871	0.36	42	27	32	7	84	72	16	16	11	13	23	27	47
PULWAMA	8	1167	0.23	45	1	26	92	0	87	18	18	1	0	0	0	0
DODA	6	816	0.23	39	29	38	20	53	69	10	13	11	1	70	10	0
GS KISHTWAR	12	470	0.14	37	21	34	3	79	21	28	11	18	3	79	0	21

The numbers highlighted indicate the upper & lower limit for the variable.
March 2015 data is not available.

JHARKHAND

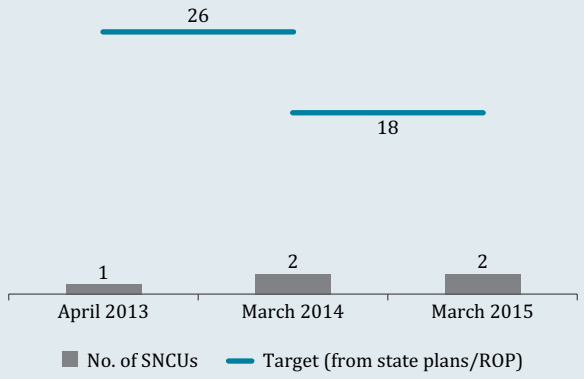
OPERATIONAL STATUS

High priority district | SNCU
Other district | SNCU became operational in 2014-15

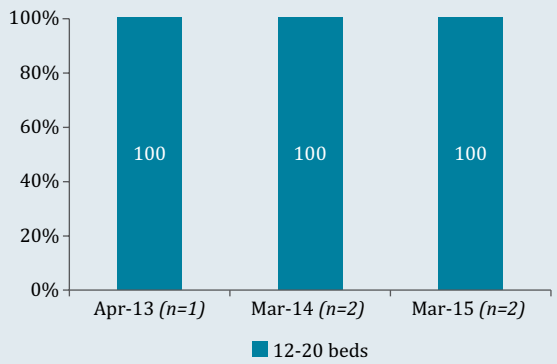
Dots representing SNCUs are plotted randomly within the district boundary.

NMR (SRS 2013)	26	
ENMR (SRS 2013)	22	
Districts	24	
Total SNCUs	2	
Districts without SNCU	22	
High Priority Districts (HPDs)	11	11 HPDs were without SNCUs viz., Palamu, Latehar, Lohardaga, Gumla, Simdega, Singhbhum West, Saraikella, Dumka, Godda, Pakur, Sahibganj

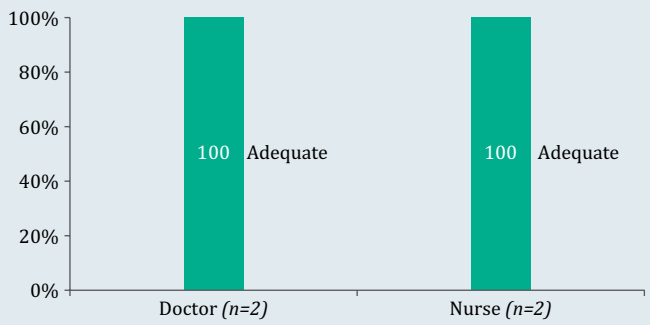
Planned versus Operational (N)



Bed-strength Distribution (%)



Adequacy of Human Resources (%)



Standard Norms

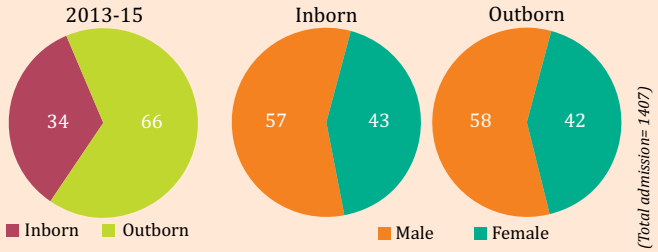
Establishment:
- Any health facility ≥ 3000 deliveries per year

Bed Strength:
- Minimum 12 beds/unit
- Additional 4 beds per 1000 deliveries/year

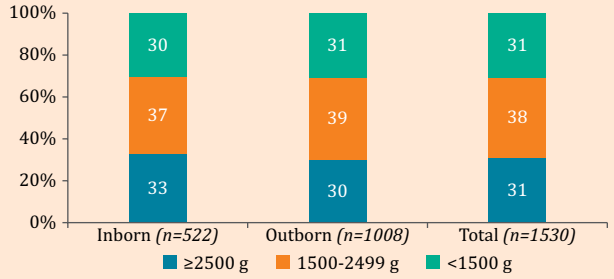
Human Resource:
- 1 doctor for 4 beds
- 2 nurses for 3 beds

ADMISSION PROFILE

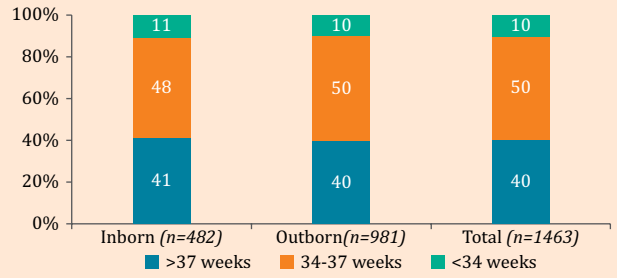
Place of Birth and Gender (%)



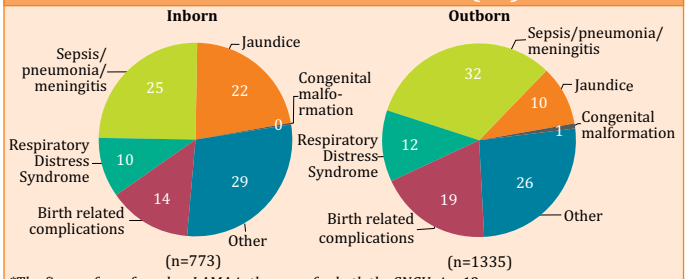
Birth Weight (%)



Gestational Age (%)

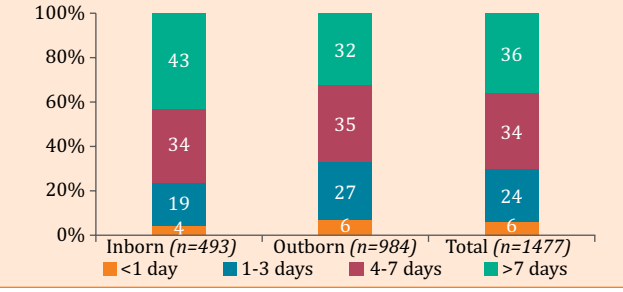


Causes of Admission (%)

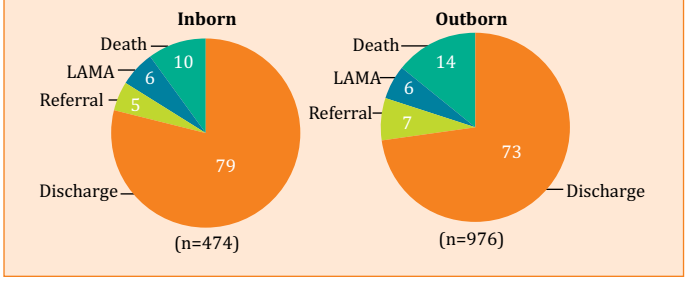


*The figures for referred or LAMA is the same for both the SNCUs i.e. 12.

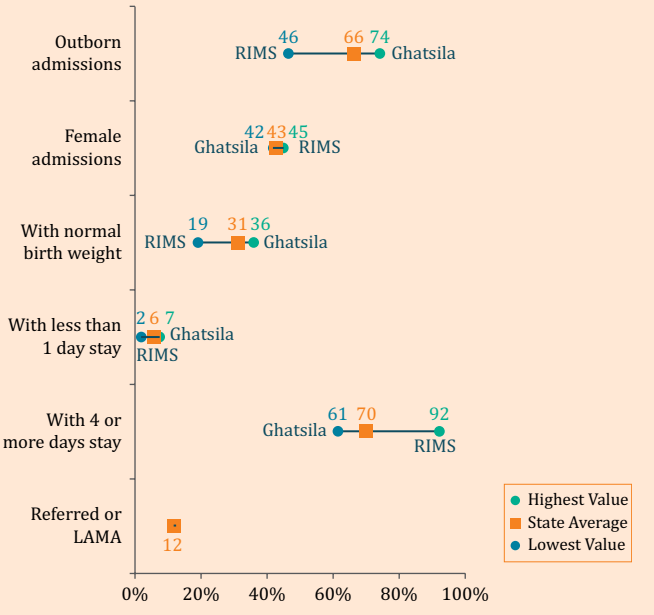
Duration of Stay (%)



Outcome (%)

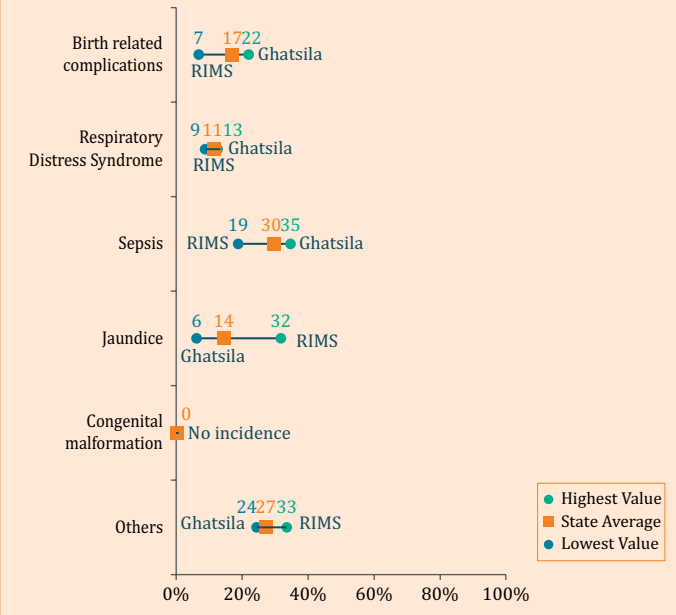


Variations in Key Admission Indicators (%)*



*When data distribution is not symmetrical, mean does not robustly represent the true central value.

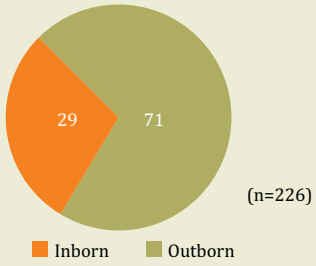
Variations in Causes of Admission (%)*



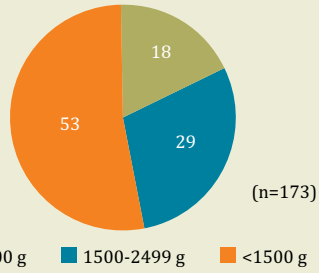
*When data distribution is not symmetrical, mean does not robustly represent the true central value.

MORTALITY PROFILE

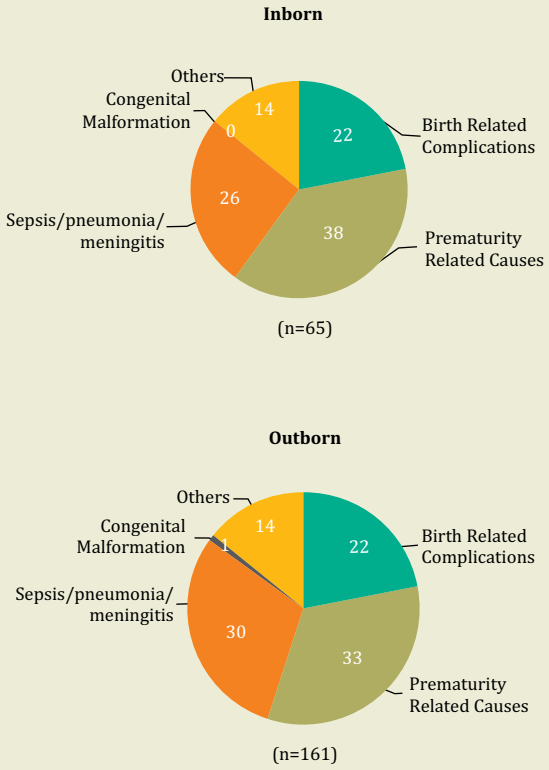
Place of Birth (%)



Weight at Birth (%)

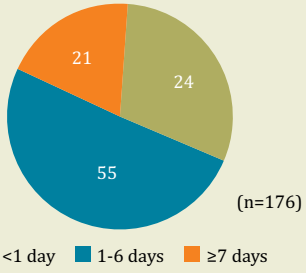


Causes of Mortality (%)

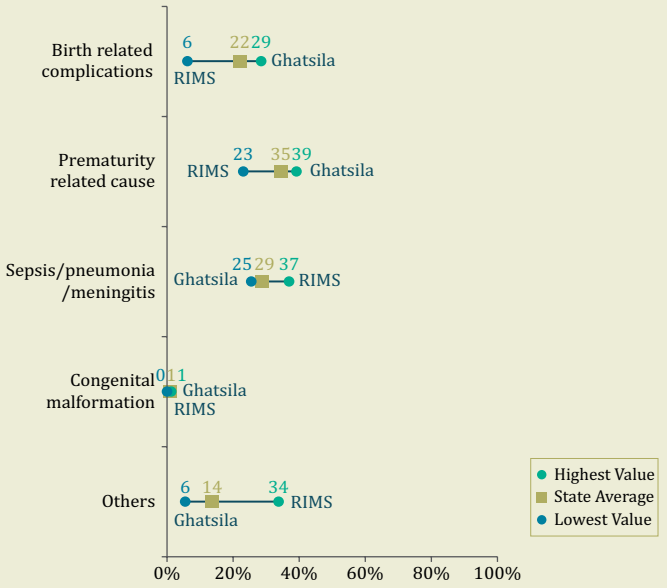


** 'Others' include:Other causes, Cause not established.*

Distribution by Age (%)



Variations in Causes of Mortality (%)*



**When data distribution is not symmetrical, mean does not robustly represent the true central value.*

KEY FINDINGS

- State had SNCUs in only two districts, rest 22 districts were without SNCUs. None of the high priority districts had SNCU.
- Percentage of outborn admissions was twice that of inborn admissions. For both inborn and outborn admissions female admissions were lower than male admissions.
- Babies with normal birth weight constituted 31% of admissions; 40% babies were full term. 30% of babies stayed for 3 days or less including 6% with less than 1 day of stay.
- Sepsis/ pneumonia/ meningitis and 'others' were the two most common diagnosis at admission (both inborn and outborn admissions), and together accounted for close to 55% of all admissions. Jaundice was much more common among inborn admissions.
- Prematurity related causes was the most common cause of death for both inborn and outborn admissions. Sepsis/pneumonia/meningitis was the second most common cause of death for both outborn and inborn admissions.
- Majority (71%) of the deaths were among outborn admissions and more than 80% of the deaths were among LBW babies.

WAY FORWARD

- State needs to prioritize establishment of new units or make arrangements for alternate mechanisms for care of small and sick newborns.
- Capacity of the SNCUs for cause ascertainment at admission and management of prematurity related causes needs to be strengthened.
- There is need to strengthen community level interventions for early identification and management of sick newborns and establish linkages between community and facility (or alternative mechanisms) wherever possible.

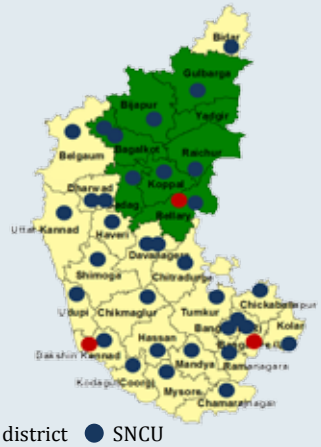
Statistics at a Glance (April 2013-March-2015)

SNCU	Bed strength (N)	Total admissions (N)	Inborn admission rate	Female admissions (%)	Out-born admissions (%)	LBW admissions (%)	Duration of stay < 1 day (%)	Duration of stay ≥ 4 days (%)	Discharged (%)	Causes of Morbidity (%)			Mortality rate (%)	Causes of Mortality (%)		
										RDS	Birth related complication	Sepsis/ Pneumonia/ Meningitis		Prematurity related causes	Birth related complications	Sepsis/ pneumonia/ meningitis
RIMS, RANCHI	16	397	0.02	45	46	81	2	92	80	9	7	19	16	23	6	37
EAST SINGHBHUM GHATSILA	12	1010	0.13	42	74	64	7	61	73	13	22	35	16	39	29	25

**The numbers highlighted indicate the upper & lower limit for the variable.*

KARNATAKA

OPERATIONAL STATUS

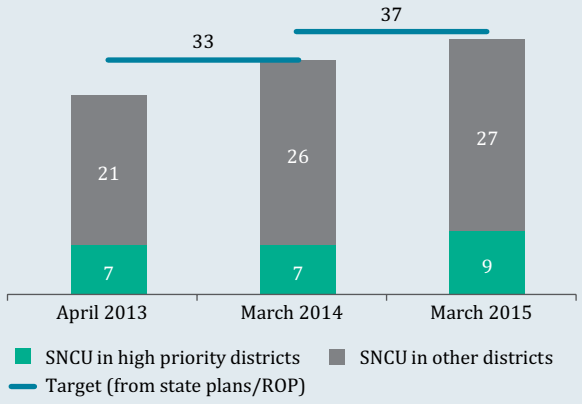


High priority district ● SNCU
Other district ● SNCU became operational in 2014-15

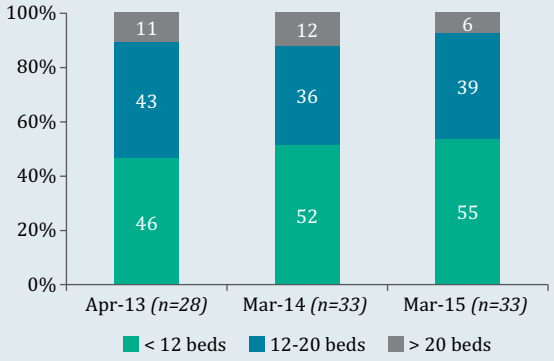
Dots representing SNCUs are plotted randomly within the district boundary.

NMR (SRS 2013)	22	
ENMR (SRS 2013)	18	
Districts	30	
Total SNCUs	36	Bangalore district had 4 SNCUs and Bellary, Davangere, Dakshin Kannad, Dharwad had 2 SNCUs each
Districts without SNCU	1	
High Priority Districts (HPDs)	8	1 HPD was without SNCU i.e., Yadgir

Planned versus Operational (N)

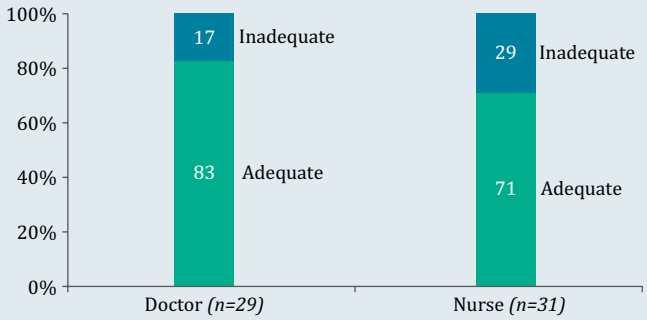


Bed-strength Distribution (%)



*Data not available for 3% of the SNCUs for 2014-15.

Adequacy of Human Resources* (%)



*No data available for Doctors in 7 SNCUs and Nurses in 5 SNCUs.

Standard Norms

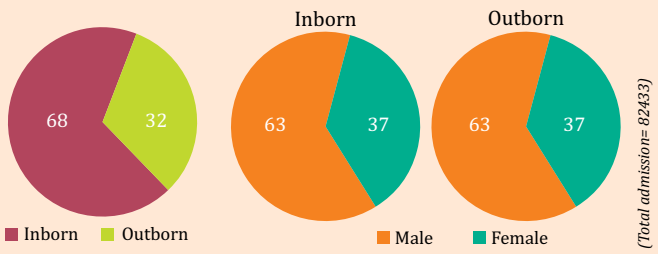
Establishment:
- Any health facility ≥ 3000 deliveries per year

Bed Strength:
- Minimum 12 beds/unit
- Additional 4 beds per 1000 deliveries/year

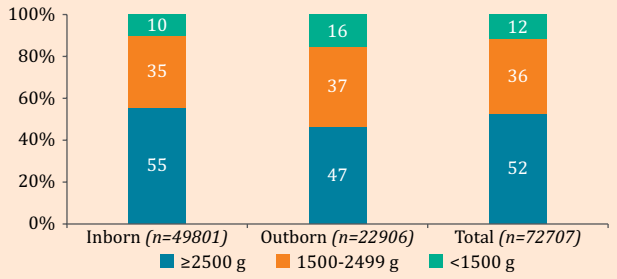
Human Resource:
- 1 doctor for 4 beds
- 2 nurses for 3 beds

ADMISSION PROFILE

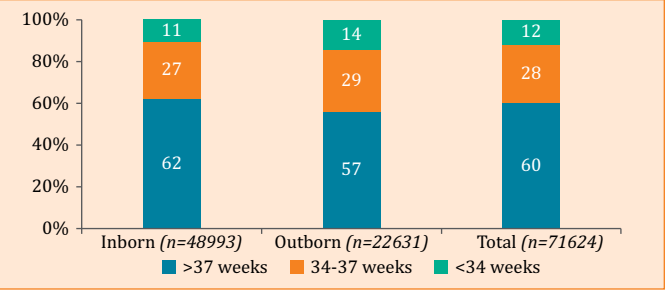
Place of Birth and Gender (%)



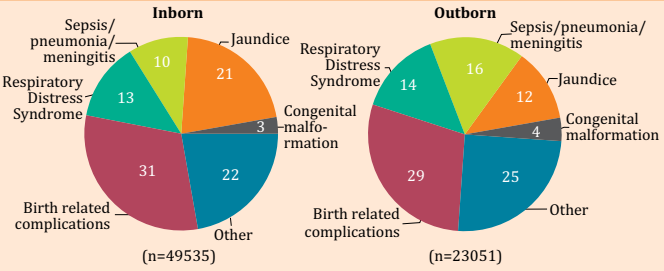
Birth Weight (%)



Gestational Age (%)

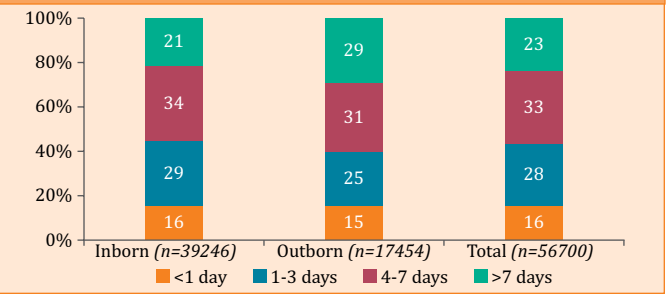


Causes of Admission (%)

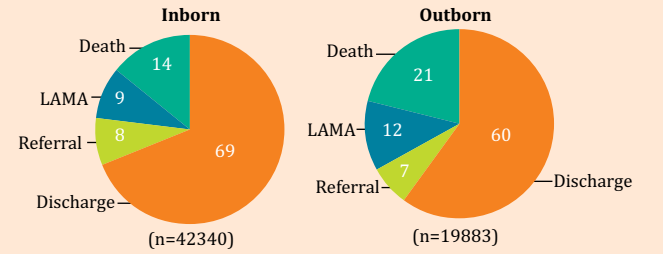


'Others' Include: Other causes of respiratory distress, Hypothermia, Hypoglycemia, Others.

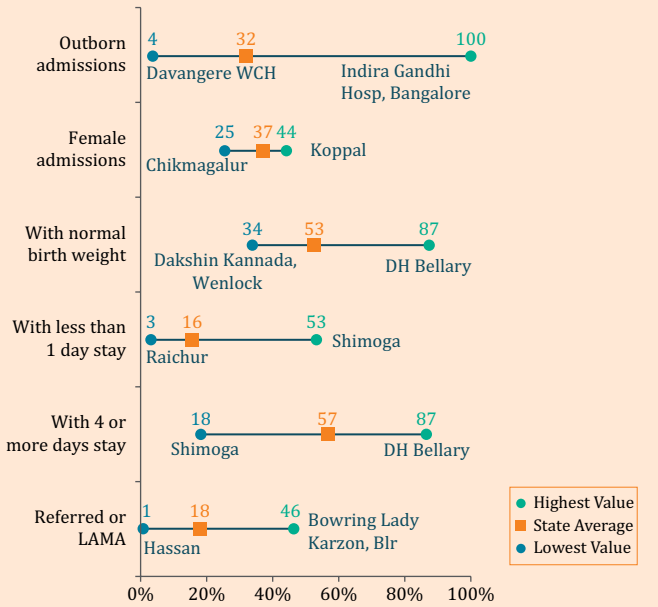
Duration of Stay (%)



Outcome (%)

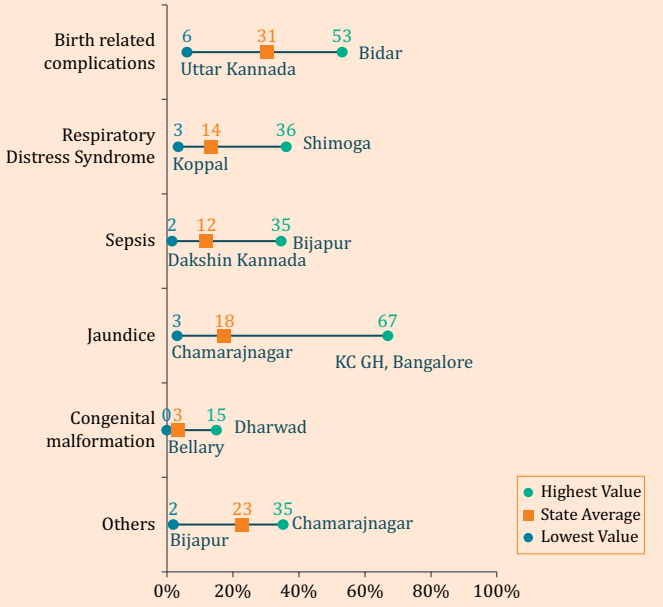


Variations in Key Admission Indicators (%)*



When data distribution is not symmetrical, mean does not robustly represent the true central value.

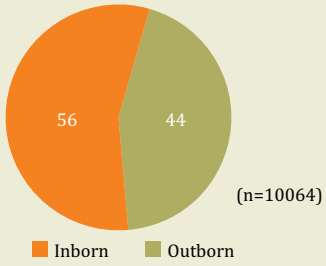
Variations in Causes of Admission (%)*



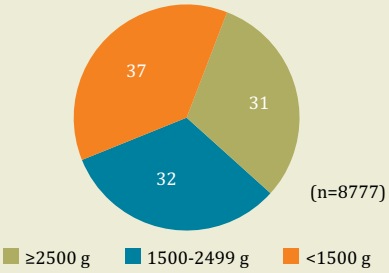
When data distribution is not symmetrical, mean does not robustly represent the true central value.

MORTALITY PROFILE

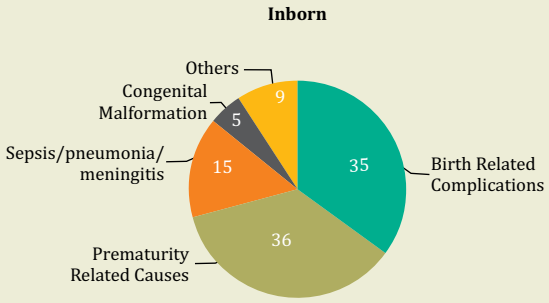
Place of Birth (%)

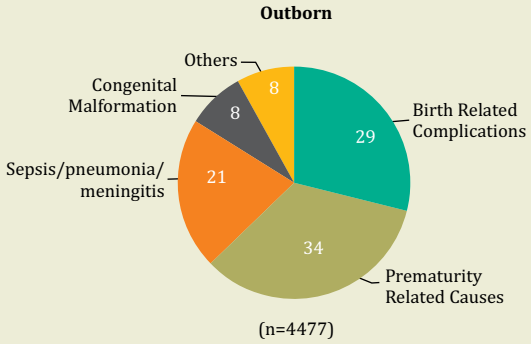


Weight at Birth (%)



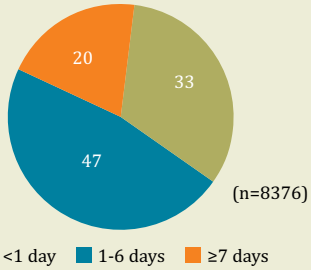
Causes of Mortality (%)



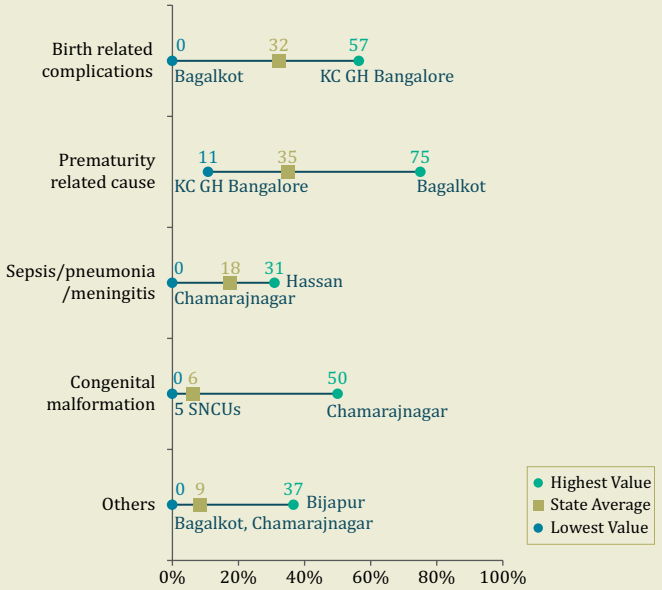


** 'Others' include: Other causes, Cause not established.*

Distribution by Age (%)



Variations in Causes of Mortality (%)*



**When data distribution is not symmetrical, mean does not robustly represent the true central value.*

KEY FINDINGS

- One HPD was without an SNCU (1/8). In the last two years, six new SNCUs had been operationalized in the state with two being in the HPDs.
- There were adequate doctors and nurses in most of the SNCUs but bed strength was less than 12 in 55% of these units.
- More than half of the admissions were of normal birth weight and 60% were full term babies. Nearly 16% babies were discharged within one day.
- The two main causes of admission were birth related complications and 'others' for both inborn and outborn admissions. This was followed by jaundice among inborn and sepsis and outborn admissions.
- Adverse outcomes (death and LAMA) were higher for both inborn (23%) and outborn (33%) admissions.
- Prematurity related causes and birth related complications were major causes of death. More than half (56%) of the deaths were among inborn admissions.

WAY FORWARD

- The State needs to look into the admission/discharge protocols and quality of care at these facilities, in addition to filling the gap in the HPD of Yadgir.
- Higher proportion of birth related complications among both inborn and outborn admissions suggest need to focus on quality of intrapartum care.
- There is a need to develop plan of action for each SNCU for improving quality of services, and regularly review and monitor their functioning including providing mentoring support.

Statistics at a Glance (April 2013-March-2015)

SNCU	Bed strength (N)	Total admissions (N)	Inborn admission rate	Female admissions (%)	Out-born admissions (%)	LBW admissions (%)	Duration of stay < 1 day (%)	Duration of stay ≥ 4 days (%)	Discharged (%)	Causes of Morbidity (%)			Mortality rate (%)	Causes of Mortality (%)		
										RDS	Birth related complication	Sepsis/ Pneumonia/ Meningitis		Prematurity related causes	Birth related complications	Sepsis/ pneumonia/ meningitis
BANGALORE K.C. GH	12	1651	0.24	37	6	33	5	19	94	5	7	5	3	11	57	2
BENGALURU VANI VILAS CHILDREN HOSPITAL	42	5920	0.13	36	33	59	9	56	69	15	35	18	20	39	31	23
INDIRA GANDHI HOSPITAL	15	2036	0.00	36	100	47	9	73	64	9	17	24	13	41	17	29
BOWRING LADY CURZON HOSPITAL		427	0.32	41	25	49	12	73	49	10	25	11	12	57	28	6
TUMKUR	12	2713	0.21	38	20	41	10	71	75	17	29	13	9	46	31	18
SHIMOGA DH	13	4281	0.21	34	27	53	53	18	75	36	21	5	12	45	25	4
RAICHUR RIMS TEACHING HOSPITAL	10	3929	0.33	31	35	39	3	69	52	14	32	11	16	44	30	12
CHIKMAGALUR DH	5	1751	0.40	25	31	40	13	45	66	12	22	11	4	27	37	13
MYSORE CHELUVAMBA HOSPITAL	40	5052	0.12	36	47	44	5	77	73	14	32	20	18	28	27	29
HASSAN S.C. HOSPITAL	8	2910	0.14	38	31	50	17	53	83	19	23	11	15	25	27	31
DAKSHINA KANNADA WENLOCK HOSPITAL	15	1027	0.12	34	56	66	14	64	76	24	16	6	15	45	12	15
DAKSHINA KANNADA LGH	10	1457	0.19	39	21	48	11	55	74	12	11	2	7	33	34	7
UDUPI DH	9	1443	0.28	39	28	35	18	45	83	11	12	7	1	42	33	17
DHARWAD DH	10	2543	0.23	40	40	54	25	61	45	5	25	7	8	31	39	20
KIMS HUBLI	20	6170	0.24	37	36	47	16	59	55	5	28	11	17	21	40	28
HAVERI DH	8	2149	0.21	37	25	48	7	70	66	13	32	5	16	22	25	23
BIJAPUR DH	10	1284	0.16	37	29	49	10	51	75	12	37	35	7	22	29	11
GADAG DH	12	1625	0.28	41	14	32	23	36	65	7	41	3	3	20	53	4
BAGALKOTE DH	10	582	0.15	38	8	51	19	40	79	9	43	4	1	75	0	25

SNCU	Bed strength (N)	Total admissions (N)	Inborn admission rate	Female admissions (%)	Out-born admissions (%)	LBW admissions (%)	Duration of stay < 1 day (%)	Duration of stay ≥ 4 days (%)	Discharged (%)	Causes of Morbidity (%)			Mortality rate (%)	Causes of Mortality (%)		
										RDS	Birth related complication	Sepsis/ Pneumonia/ Meningitis		Prematurity related causes	Birth related complications	Sepsis/ pneumonia/ meningitis
GENERAL HOSPITAL JAYANAGAR, BANGALORE	10	546	0.11	41	5	31	11	52	70	6	19	17	0			
UTTARA KANNADA DH	6	458	0.18	31	10	41	8	68	88	19	6	5	4	47	26	11
KOPPAL DH	8	1256	0.27	44	26	52	18	60	78	3	47	16	4	48	18	14
BELLARY VIMS	12	3904	0.23	38	60	46	7	82	72	12	47	13	18	27	44	17
DH BELLARY	18	150	0.06	42	15	13	4	87	77	25	44	2	0			
GULBARGA DH	12	3839	0.24	38	31	56	8	71	72	10	38	7	12	39	43	11
DAVANGERE DH	9	2895	0.23	43	23	50	6	74	82	13	34	10	19	59	30	8
WOMEN & CHILD HOSPITAL	7	3339	0.32	43	4	39	8	75	82	9	27	7	6	31	32	14
RAMANGARA	6	273	0.15	42	10	20	19	64	71	8	28	4	0			
CHICKBALLAPUR	6	1326	0.21	31	31	46	18	54	50	6	22	22	2	12	32	0
CHITRADURGA	12	2865	0.17	36	24	54	22	42	53	14	28	16	11	41	23	6
KOLAR	12	1292	0.13	35	52	49	13	49	64	11	21	13	10	40	21	19
BELGUAM DH	12	2683	0.17	37	28	54	14	64	50	13	41	12	13	27	43	19
BRIMS DH BIDAR	40	3582	0.18	38	31	45	24	41	29	18	53	4	19	32	40	4
CHAMARAJANAGAR	5	1047	0.31	34	15	39	12	55	71	7	51	3	1	33	17	0
MANDYA	7	2648	0.17	40	27	49	25	30	39	26	22	31	7	46	32	12
KODAGU	40	1380	0.26	43	18	41	12	71	66	14	19	13	7	51	10	29

**The numbers highlighted indicate the upper & lower limit for the variable.*

KERALA

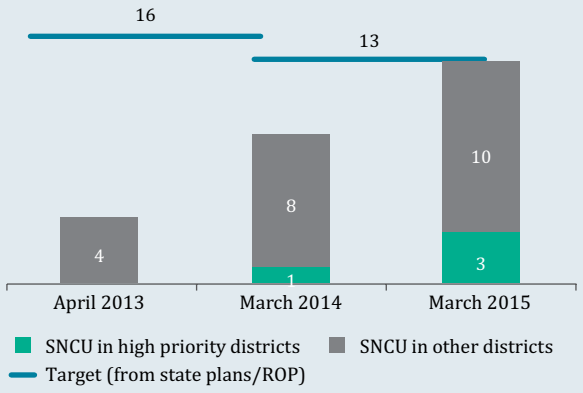
OPERATIONAL STATUS

High priority district
Other district
SNCU
SNCU became operational in 2014-15

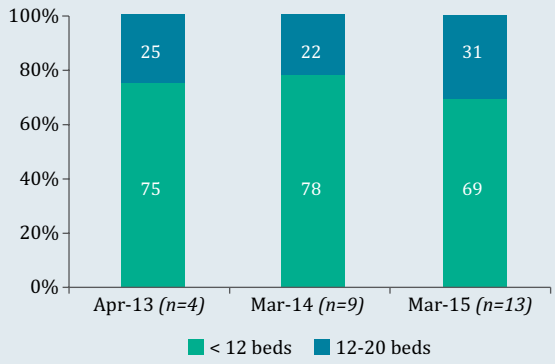
Dots representing SNCUs are plotted randomly within the district boundary.

NMR (SRS 2013)	6	
ENMR (SRS 2013)	4	
Districts	14	
Total SNCUs	13	Alappuzha, Kottayam, Palakkad, Thiruvananthapuram districts had 2 SNCUs each
Districts without SNCU	5	
High Priority Districts (HPDs)	3	1 HPD was without SNCU i.e., Kasaragod

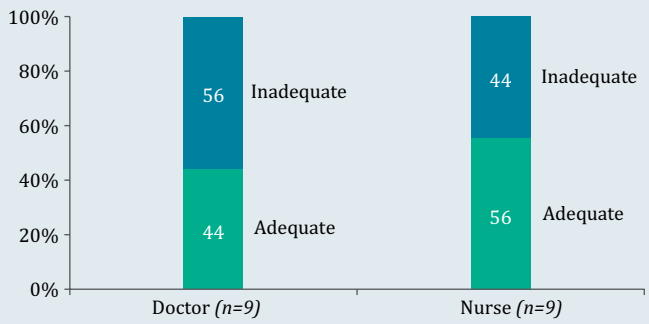
Planned versus Operational (N)



Bed-strength Distribution (%)



Adequacy of Human Resources* (%)



*No data available for 4 SNCUs.

Standard Norms

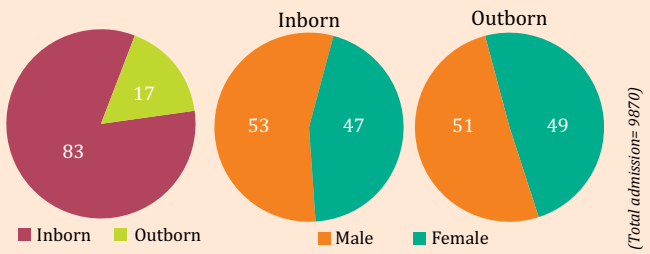
Establishment:
- Any health facility ≥ 3000 deliveries per year

Bed Strength:
- Minimum 12 beds/unit
- Additional 4 beds per 1000 deliveries/year

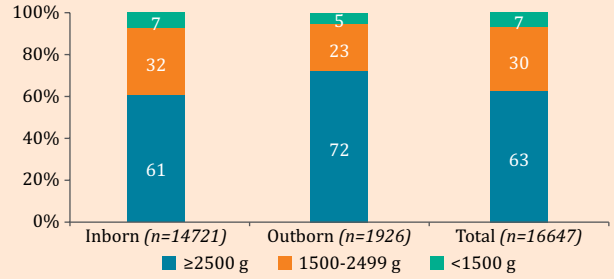
Human Resource:
- 1 doctor for 4 beds
- 2 nurses for 3 beds

ADMISSION PROFILE

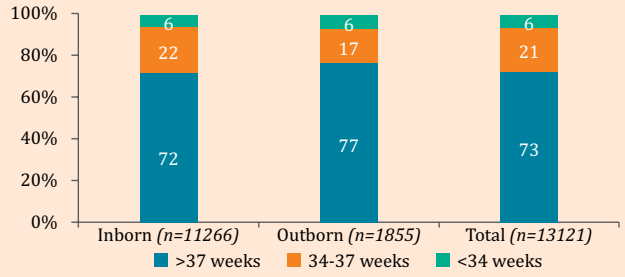
Place of Birth and Gender (%)



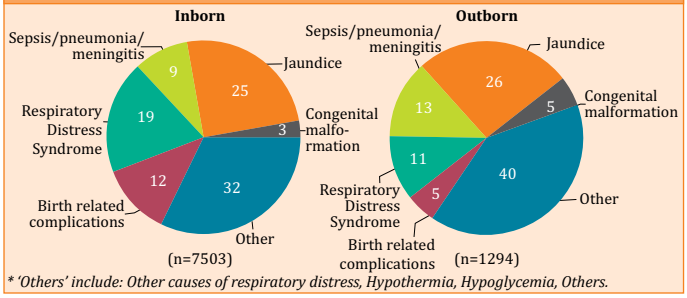
Birth Weight (%)



Gestational Age (%)

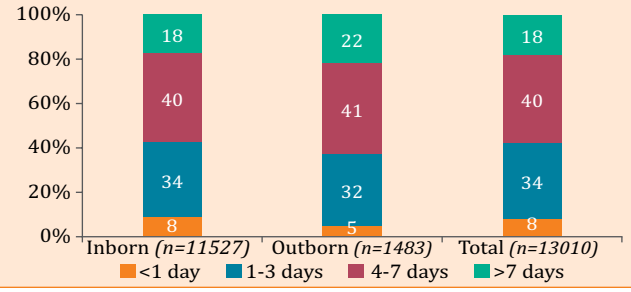


Causes of Admission (%)

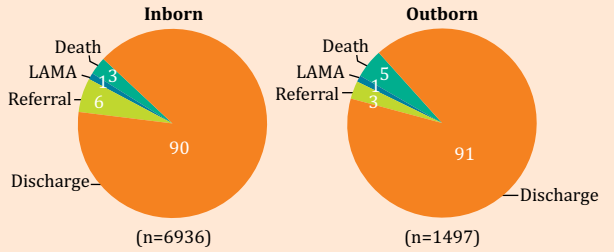


*'Others' include: Other causes of respiratory distress, Hypothermia, Hypoglycemia, Others.

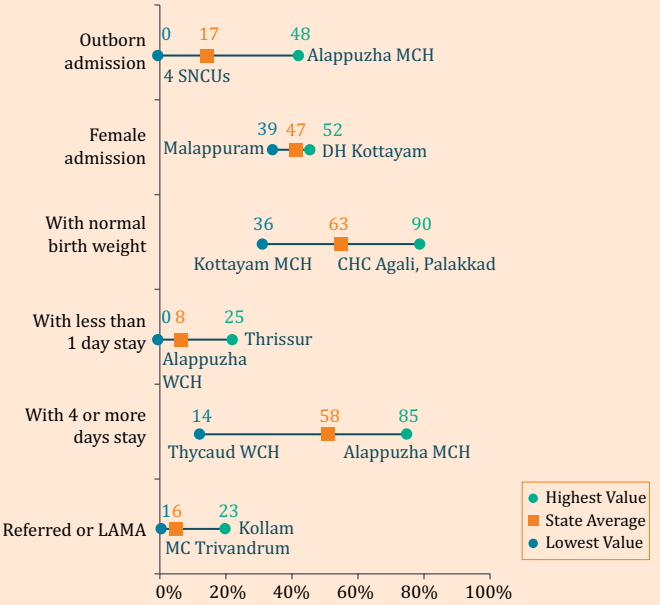
Duration of Stay (%)



Outcome (%)

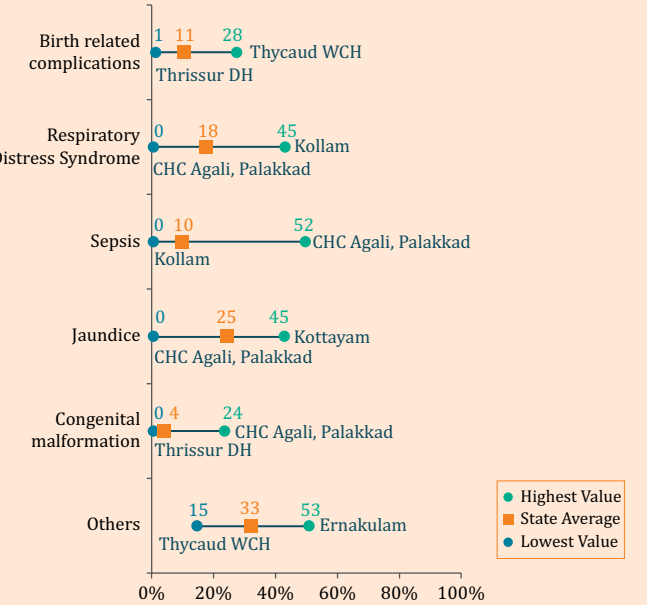


Variations in Key Admission Indicators (%)*



*When data distribution is not symmetrical, mean does not robustly represent the true central value.

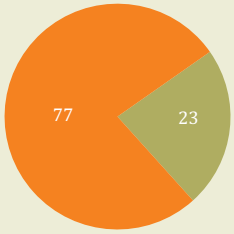
Variations in Causes of Admission (%)*



*When data distribution is not symmetrical, mean does not robustly represent the true central value.

MORTALITY PROFILE

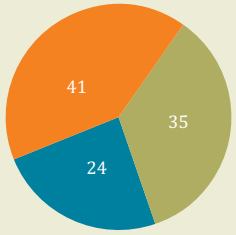
Place of Birth (%)



(n=315)

Note: Data not available for June, July 2013 and, January to June 2014.

Weight at Birth (%)

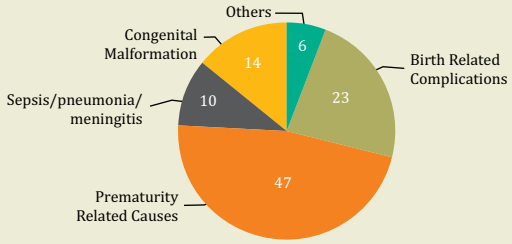


(n=304)

Note: Data not available for June, July 2013 and, January to June 2014.

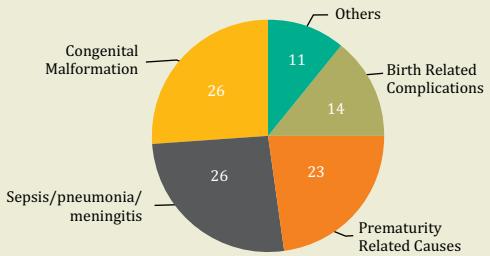
Causes of Mortality (%)

Inborn



(n=242)

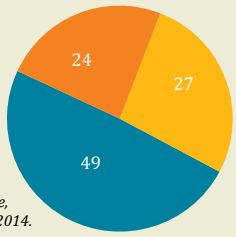
Outborn



(n=73)

** 'Others' include: Other causes, Cause not established.*

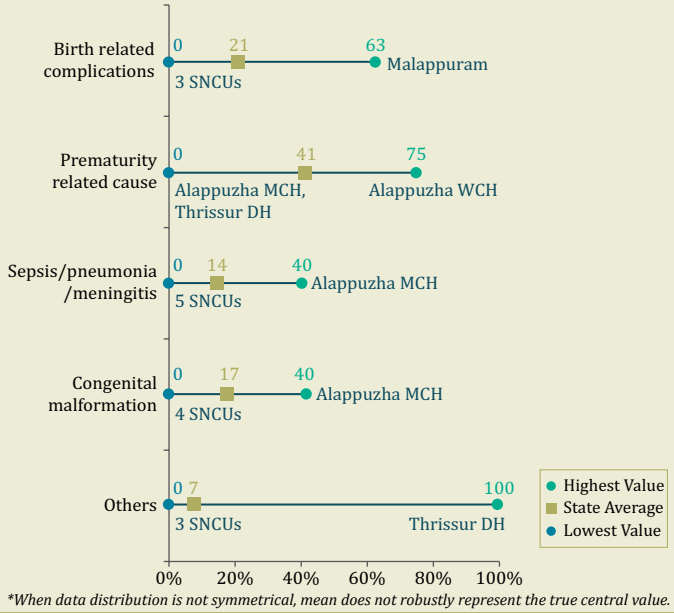
Distribution by Age (%)



(n=243)

Note: Data not available for June, July 2013 and, January to June 2014.

Variations in Causes of Mortality (%)*



**When data distribution is not symmetrical, mean does not robustly represent the true central value.*

KEY FINDINGS

- Nearly one-third of the SNCUs had less than 12 beds and about half of them had adequate doctors and nurses.
- Profiles of inborn and outborn admissions were similar. Discharge rates were >90% with adverse outcomes between 4-6%.
- 'Others' and jaundice were the major causes of admission for both Inborn and Outborn babies. Other causes included RDS for inborn babies and sepsis for outborns.
- While prematurity related causes were the major cause of death among inborns, sepsis and congenital malformation were the major causes of death among outborn babies.

WAY FORWARD

- Prioritize establishment of new units in the districts without SNCUs. State also needs to upgrade the existing SNCU to have adequate beds and Human resource for their optimal utilization.
- Since majority of the admissions are normal weight and full term, the facilities needs to look into the admission/discharge protocols.
- Higher proportion of prematurity related complications among both inborn and outborn admissions suggest need to focus on quality of antenatal and peripartum care.
- Regularly review the functioning of SNCUs and develop unit-specific plan of action for improving quality of services.

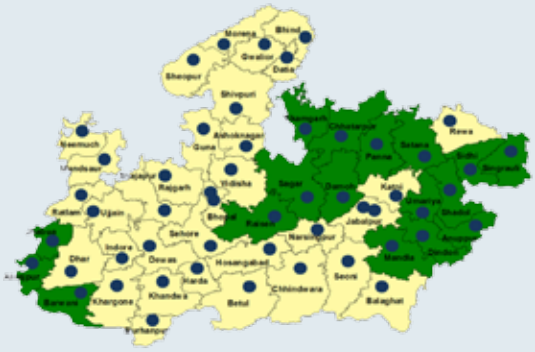
Statistics at a Glance (April 2013-March-2015)

SNCU	Bed strength (N)	Total admissions (N)	Inborn admission rate	Female admissions (%)	Out-born admissions (%)	LBW admissions (%)	Duration of stay < 1 day (%)	Duration of stay ≥ 4 days (%)	Discharged (%)	Causes of Morbidity (%)			Mortality rate (%)	Causes of Mortality (%)		
										RDS	Birth related complication	Sepsis/ Pneumonia/ Meningitis		Prematurity related causes	Birth related complications	Sepsis/ pneumonia/ meningitis
ERNAKULAM	12	817	0.19	47	19	34	6	68	91	16	7	4	0	50	0	0
ALAPPUZHA W&C HOSPITAL	10	139	0.04	44	35	25	0	84	86	15	14	30	3	75	0	25
MCH ALAPPUZHA	6	79	0.20	52	48	58	2	85	87	2	5	14	6	0	20	40
PALAKKAD CHC AGALI	12	29	0.31	48	0	10	3	72	95	0	3	52	0			
PALAKKAD W&C	12	991	0.21	46	4	32	6	70	93	14	11	21	1	43	43	0
GOVT. VICTORIA HOSPITAL KOLLAM	10	778	0.19	45	1	32	13	56	77	45	15	0	0			
SAT HOSPITAL, MEDICAL COLLEGE, TRIVANDRUM	7	3654	0.33	49	36	45	9	52	93	19	12	8	4	28	17	22
W&C HOSPITAL, THYCAUD	11	524	0.18	47	0	12	9	14	93	43	28	6	0			
KOTTAYAM DISTRICT HOSPITAL	6	467	0.27	52	1	27	3	65	96	5	2	17	3	50	25	0
KOTTAYAM MCH	9	1120	0.18	48	0	64	4	80	84	8	7	13	10	61	21	7
G.H. MANJERI, MALAPPURAM	10	313	0.07	39	19	25	12	58	80	11	10	16	3	13	63	0
W&C HOSPITAL KOZHIKODE	12	624	0.17	46	2	15	3	56	96	6	3	3	0			
THRISSUR DH	9	335	0.16	47	0	17	25	30	96	12	1	2	0	0	0	0

The numbers highlighted indicate the upper & lower limit for the variable.

MADHYA PRADESH

OPERATIONAL STATUS

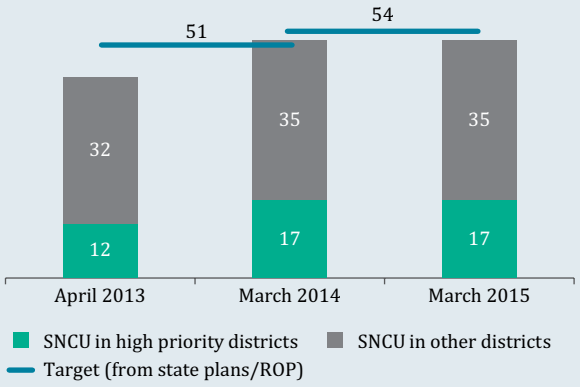


High priority district
Other district
SNCU
SNCU became operational in 2014-15

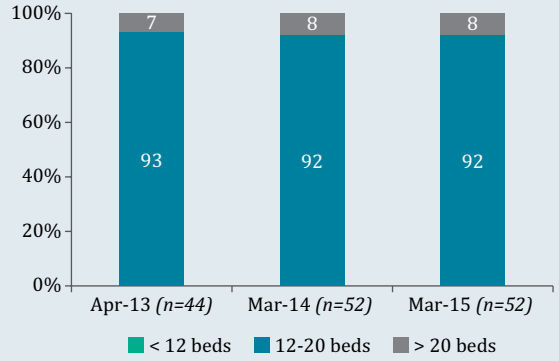
Dots representing SNCUs are plotted randomly within the district boundary.

NMR (SRS 2013)	36	
ENMR (SRS 2013)	27	
Districts	50	
Total SNCUs	52	Bhopal and Jabalpur districts had 2 SNCUs each
Districts without SNCU	Nil	
High Priority Districts (HPDs)	17	No HPDs was without SNCU

Planned versus Operational (N)



Bed-strength Distribution (%)



Adequacy of Human Resources (%)

DATA NOT REPORTED

Standard Norms

Establishment:

- Any health facility ≥ 3000 deliveries per year

Bed Strength:

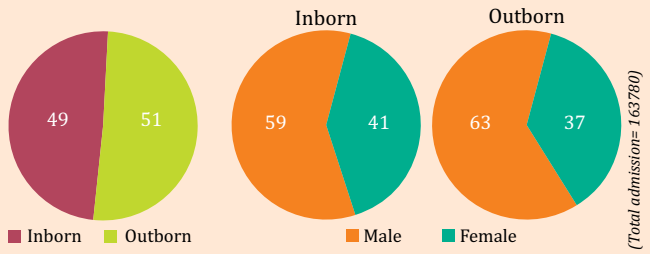
- Minimum 12 beds/unit
- Additional 4 beds per 1000 deliveries/year

Human Resource:

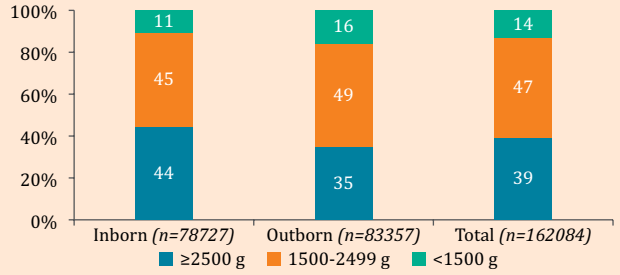
- 1 doctor for 4 beds
- 2 nurses for 3 beds

ADMISSION PROFILE

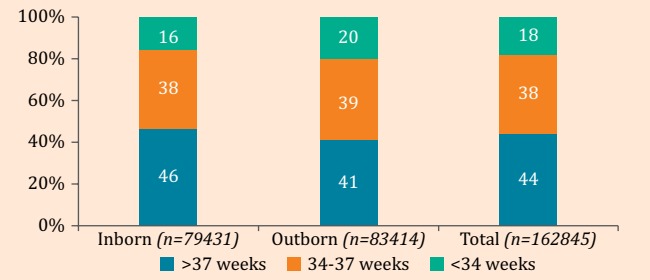
Place of Birth and Gender (%)



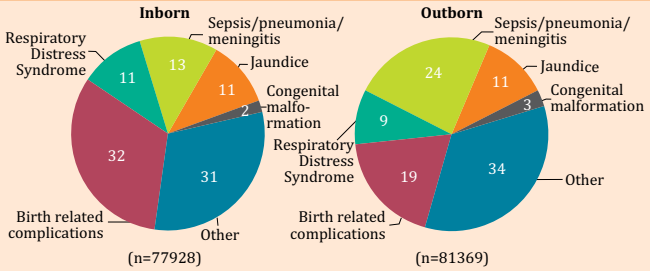
Birth Weight (%)



Gestational Age (%)

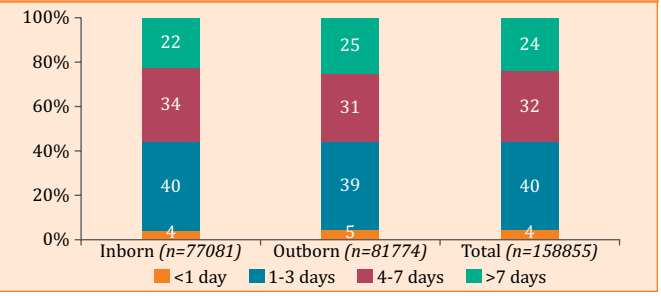


Causes of Admission (%)

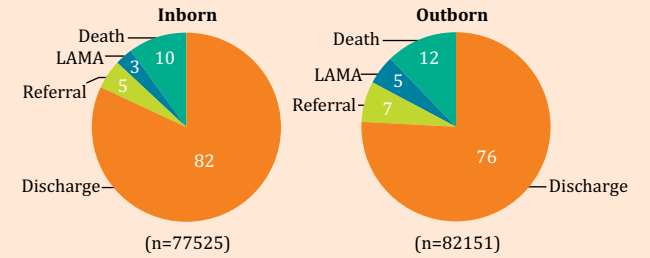


*'Others' include: Other causes of respiratory distress, Hypothermia, Hypoglycemia, Others.

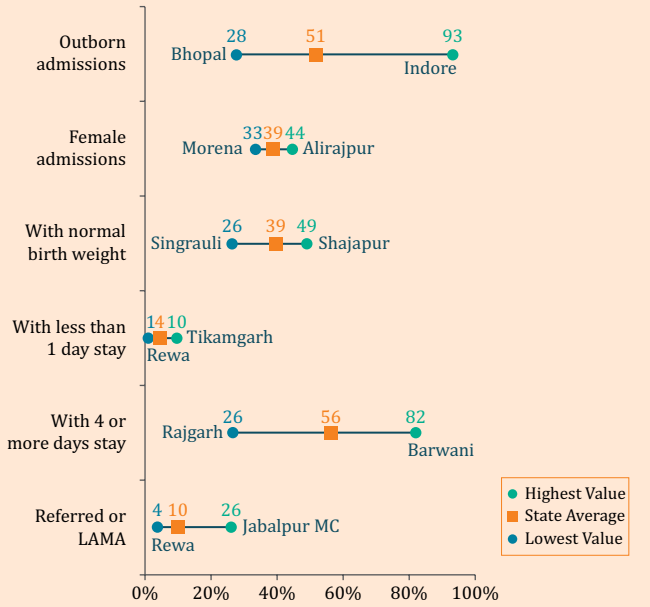
Duration of Stay (%)



Outcome (%)

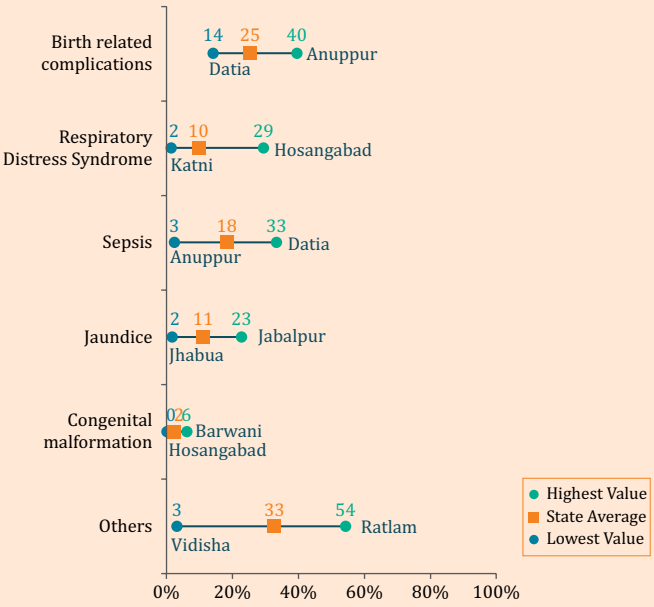


Variations in Key Admission Indicators (%)*



*When data distribution is not symmetrical, mean does not robustly represent the true central value.

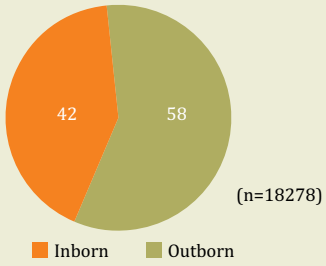
Variations in Causes of Admission (%)*



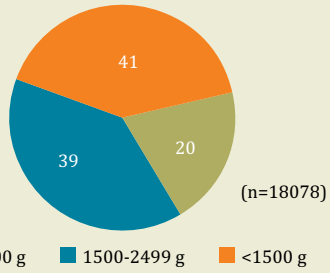
*When data distribution is not symmetrical, mean does not robustly represent the true central value.

MORTALITY PROFILE

Place of Birth (%)

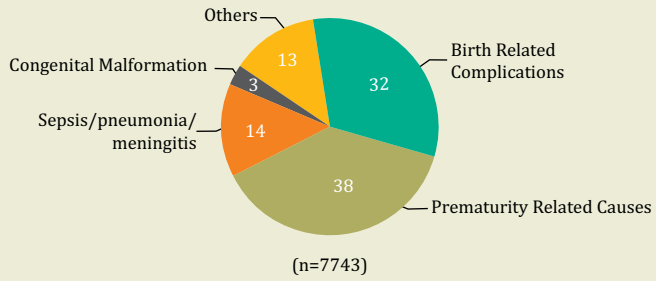


Weight at Birth (%)



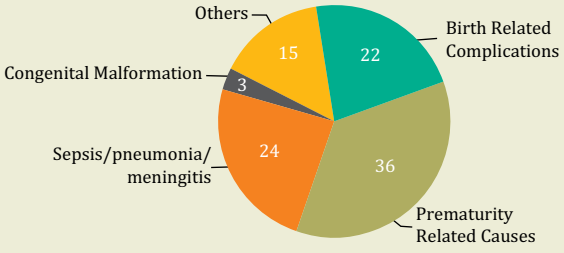
Causes of Mortality (%)

Inborn



(n=7743)

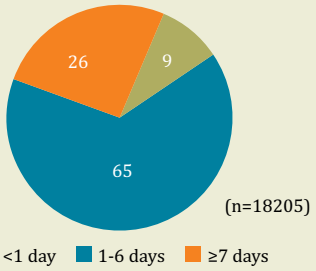
Outborn



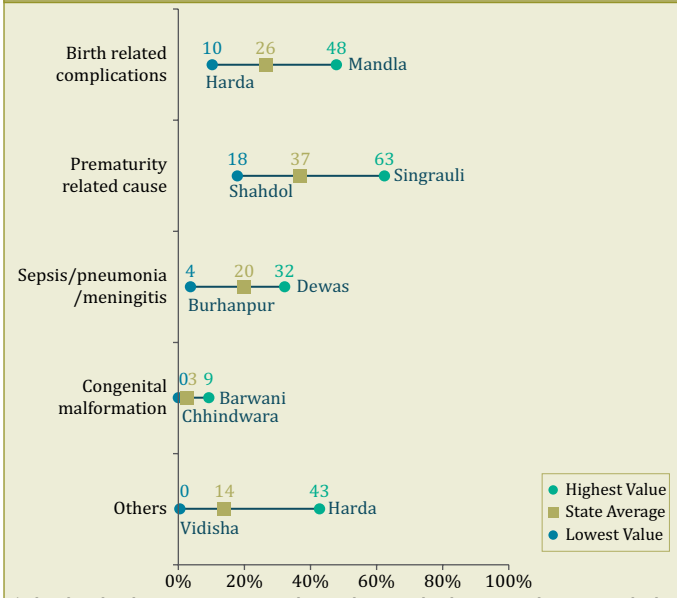
(n=10535)

** 'Others' include: Other causes, Cause not established.*

Distribution by Age (%)



Variations in Causes of Mortality (%)*



**When data distribution is not symmetrical, mean does not robustly represent the true central value.*

KEY FINDINGS

- All the districts (including the HPDs) in the state had at least one SNCU with bed strength >12.
- Inborn and outborn admissions were of near-equal proportions and had similar profiles: higher proportion of male, low birth weight and preterm babies, , 'others' as a common diagnosis at admission, and pattern of stay in the SNCUs (~5% of the babies stayed for <1 day; 75% for <1 week) and discharge rates.
- Majority of the deaths in the SNCUs were among outborn babies (58%) and those with low birth weight (80%). Prematurity related causes and birth related complications and sepsis were the three main causes of mortality.
- SNCU admission and mortality related indicators were fairly consistent across the state except for proportion of outborn admissions, duration of stay beyond 4 days and 'others' as cause of admission and of mortality.

WAY FORWARD

- The state has developed an excellent system of SNCUs with units in each district and fairly consistent performance indicator values across the state.
- Capacity for diagnostic labelling at admission and cause ascertainment for mortality needs to be strengthened across SNCUs so that the frequency of the 'others' category is minimal and cause-specific salvage approaches are more data informed.
- High mortality due to birth related complications and prematurity related causes calls for making peripartum services more robust.
- Initiatives for improving quality of services needs to be documented and shared with other states to facilitate cross-learning.

Statistics at a Glance (April 2013-March-2015)

SNCU	Bed strength (N)	Total admissions (N)	Inborn admission rate	Female admissions (%)	Out-born admissions (%)	LBW admissions (%)	Duration of stay < 1 day (%)	Duration of stay ≥ 4 days (%)	Discharged (%)	Causes of Morbidity (%)			Mortality rate (%)	Causes of Mortality (%)		
										RDS	Birth related complication	Sepsis/ Pneumonia/ Meningitis		Prematurity related causes	Birth related complications	Sepsis/ pneumonia/ meningitis
GWALIOR	20	2144	0.11	37	44	59	7	40	77	18	22	21	8	50	16	23
GUNA	20	5165	0.17	36	54	53	2	62	86	8	30	22	10	35	39	19
SHIVPURI	20	3204	0.11	34	52	67	3	70	79	15	20	20	12	46	26	16
BHIND	20	3182	0.10	34	51	53	5	48	79	5	25	20	8	41	36	14
DATIA	20	2425	0.18	37	30	58	6	51	75	21	14	33	13	57	24	16
ASHOKNAGAR	20	3133	0.20	37	46	54	4	52	79	6	25	16	14	43	20	13
MORENA	20	5569	0.12	33	54	60	1	59	88	4	34	24	8	35	30	25
SHEOPUR	20	3708	0.18	39	46	51	4	66	82	5	19	30	7	33	36	23
BHOPAL	20	2384	0.16	41	28	56	1	81	88	7	29	14	6	38	26	25
BHOPAL MC	30	5818	No Data	38	65	68	7	58	56	7	25	24	20	29	21	30
SEHORE	20	5264	0.15	37	61	57	4	36	83	14	28	21	9	46	26	18
VIDISHA	20	2778	0.15	37	46	60	4	71	80	24	27	22	8	44	33	19
HOSHANGABAD	20	2582	0.12	39	49	65	4	71	84	29	22	14	7	53	19	12
RAISEN	20	2211	0.17	38	49	61	4	56	84	14	21	18	6	39	21	16
RAJGARH	20	3785	0.20	36	52	60	6	26	84	6	26	12	10	39	27	15
BETUL	20	2989	0.15	42	57	58	3	64	81	5	20	27	11	38	19	26
UJJAIN	20	5008	0.13	39	48	60	8	30	81	10	36	14	14	38	27	24
MANDSAUR	20	4990	0.15	39	59	62	3	57	83	3	22	14	11	31	26	16
RATLAM	20	4664	0.15	39	45	62	4	41	81	5	20	10	13	58	21	10
SHAJAPUR	20	2674	0.13	39	51	51	2	55	84	8	38	24	12	36	39	17
NEEMUCH	20	3861	0.21	40	40	60	5	68	81	20	19	8	12	39	32	11
DEWAS	20	2298	0.07	41	54	61	3	57	84	3	24	19	10	39	11	32
JABALPUR	20	3636	0.15	42	32	53	4	63	83	13	17	19	10	39	18	19
JABALPUR MC	30	3680	0.14	39	58	66	8	68	50	2	30	16	23	18	31	32
KATNI	20	3504	0.17	41	51	60	4	41	78	2	29	20	9	23	36	22

SNCU	Bed strength (N)	Total admissions (N)	Inborn admission rate	Female admissions (%)	Out-born admissions (%)	LBW admissions (%)	Duration of stay < 1 day (%)	Duration of stay ≥ 4 days (%)	Discharged (%)	Causes of Morbidity (%)			Mortality rate (%)	Causes of Mortality (%)		
										RDS	Birth related complication	Sepsis/ Pneumonia/ Meningitis		Prematurity related causes	Birth related complications	Sepsis/ pneumonia/ meningitis
CHHINDWARA	20	3907	0.13	41	36	53	3	62	81	9	29	14	9	47	28	15
MANDLA	20	2340	0.19	43	49	62	3	47	79	9	24	4	10	29	48	4
NARSINGPUR	20	2972	0.17	39	51	56	7	64	80	14	18	26	5	59	21	6
SEONI	20	2808	0.12	42	53	60	3	60	81	6	33	10	12	27	40	12
SATNA	20	4830	0.16	39	43	60	8	44	74	23	26	13	10	44	28	13
SHAHDOL	20	3507	0.16	39	46	53	4	54	78	7	30	16	11	18	36	19
UMARIA	20	1599	0.19	38	44	52	6	54	80	3	28	26	6	36	21	12
INDORE M.C.	30	3380	0.01	39	93	65	1	59	67	9	22	16	21	30	20	29
BARWANI	20	3809	0.14	41	52	67	3	82	79	15	23	27	9	44	20	22
JHABUA	20	2569	0.17	42	63	70	3	65	71	6	27	26	15	47	24	22
KHARGONE	20	3394	0.10	41	53	63	5	58	72	4	24	12	11	35	17	26
KHANDWA	20	2759	0.08	43	56	71	4	63	74	11	18	15	14	41	15	26
DHAR	20	3070	0.17	41	54	67	7	56	77	23	26	13	12	56	20	11
BURHANPUR	20	2302	0.10	40	49	58	5	63	81	8	30	4	9	47	36	4
ALIRAJPUR	20	1175	0.13	44	55	71	3	36	86	3	22	20	8	40	14	28
CHHATARPUR	20	4660	0.14	34	58	61	3	62	84	19	25	28	11	33	30	16
PANNA	20	2659	0.21	37	47	62	5	62	76	2	24	27	14	29	35	24
TIKAMGARH	20	2934	0.12	37	60	66	10	34	78	15	21	24	14	30	21	28
DAMOH	20	2925	0.15	41	41	62	1	60	86	3	30	18	9	22	28	26
ANUPPUR	20	1079	0.17	42	43	59	4	61	79	2	40	3	9	23	26	22
HARDA	20	1499	0.17	40	42	60	10	53	67	3	22	17	14	22	10	23
BALAGHAT	20	3535	0.15	42	49	65	7	43	86	5	26	15	10	25	38	18
DINDORI	20	1036	0.14	44	61	71	6	54	76	6	20	20	13	46	17	19
SIDHI	20	1408	0.09	38	51	63	3	70	76	14	20	22	8	43	18	11
SINGRAULI	20	687	0.09	38	49	74	8	69	75	14	25	19	15	63	18	7
SAGAR	20	1700	0.07	37	51	65	3	61	78	7	26	19	12	25	22	32
REWA M.C.	30	4041	0.50	37	66	61	1	70	83	12	26	14	12	48	31	12

The numbers highlighted indicate the upper & lower limit for the variable.

MAHARASHTRA

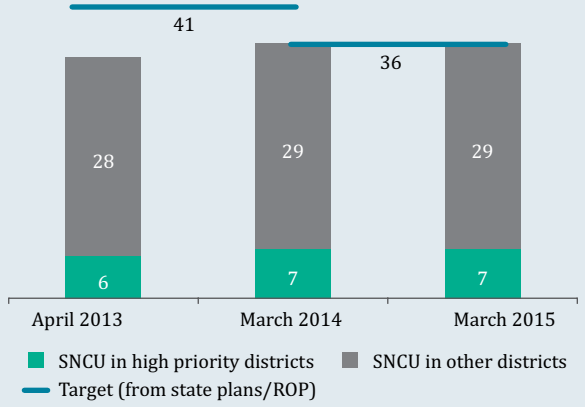
OPERATIONAL STATUS

High priority district
Other district
SNCU
SNCU became operational in 2014-15

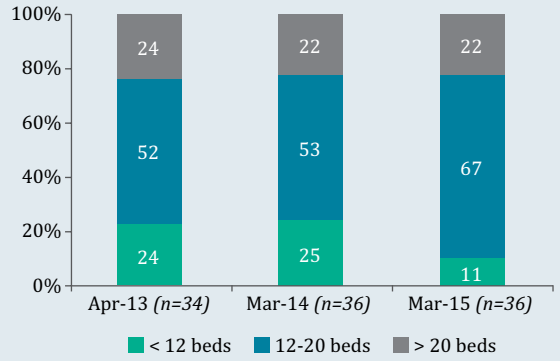
Dots representing SNCUs are plotted randomly within the district boundary.

NMR (SRS 2013)	17	
ENMR (SRS 2013)	13	
Districts	36	
Total SNCUs	36	Buldhana, Nasik and Satara districts had 2 SNCUs each; Thane district had 5 SNCUs
Districts without SNCU	5	
High Priority Districts (HPDs)	9	2 HPDs did not have SNCU viz., Aurangabad and Dhule

Planned versus Operational (N)

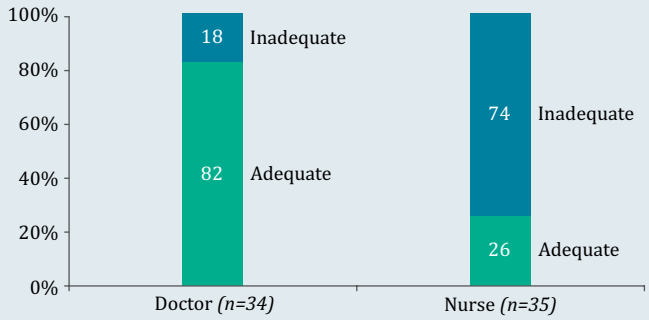


Bed-strength Distribution (%)



**Target data from State plans (ROP).*

Adequacy of Human Resources* (%)



**No data available for Doctor for 2 SNCUs and Nurse for 1 SNCU.*

Standard Norms

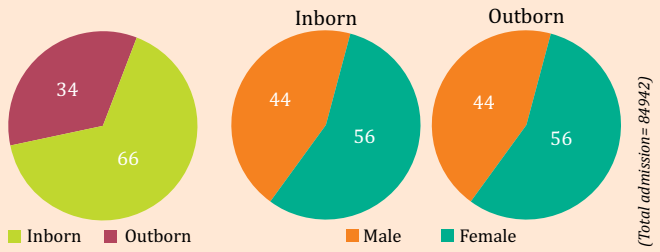
Establishment:
- Any health facility ≥ 3000 deliveries per year

Bed Strength:
- Minimum 12 beds/unit
- Additional 4 beds per 1000 deliveries/year

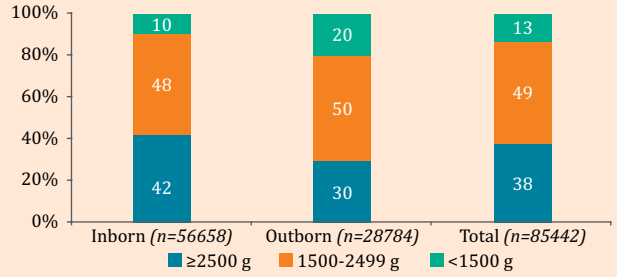
Human Resource:
- 1 doctor for 4 beds
- 2 nurses for 3 beds

ADMISSION PROFILE

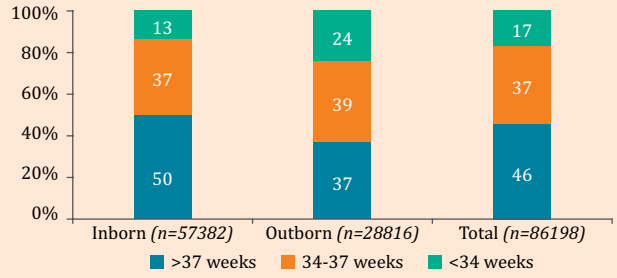
Place of Birth and Gender (%)



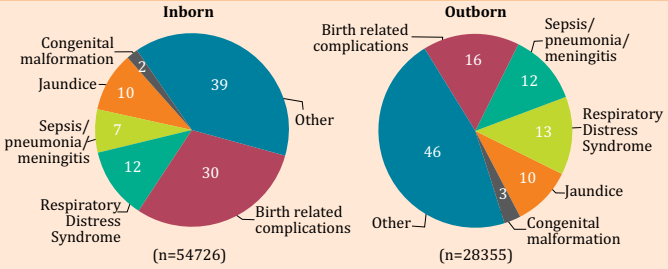
Birth Weight (%)



Gestational Age (%)

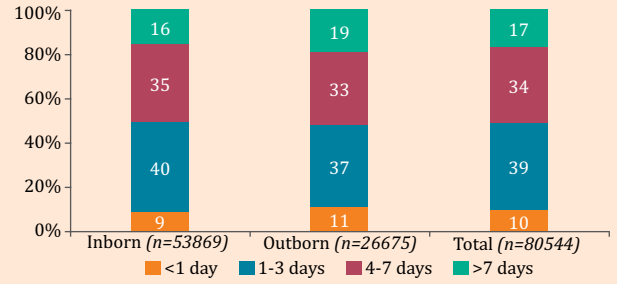


Causes of Admission (%)

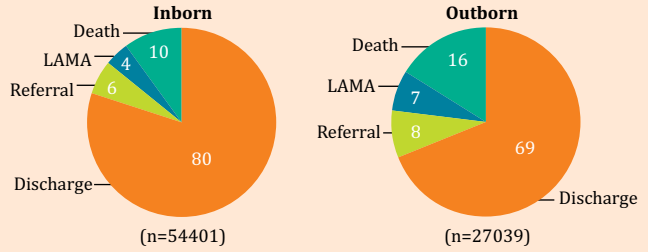


** 'Others' include: Other causes of respiratory distress, Hypothermia, Hypoglycemia, Others.*

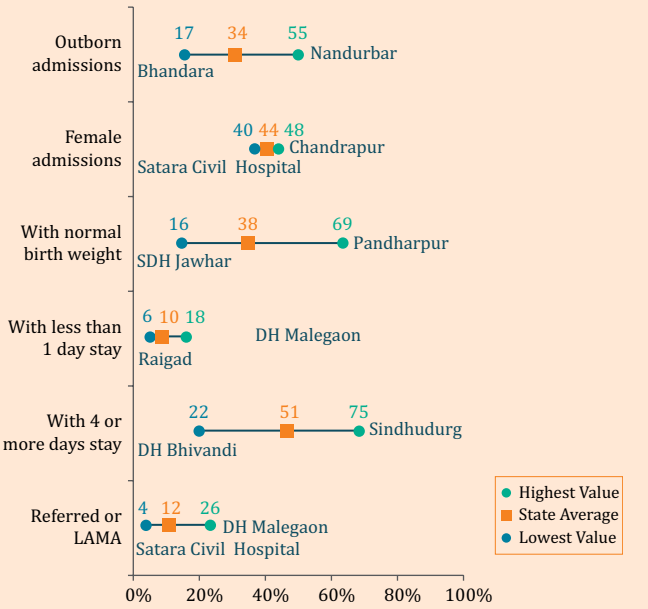
Duration of Stay (%)



Outcome (%)

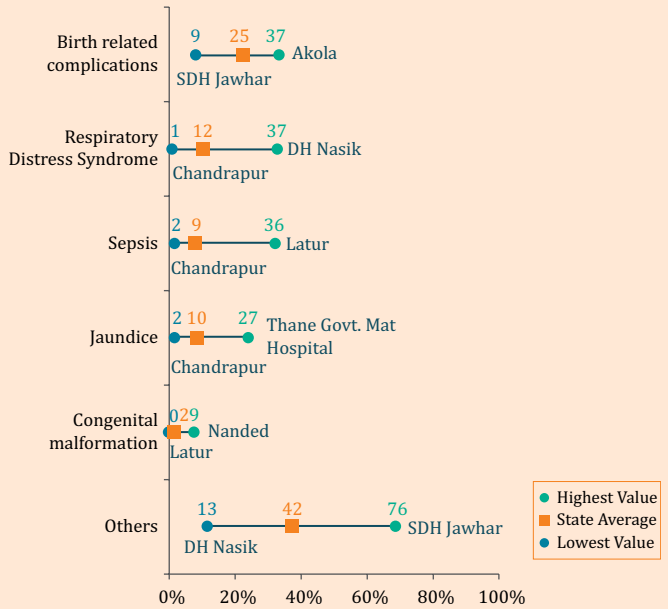


Variations in Key Admission Indicators (%)*



**When data distribution is not symmetrical, mean does not robustly represent the true central value.*

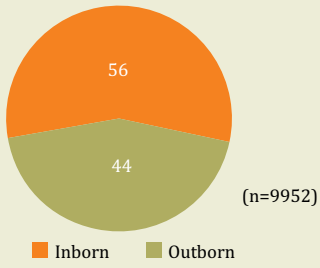
Variations in Causes of Admission (%)*



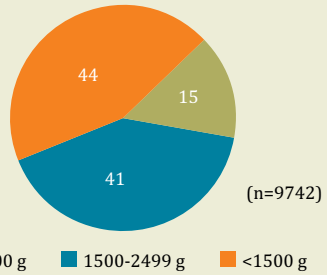
**When data distribution is not symmetrical, mean does not robustly represent the true central value.*

MORTALITY PROFILE

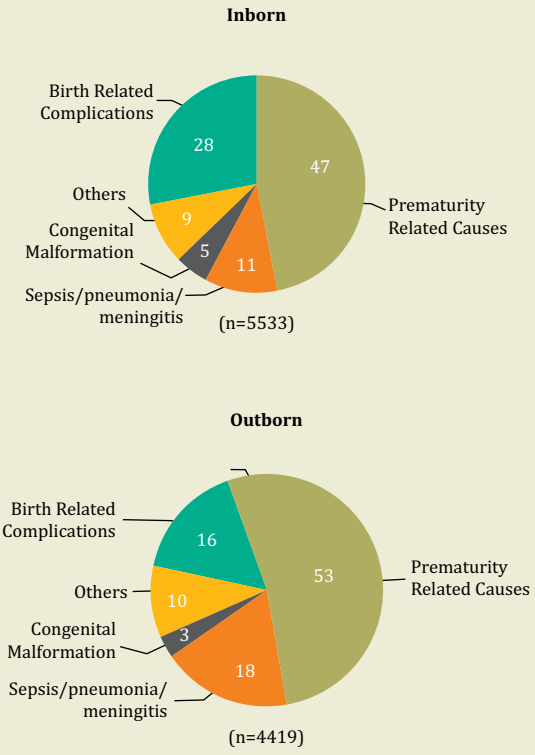
Place of Birth (%)



Weight at Birth (%)

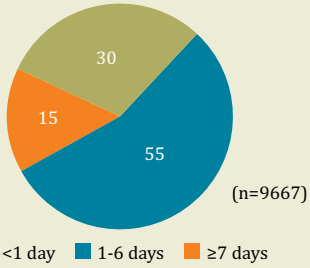


Causes of Mortality (%)

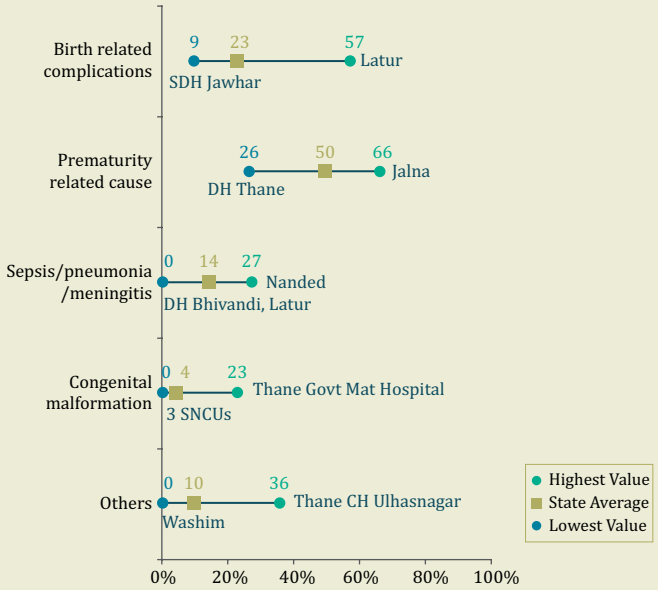


** 'Others' include: Other causes, Cause not established.*

Distribution by Age (%)



Variations in Causes of Mortality (%)*



**When data distribution is not symmetrical, mean does not robustly represent the true central value.*

KEY FINDINGS

- The state had 36 SNCUs (as per the target); one of the districts had 5 SNCUs. Still, 5/34 (15%) of the districts did not have a SNCU which included two HPDs. About 3/4th of the SNCUs had inadequate nursing staff.
- Inborns constituted 2/3rd all SNCU admissions. Females outnumbered males in both inborn and outborn admissions. Inborn admissions had higher proportion babies with birth weight ≥2500g and > 37 weeks gestational age compared to outborn admissions.
- The most common cause for admission in both inborn and outborn babies was cited as 'others' followed by 'birth related complications'; however, 'others' was more common in Ourborns while birth related complications was more common in Outborns.
- Prematurity related causes accounted for most deaths.

WAY FORWARD

- Operationalization of SNCUs in the remaining districts (especially in the HPDs) should be expedited with attention to adequate staffing.
- Capacity should be improve to further characterize the 'others' category at admission. This will help in data informed preparedness and decision making.
- Higher proportion of mortality due to prematurity related causes among both inborn and outborn admissions suggest need to focus on strengthening antenatal and intrapartum/ peripartum care.

Statistics at a Glance (April 2013-March-2015)

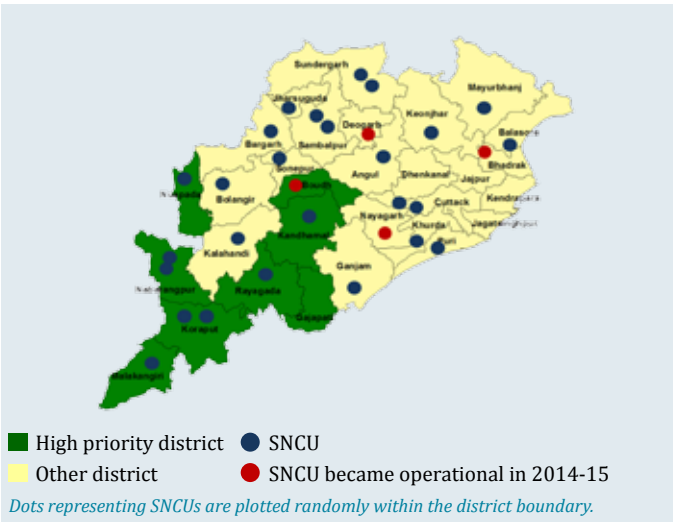
SNCU	Bed strength (N)	Total admissions (N)	Inborn admission rate	Female admissions (%)	Out-born admissions (%)	LBW admissions (%)	Duration of stay < 1 day (%)	Duration of stay ≥ 4 days (%)	Discharged (%)	Causes of Morbidity (%)			Mortality rate (%)	Causes of Mortality (%)		
										RDS	Birth related complication	Sepsis/ Pneumonia/ Meningitis		Prematurity related causes	Birth related complications	Sepsis/ pneumonia/ meningitis
DH MALEGAON	13	1209	0.12	47	37	54	18	48	65	11	29	3	14	56	30	8
DH NASIK	541	4809	0.24	43	43	64	16	43	76	37	32	7	13	60	23	11
SDH JAWHAR	12	2258	0.42	47	34	84	6	31	87	4	9	4	7	59	9	11
THANE CH ULHASNAGAR	12	1288	0.14	41	26	59	7	59	79	9	16	5	6	44	16	4
DH BHIVANDI	7	781	0.09	46	23	53	8	22	86	10	27	16	1	55	36	0
THANE GOVT. MAT HOSPITAL, ULHASNAGAR-4	12	1149	0.27	46	30	53	12	56	81	12	23	5	4	43	18	7
DH THANE	12	1835	0.26	45	34	59	7	53	79	8	21	4	12	26	21	15
DH BULDHANA	21	2806	0.29	45	42	52	12	55	78	8	27	10	11	40	25	18
RH KHAMGAON	12	2048	0.17	43	29	53	9	65	77	7	16	20	10	37	25	19
SATARA CIVIL HOSPITAL	12	1656	0.18	40	34	62	11	58	83	10	27	14	13	43	27	11
SATARA SDH KARAD	12	1191	0.30	46	30	48	11	59	82	4	21	7	5	65	16	7
DH JALGAON	16	4693	0.27	46	37	66	14	41	72	13	36	5	18	51	25	12
AHMEDNAGAR CIVIL HOSPITAL	12	1875	0.18	44	36	64	14	58	68	12	18	10	12	50	19	12
DH NANDURBAR	8	1873	0.13	45	55	73	16	52	64	5	25	6	24	41	26	23
RAIGAD	12	1513	0.27	48	29	65	6	65	81	5	14	5	14	37	20	5
DH RATNAGRIRI	12	1955	0.24	45	33	72	7	55	78	7	17	4	10	58	15	17
DH PUNE	12	1718	0.38	43	37	49	6	63	84	17	21	8	19	52	18	8
WH OSMANABAD	20	2358	0.18	41	25	49	8	42	77	14	23	12	7	49	27	15

SNCU	Bed strength (N)	Total admissions (N)	Inborn admission rate	Female admissions (%)	Out-born admissions (%)	LBW admissions (%)	Duration of stay < 1 day (%)	Duration of stay ≥ 4 days (%)	Discharged (%)	Causes of Morbidity (%)			Mortality rate (%)	Causes of Mortality (%)		
										RDS	Birth related complication	Sepsis/ Pneumonia/ Meningitis		Prematurity related causes	Birth related complications	Sepsis/ pneumonia/ meningitis
DH HINGOLI	18	2253	0.23	43	36	59	10	62	82	15	33	20	7	38	38	15
DH WARDHA	12	1420	0.13	47	41	72	7	68	79	13	20	12	11	54	17	16
DH BHANDARA	10	1532	0.08	44	17	59	6	61	77	16	12	16	13	40	35	6
DH GADCHIROLI	12	3492	0.28	45	39	73	7	45	73	3	23	10	18	42	22	27
DAGA MEORIAL (GOVT.) HOSPITAL, NAGPUR)	42	3751	0.10	42	26	63	7	44	74	23	16	6	9	55	18	11
DIST. WOMEN HOSPITAL, JALNA	16	3238	0.19	42	43	60	9	57	68	7	25	12	7	66	16	4
WH LATUR	12	708	0.20	47	18	43	6	70	86	13	11	36	1	29	57	0
WH PARBHANI	60	3211	0.11	45	48	57	11	54	80	15	23	17	8	56	26	10
WH AMRAVATI	33	4373	0.17	44	23	68	10	57	63	13	34	6	19	61	17	14
BGW GONDIA	135	4752	0.24	43	47	72	11	43	72	7	34	8	12	53	21	21
DISTRICT HOSPITAL FOR WOMEN, AKOLA	53	6482	0.19	45	18	59	8	60	78	9	37	12	16	54	22	17
G.H. CHANDRAPUR	16	4451	0.30	48	28	65	6	46	80	1	19	2	12	33	31	9
DH BEED	21	2666	0.12	45	29	55	11	31	79	10	23	7	8	54	25	7
DH WASHIM	12	1070	0.15	45	48	64	9	59	70	11	17	7	6	45	21	18
SDH PANDHARPUR	12	1658	0.31	47	26	31	7	42	87	17	30	3	3	49	17	4
DH SINDHUDURG	10	575	0.20	46	53	69	6	75	80	8	20	9	8	43	23	19
SNCU GADHINGLAJ, KOLHAPUR	14	807	0.57	43	37	58	15	45	76	11	27	4	7	51	34	7
WH NANDED	16	1488	0.51	42	40	64	7	57	78	18	17	9	5	47	21	27

The numbers highlighted indicate the upper & lower limit for the variable.

ODISHA

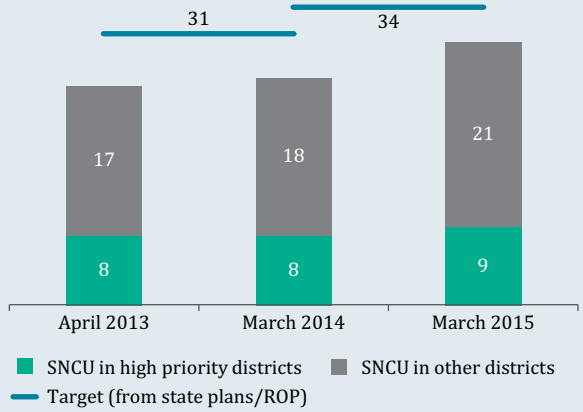
OPERATIONAL STATUS



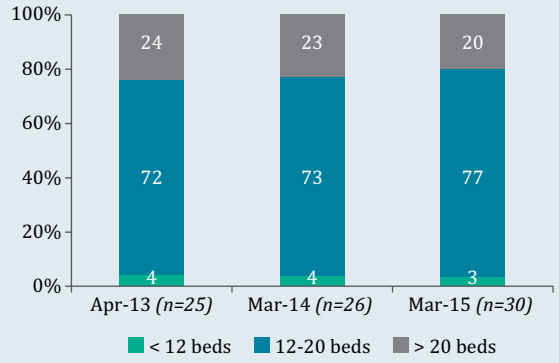
Dots representing SNCUs are plotted randomly within the district boundary.

NMR (SRS 2013)	37	
ENMR (SRS 2013)	28	
Districts	30	
Total SNCUs	30	Cuttack, Koraput, Nabarangpur, Sambalpur, Sundergarh districts had 2 SNCUs each
Districts without SNCU	5	
High Priority Districts (HPDs)	8	1 HPD was without SNCU i.e., Gajapati

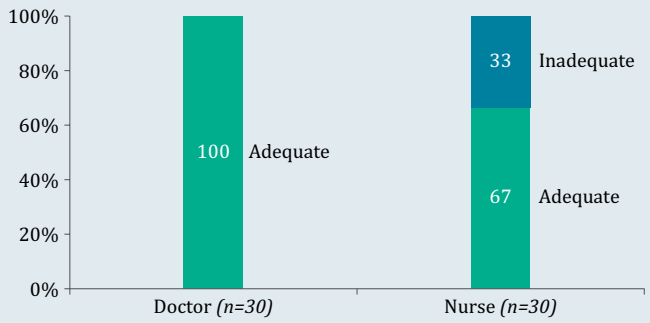
Planned versus Operational (N)



Bed-strength Distribution (%)



Adequacy of Human Resources (%)



Standard Norms

Establishment:

- Any health facility ≥ 3000 deliveries per year

Bed Strength:

- Minimum 12 beds/unit
- Additional 4 beds per 1000 deliveries/year

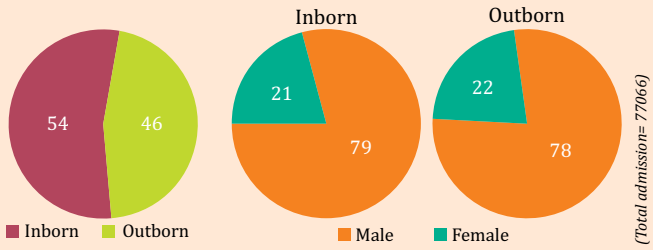
Human Resource:

- 1 doctor for 4 beds
- 2 nurses for 3 beds

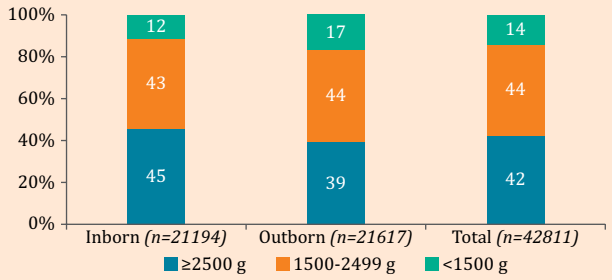
ADMISSION PROFILE

Note: No data available for admission by birth weight, gestational age, duration of SNCU stay, outcome in SNCU, morbidity profile, mortality profile for 2013-14.

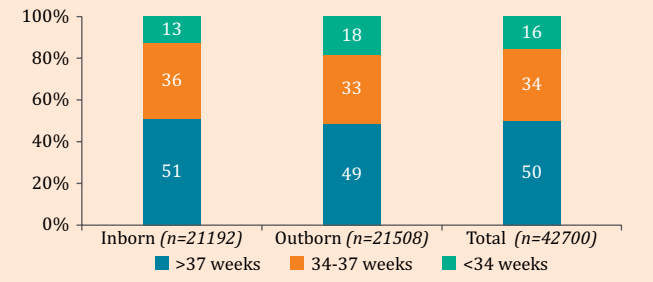
Place of Birth and Gender (%)



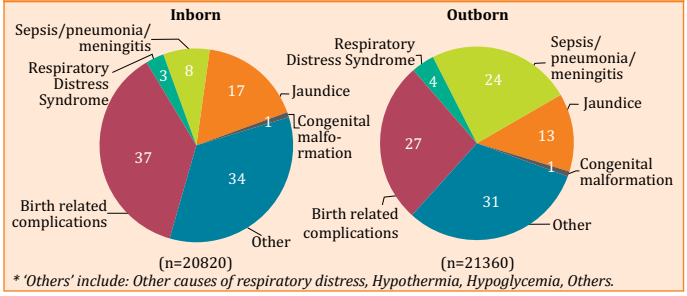
Birth Weight (%)



Gestational Age (%)

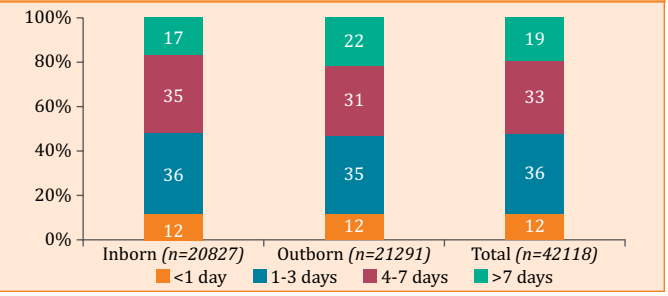


Causes of Admission (%)

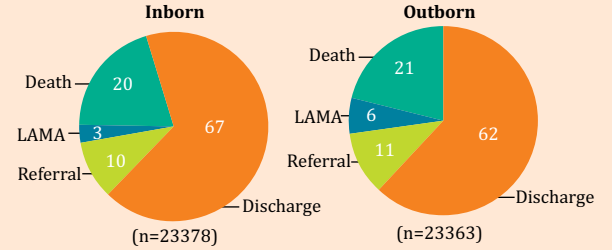


** 'Others' include: Other causes of respiratory distress, Hypothermia, Hypoglycemia, Others.*

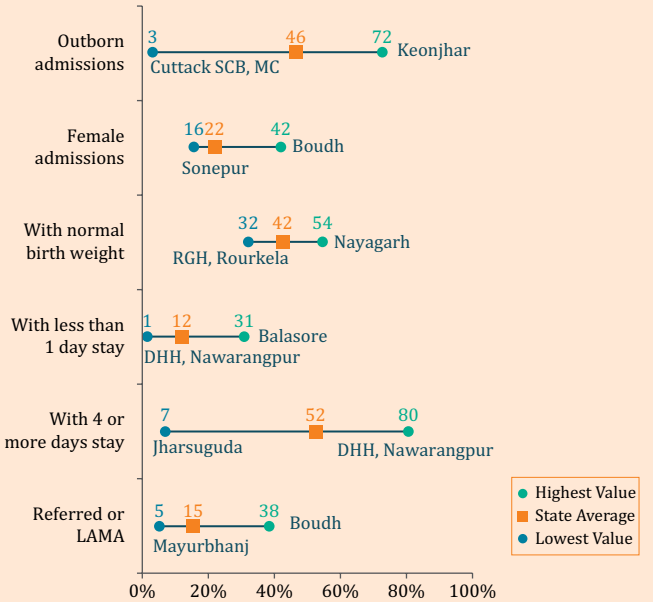
Duration of Stay (%)



Outcome (%)

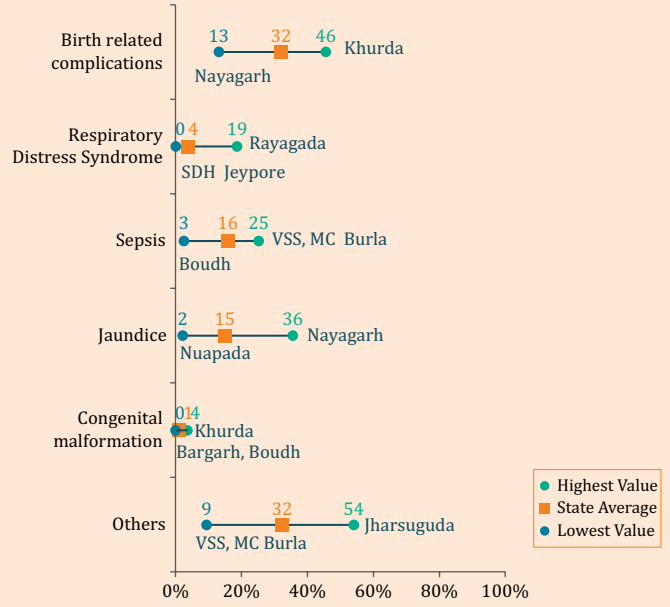


Variations in Key Admission Indicators (%)*



**When data distribution is not symmetrical, mean does not robustly represent the true central value.*

Variations in Causes of Admission (%)*

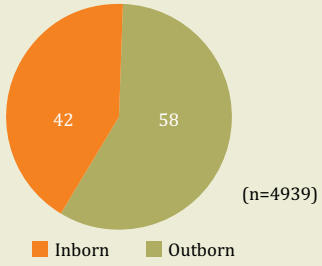


**When data distribution is not symmetrical, mean does not robustly represent the true central value.*

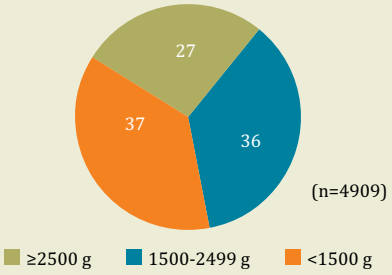
MORTALITY PROFILE

Note: No data available for admission by birth weight, gestational age, duration of SNCU stay, outcome in SNCU, morbidity profile, mortality profile for 2013-14.

Place of Birth (%)

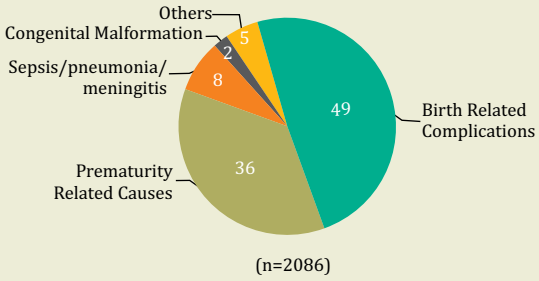


Weight at Birth (%)

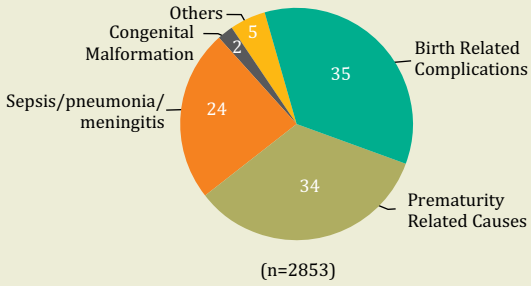


Causes of Mortality (%)

Inborn

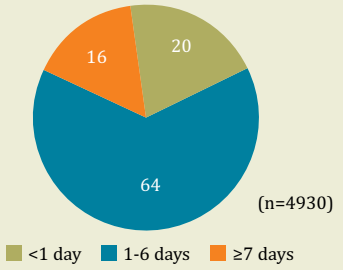


Outborn

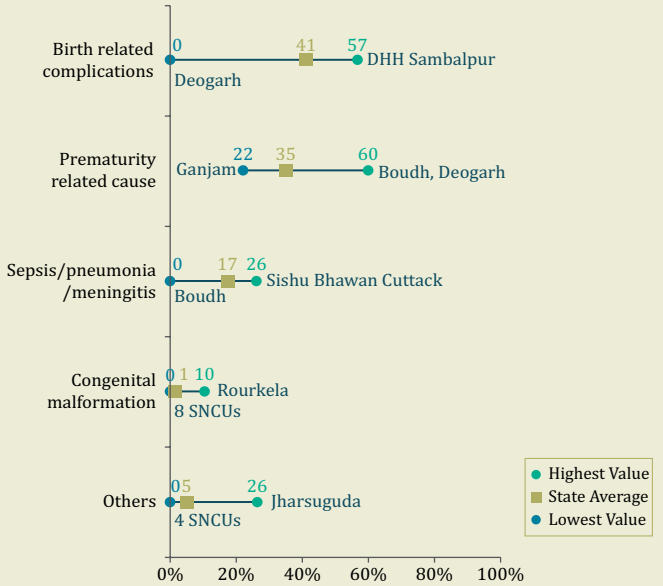


** 'Others' include:Other causes, Cause not established.*

Distribution by Age (%)



Variations in Causes of Mortality (%)*



**When data distribution is not symmetrical, mean does not robustly represent the true central value.*

KEY FINDINGS

- Of the 30 districts in the state, five districts (17%) had no SNCU including one of the eight HPDs (12.5%). Most (97%) SNCUs had 12 beds or more. Nursing staff was inadequate in one-third of the units.
- There were almost equal proportion of inborn admissions and outborn admissions with male babies accounting for 80% admissions in either groups.
- Birth related complications and others were the two main causes of admission for both Inborn and Outborn admissions followed by Jaundice for Inborn and Sepsis for Outborn babies. Duration of stay and outcome profiles were similar for the two groups.
- Adverse outcomes (death + LAMA) were higher in both Inborn and Outborn admissions.
- Most deaths in SNCUs were among babies with low birth weight and due to birth related complications and prematurity related causes. One fifth of the deaths were in babies that were less than a day old.
- Proportion of outborn admissions, duration of stay beyond the 3rd day, rate of referral and LAMA, 'others' as cause of admission, and mortality due to birth related complications showed wide intra-state variations.

WAY FORWARD

- The only HPD without a SNCU needs to be prioritized for operationalizing a unit.
- With high rates of death and referral and with many babies leaving the SNCU within a day of admission, and variations in cause-specific mortality, the quality of care across SNCUs is inconsistent and inadequate. This calls for a review and standardization of care and cause ascertainment practices across the SNCUs, and identification of facility-specific barriers/ enablers to SNCU performance.
- Intrapartum care needs to be strengthened to minimize birth related complications.
- Strengthen community level interventions for early identification and management of small and sick newborns and develop linkages between community and facilities.

Statistics at a Glance (April 2013-March-2015)

SNCU	Bed strength (N)	Total admissions (N)	Inborn admission rate	Female admissions (%)	Out-born admissions (%)	LBW admissions (%)	Duration of stay < 1 day (%)	Duration of stay ≥ 4 days (%)	Discharged (%)	Causes of Morbidity (%)			Mortality rate (%)	Causes of Mortality (%)		
										RDS	Birth related complication	Sepsis/ Pneumonia/ Meningitis		Prematurity related causes	Birth related complications	Sepsis/ pneumonia/ meningitis
DHH MAYURBHANJ	24	7057	0.22	23	42	51	15	57	75	4	26	12	6	44	33	18
DHH KORAPUT	12	2140	0.16	25	44	55	11	69	69	2	24	11	6	40	46	9
SDH JEYPORE	8	1997	0.22	23	47	60	7	37	73	0	34	23	5	41	38	17
DHH ANUGUL	12	2541	0.09	18	61	60	14	45	58	3	42	10	6	32	39	21
DHH KANDHAMAL	12	2046	0.27	20	36	62	6	47	69	1	36	6	7	36	41	18
DHH RAYAGADA	12	2811	0.21	24	51	65	5	74	76	19	25	14	4	38	42	17
DHH SONEPUR	12	1837	0.19	16	43	51	19	47	58	3	29	13	4	25	52	22
DHH BALASORE	12	5088	0.14	18	48	59	31	30	54	2	30	14	4	39	39	16
VSS MC, BURLA	12	2540	0.11	24	54	58	8	51	70	8	42	25	11	30	41	20
DHH SAMBALPUR	24	1949	0.15	21	21	56	9	60	74	1	28	18	2	27	57	14
DHH PURI	12	2883	0.15	23	44	46	9	30	77	0	17	14	4	59	31	7
DHH NAWARANGPUR	12	1720	0.14	23	60	68	1	80	68	1	36	9	7	43	50	6
UMERKOTE-NGPUR	12	1463	0.27	38	31	61	11	63	81	6	23	11	5	25	46	25
DHH NUAPADA	12	2172	0.16	21	37	57	11	60	57	1	39	17	9	37	39	22
DHH KALAHANDI	12	3038	0.14	20	37	64	10	31	54	1	38	18	6	32	46	15
DHH KEONJHAR	12	3326	0.11	20	72	55	6	45	66	2	32	21	8	41	38	20
DHH BOLANGIR	12	5008	0.15	23	52	64	16	47	51	1	37	18	6	46	39	14

SNCU	Bed strength (N)	Total admissions (N)	Inborn admission rate	Female admissions (%)	Out-born admissions (%)	LBW admissions (%)	Duration of stay < 1 day (%)	Duration of stay ≥ 4 days (%)	Discharged (%)	Causes of Morbidity (%)			Mortality rate (%)	Causes of Mortality (%)		
										RDS	Birth related complication	Sepsis/ Pneumonia/ Meningitis		Prematurity related causes	Birth related complications	Sepsis/ pneumonia/ meningitis
CAPITAL HOSP., BBSR	24	1345	0.03	19	46	63	17	74	58	9	46	17	7	38	42	11
SCB MC, CUTTACK	24	3493	0.19	25	3	61	13	57	64	6	30	3	9	29	44	18
SISHU BHAWAN, CUTTACK	24	4962		19	69	52	7	68	58	9	34	24	9	32	37	26
MKCG MC, BRMPUR	24	5424	0.14	17	62	51	8	58	52	1	43	25	13	22	50	17
RGH ROURKELA	12	2243	0.10	20	41	68	8	70	68	8	34	13	4	48	28	13
DHH SUNDERGARH	12	2254	0.17	21	35	52	14	59	60	4	28	14	3	33	48	6
DHH MALKANGIRI	12	2260	0.22	22	47	66	3	50	77	2	23	17	5	34	35	12
DHH JHARSUGUDA	12	1270	0.11	22	44	62	24	7	66	4	22	6	1	42	21	5
DHH BARGARH	12	2639	0.17	24	39	60	17	42	67	0	33	20	3	36	43	19
DHH BOUDH	12	189	0.10	42	44	65	12	35	59	3	23	3	3	60	20	0
BHADRAK	12	949	0.23	39	29	50	18	36	70	1	32	16	4	36	36	14
DEOGARH	12	135	0.17	40	45	57	19	61	72	4	30	11	7	60	0	20
DHH NAYAGARH	12	287	0.13	36	36	46	12	65	74	3	13	4	3	22	56	22

The numbers highlighted indicate the upper & lower limit for the variable.
Note: No data available for admission by birth weight, gestational age, duration of SNCU stay, outcome in SNCU, morbidity profile, mortality profile for 2013-14.

PUNJAB

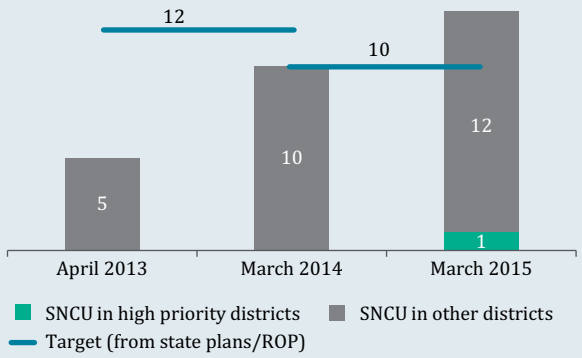
OPERATIONAL STATUS

High priority district | SNCU
Other district | SNCU became operational in 2014-15

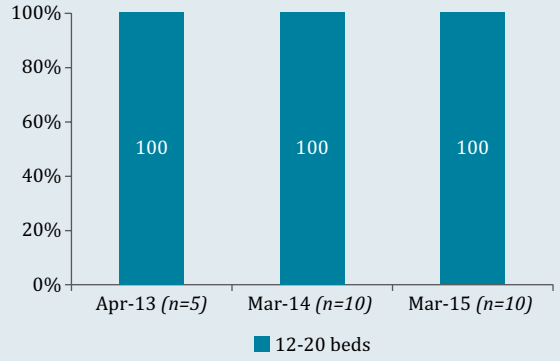
Dots representing SNCUs are plotted randomly within the district boundary.

NMR (SRS 2013)	16	
ENMR (SRS 2013)	11	
Districts	22	
Total SNCUs	13	Amritsar and Patiala districts had 2 SNCUs each
Districts without SNCU	11	
High Priority Districts (HPDs)	5	4 HPDs were without SNCUs viz., Barnala, Mansa, Muktsar and Sangrur

Planned versus Operational (N)

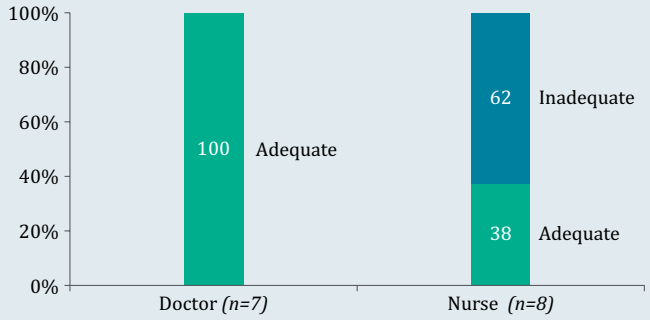


Bed-strength Distribution* (%)



**No data available for 3 SNCUs for 2014-15.*

Adequacy of Human Resources* (%)



**No data available for Doctors for 6 SNCUs and for Nurses for 5 SNCUs.*

Standard Norms

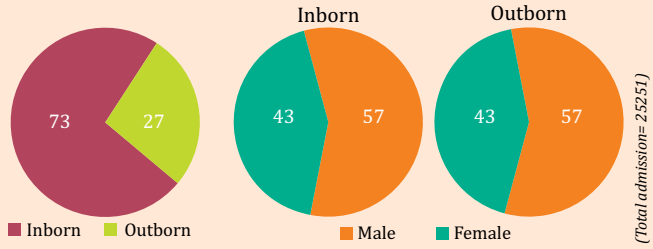
Establishment:
- Any health facility ≥ 3000 deliveries per year

Bed Strength:
- Minimum 12 beds/unit
- Additional 4 beds per 1000 deliveries/year

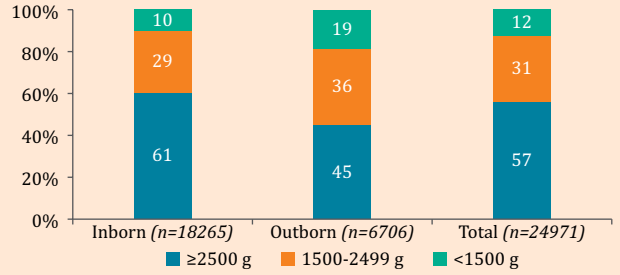
Human Resource:
- 1 doctor for 4 beds
- 2 nurses for 3 beds

ADMISSION PROFILE

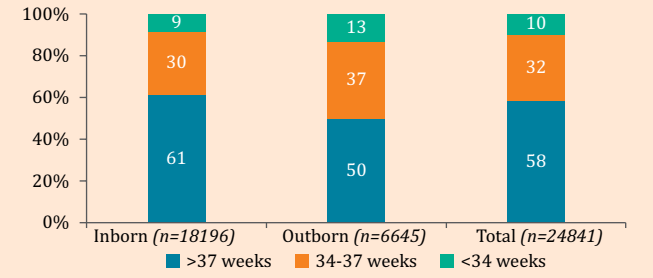
Place of Birth and Gender (%)



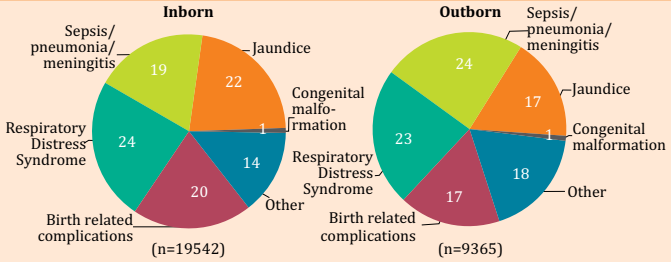
Birth Weight (%)



Gestational Age (%)

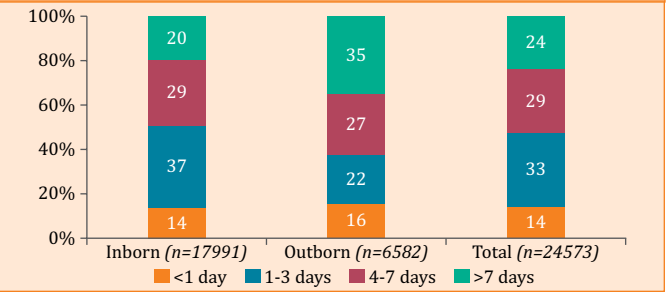


Causes of Admission (%)

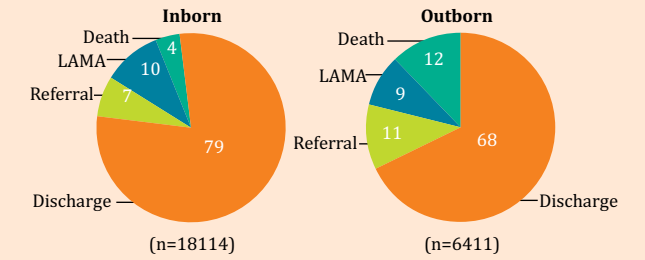


*'Others' include: Other causes of respiratory distress, Hypothermia, Hypoglycemia, Others.

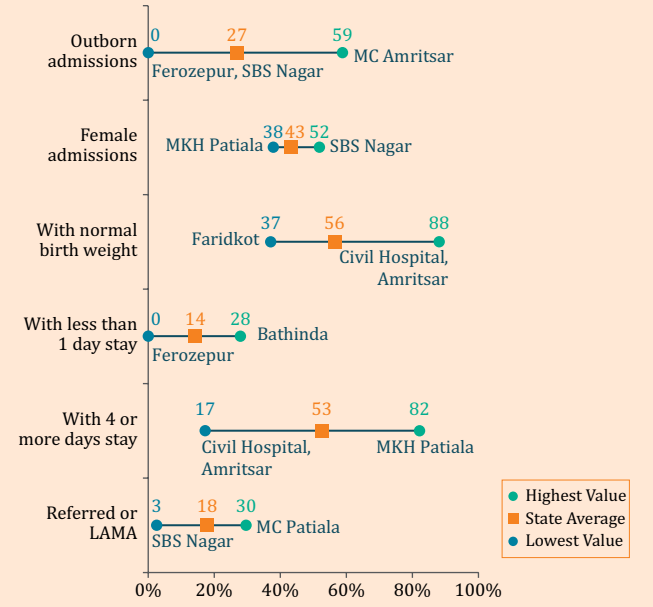
Duration of Stay (%)



Outcome (%)

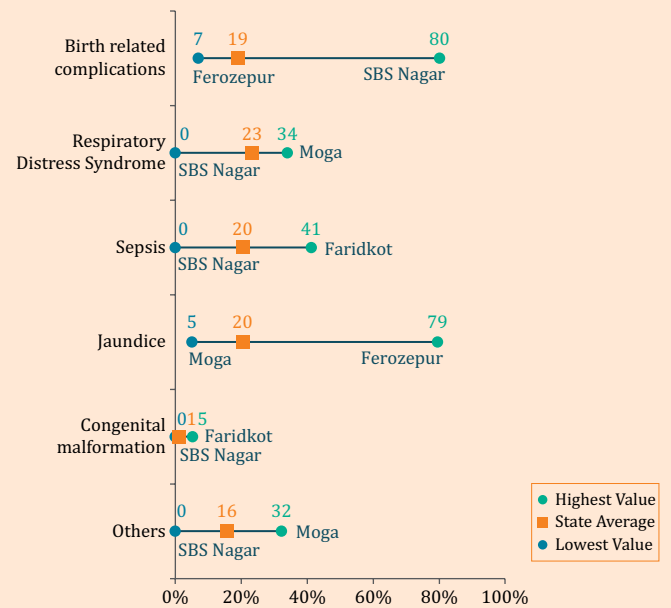


Variations in Key Admission Indicators (%)*



*When data distribution is not symmetrical, mean does not robustly represent the true central value.

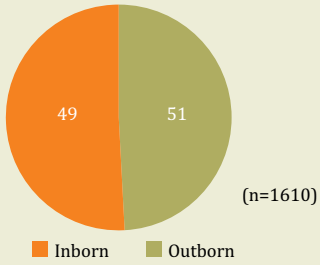
Variations in Causes of Admission (%)*



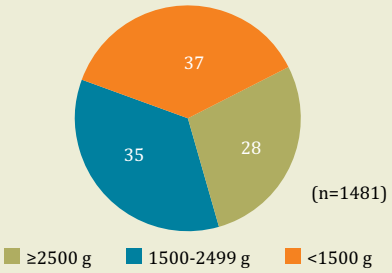
*When data distribution is not symmetrical, mean does not robustly represent the true central value.

MORTALITY PROFILE

Place of Birth (%)

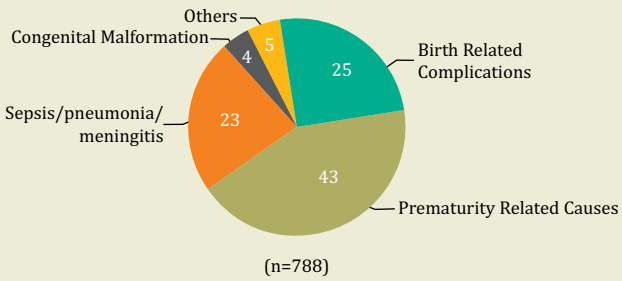


Weight at Birth (%)



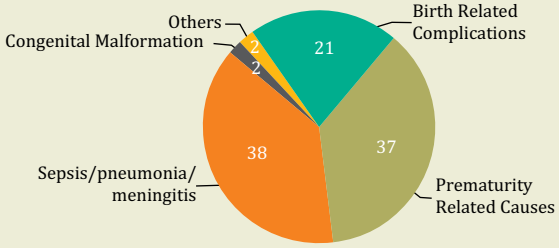
Causes of Mortality (%)

Inborn



(n=788)

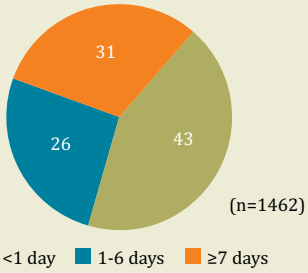
Outborn



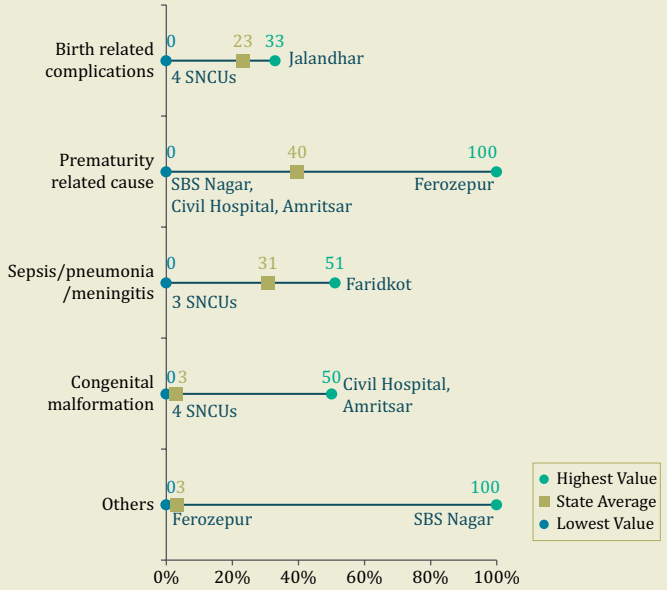
(n=822)

** 'Others' include:Other causes, Cause not established.*

Distribution by Age (%)



Variations in Causes of Mortality (%)*



**When data distribution is not symmetrical, mean does not robustly represent the true central value.*

KEY FINDINGS

- The state had 13 SNCUs against the target of 10. Still, 50% of the districts and 80% of the HPDs did not have a SNCU. There was a shortage of nurses at most SNCUs.
- Of all admissions to the SNCUs, majority were inborn (73%), males (57%), with normal birth weight and term, and admitted mostly due to respiratory distress syndrome, sepsis/ pneumonia/ meningitis, and jaundice.
- As many as 14% of the babies left the SNCU on the first day. Inborns were more likely to leave between 1-3 days and outborns to stay beyond a week. Discharge rates were higher for inborns while adverse outcomes were more frequent among those outborn.
- Majority deaths in the SNCUs were among LBW babies (~3/4th) and among those less than a day old (43%). Prematurity related causes, sepsis/ pneumonia/ meningitis, and birth related complications were the most frequent causes of mortality.
- There were considerable intra-state variations for admission and mortality indicators. Admission of female babies to the SNCUs was consistent.

WAY FORWARD

- Prioritize establishing new units in HPDs or develop alternative mechanisms for care of small and sick newborns.
- Regularly review the functioning of units showing great variations in morbidity/' admission indicators including their ability to follow admission protocols and data recording and reporting processes.
- Higher proportion of prematurity related causes and birth related compliacaitons as cause of death suggest need to focus on quality of intrapartum care.

Statistics at a Glance (April 2013-March-2015)

SNCU	Bed strength (N)	Total admissions (N)	Inborn admission rate	Female admissions (%)	Out-born admissions (%)	LBW admissions (%)	Duration of stay < 1 day (%)	Duration of stay ≥ 4 days (%)	Discharged (%)	Causes of Morbidity (%)			Mortality rate (%)	Causes of Mortality (%)		
										RDS	Birth related complication	Sepsis/ Pneumonia/ Meningitis		Prematurity related causes	Birth related complications	Sepsis/ pneumonia/ meningitis
CIVIL HOSPITAL AMRITSAR	12	1817	0.30	43	7	12	25	17	89	17	14	12	0	0	0	0
MEDICAL COLLEGE AMRITSAR	12	5153	0.18	46	59	62	11	76	73	21	20	23	15	39	25	34
BATHINDA	12	2233	0.17	39	26	51	28	20	83	31	26	6	2	55	30	11
GURU GOBIND SINGH HOSPITAL FARIDKOT	12	1199	0.28	42	44	63	17	61	60	4	14	41	22	24	16	51
MEDICAL COLLEGE PATIALA	12	7110	1.00	44	17	46	11	57	68	28	18	21	2	52	14	26
MKH PATIALA	12	1601	0.21	38	10	28	4	82	89	23	10	33	0	33	0	33
JALANDHAR	12	1976	0.26	43	16	18	9	34	85	21	25	13	9	39	33	18
HOSHIARPUR	12	890	0.06	47	10	26	14	28	92	18	15	35	9	45	27	25
LUDHIANA	12	950	0.11	42	31	49	20	55	74	30	29	15	7	60	26	6
MOGA	12	1311	0.13	39	22	50	28	50	68	34	21	5	4	54	20	5
GURDASPUR		558	0.11	44	27	31	12	40	83	15	10	19	0			
FEROZEPUR		138	0.17	43	0	28	0	37	96	6	7	4	5	100	0	0
DH, SBS NAGAR		315	1.00	52	0	17	2	32	97	0	80	0	0	0	0	0

The numbers highlighted indicate the upper & lower limit for the variable.

RAJASTHAN

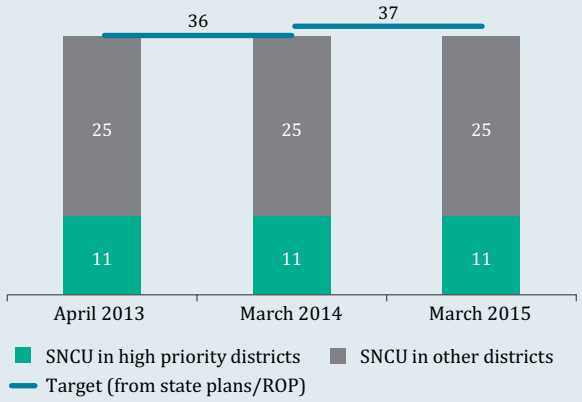
OPERATIONAL STATUS

High priority district
Other district
SNCU
SNCU became operational in 2014-15

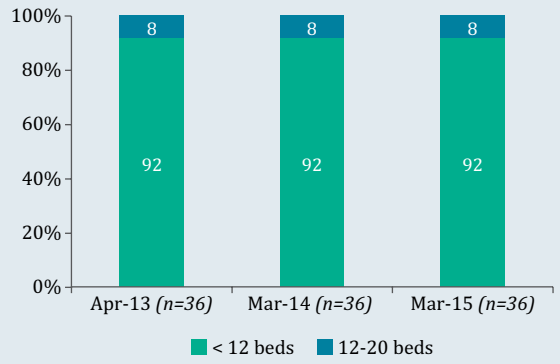
Dots representing SNCUs are plotted randomly within the district boundary.

NMR (SRS 2013)	32	
ENMR (SRS 2013)	26	
Districts	33	
Total SNCUs	36	Ajmer, Dungarpur and Jaipur districts had 2 SNCUs each
Districts without SNCU	Nil	
High Priority Districts (HPDs)	10	No HPD was without SNCU

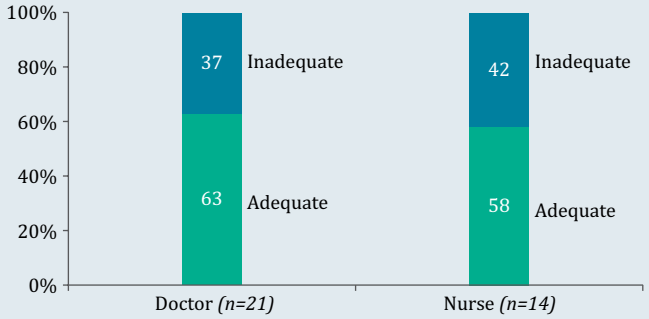
Planned versus Operational (N)



Bed-strength Distribution (%)



Adequacy of Human Resources* (%)



**No data available on Doctors for 15 SNCUs and Nurses for 22 SNCUs.*

Standard Norms

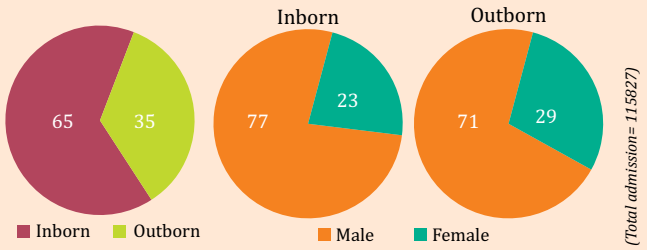
Establishment:
- Any health facility ≥ 3000 deliveries per year

Bed Strength:
- Minimum 12 beds/unit
- Additional 4 beds per 1000 deliveries/year

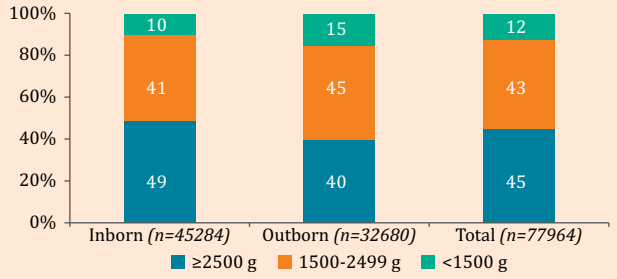
Human Resource:
- 1 doctor for 4 beds
- 2 nurses for 3 beds

ADMISSION PROFILE

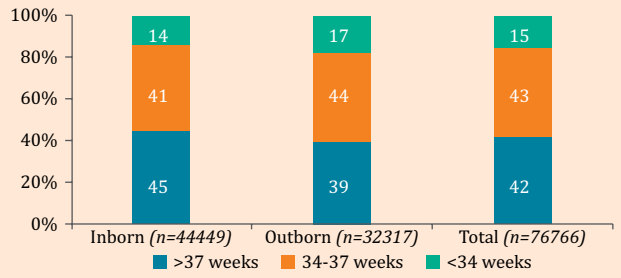
Place of Birth and Gender (%)



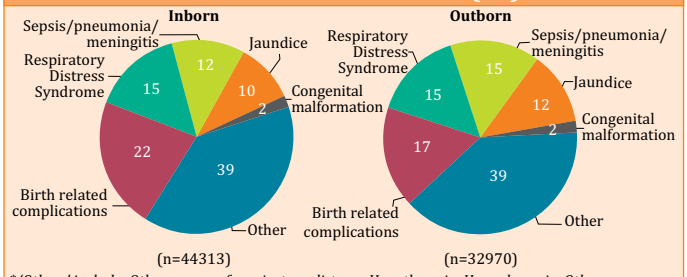
Birth Weight (%)



Gestational Age (%)

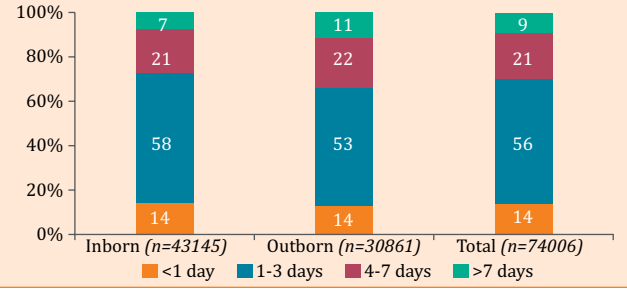


Causes of Admission (%)

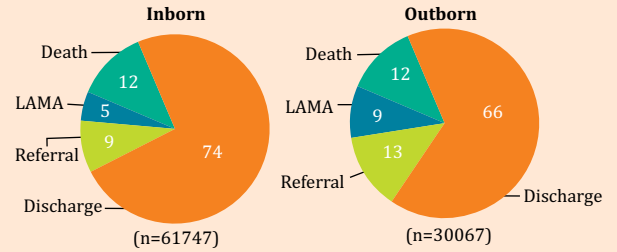


'Others' include: Other causes of respiratory distress, Hypothermia, Hypoglycemia, Others.

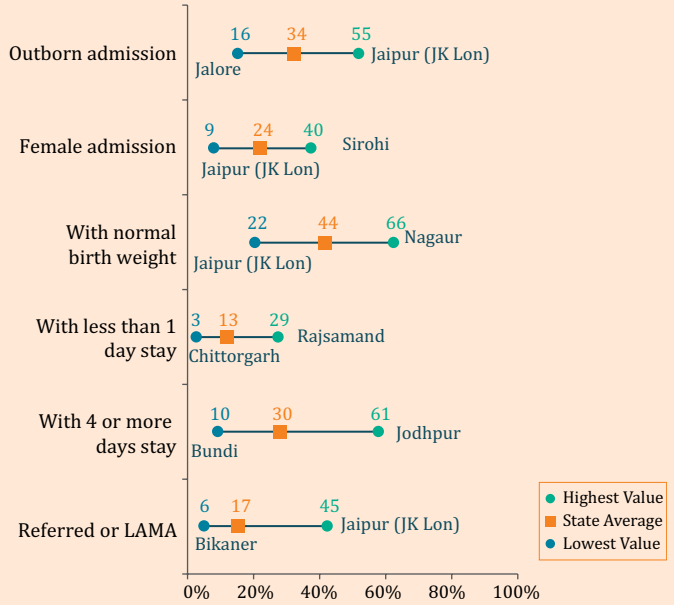
Duration of Stay (%)



Outcome (%)

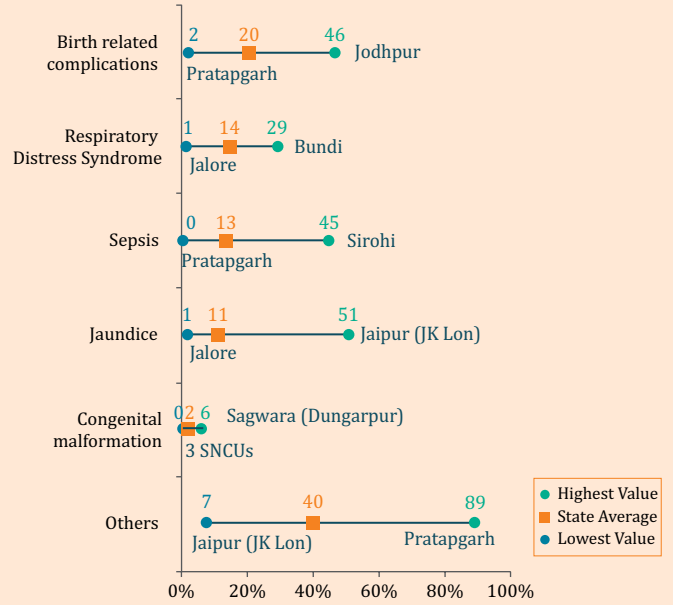


Variations in Key Admission Indicators (%)*



When data distribution is not symmetrical, mean does not robustly represent the true central value.

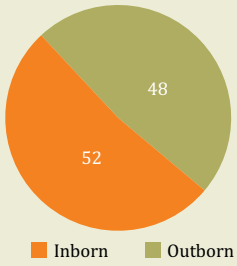
Variations in Causes of Admission (%)*



When data distribution is not symmetrical, mean does not robustly represent the true central value.

MORTALITY PROFILE

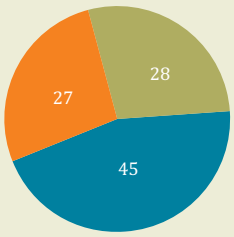
Place of Birth (%)



(n=7894)

Note:
1. *No data available for February and March 2015.*
2. *SNCU-wise data not available for January-March 2014, state figures available only.*

Weight at Birth (%)

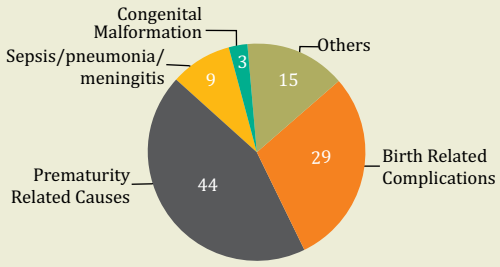


(n=7674)

Note:
1. *No data available for February and March 2015.*
2. *SNCU-wise data not available for January-March 2014, state figures available only.*

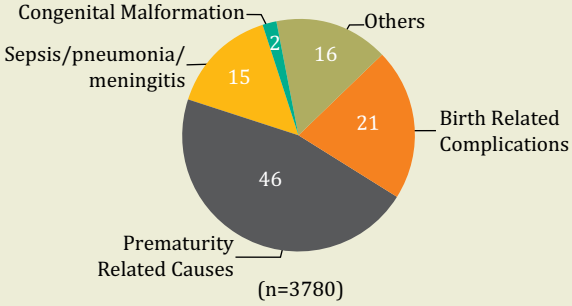
Causes of Mortality (%)

Inborn



(n=4114)

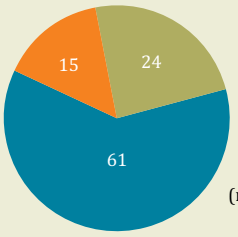
Outborn



(n=3780)

** 'Others' include: Other causes, Cause not established.*

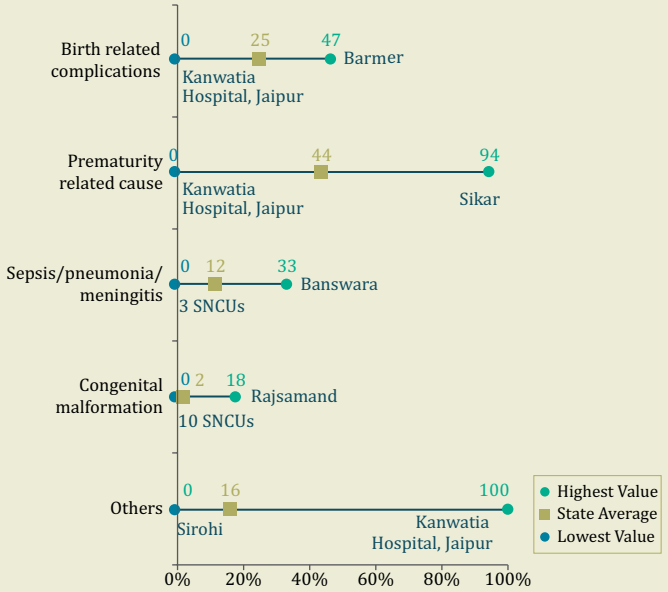
Distribution by Age (%)



(n=7588)

Note:
1. *No data available for February and March 2015.*
2. *SNCU-wise data not available for January-March 2014, state figures available only.*

Variations in Causes of Mortality (%)*



**When data distribution is not symmetrical, mean does not robustly represent the true central value.*

KEY FINDINGS

- Each district in the state had at least one SNCU. All SNCUs had more than 12 beds. Doctor and nurse staffing was inadequate in about 40% units.
- Two-thirds of SNCU admissions were inborn babies; male babies contributed to nearly 75% of both inborn and outborn admissions.
- Major cause of admission was 'others' and 70% babies left the SNCU within 3 days.
- Death rate was similar for inborn and outborn admissions but outborns were more likely be referred and leave against medical advice.
- Mortality in the SNCUs were majorly due to prematurity related causes and birth related complications. Newborns <1 day old accounted for 24% of all deaths and those aged 1-6 days for 61%.
- The proportion of admissions and mortality in the SNCUs collectively attributed to the 'others' category showed considerable intra-state variation.

WAY FORWARD

- The SNCU network in the state is well-spread with bed strength as per norms. There is a need to adequately staff the SNCUs.
- From the summary statistics, it is evident that some centres have high admission load despite lower bed strength and vice versa. Overloaded centres as well as centres with relatively less number of admissions vis-à-vis bed strength have high discharge rates. Optimization of bed strength and human resource capacity along with implementation of structured care protocols (admission, management and discharge) is necessary.
- The capacity of SNCUs for diagnosis assignment at admission and cause ascertainment at death is variegated. There is a need to develop plan of action for each SNCU for improving quality of services with regular review of their functioning.

Statistics at a Glance (April 2013-March-2015)

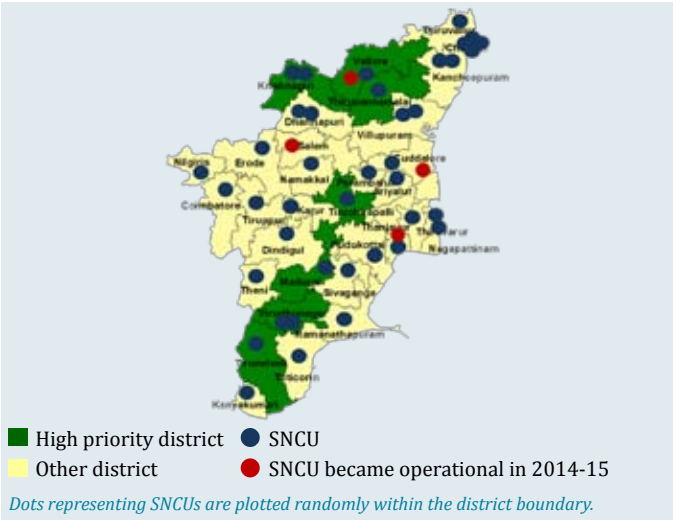
SNCU	Bed strength (N)	Total admissions (N)	Inborn admission rate	Female admissions (%)	Out-born admissions (%)	LBW admissions (%)	Duration of stay < 1 day (%)	Duration of stay ≥ 4 days (%)	Discharged (%)	Causes of Morbidity (%)			Mortality rate (%)	Causes of Mortality (%)		
										RDS	Birth related complication	Sepsis/ Pneumonia/ Meningitis		Prematurity related causes	Birth related complications	Sepsis/pneumonia/ meningitis
AJMER	12	4177	0.27	21	49	60	13	49	60	21	20	19	5	42	30	16
BEAWAR	12	4131	0.30	23	25	50	11	24	77	17	17	10	4	54	32	9
ALWAR	25	5368	0.20	25	36	64	17	35	71	6	22	11	8	59	22	9
BANSWARA	12	3319	0.32	25	30	65	9	35	65	6	23	16	14	31	22	33
BARAN	12	5010	0.46	25	23	53	15	16	74	7	32	10	3	31	42	3
BARMER	12	3284	0.23	22	37	44	15	14	72	4	29	17	5	34	47	13
BHARATPUR	25	5421	0.26	22	32	60	22	18	53	19	28	12	4	31	22	6
BHILWARA	12	4397	0.36	21	28	56	12	28	66	10	17	8	8	49	28	12
BIKANER	12	6048	0.34	25	38	55	15	36	76	22	24	11	10	48	37	11
BUNDI	12	2901	0.20	25	29	55	17	10	69	29	23	19	4	46	27	9
CHITTORGARH	12	4047	0.21	25	26	57	3	44	89	28	16	25	3	44	29	15
CHURU	12	1253	0.37	26	26	41	24	24	57	15	15	16	4	57	23	9
DAUSA	25	954	0.08	27	39	66	9	56	75	9	20	30	6	64	14	12
DHOLPUR	12	3597	0.15	22	37	62	14	22	67	25	19	16	11	47	23	12
DUNGARPUR	12	1834	0.12	27	52	52	14	22	66	14	8	12	10	53	11	16
SAGWARA	12	1206	0.15	30	24	74	14	24	76	4	21	4	8	26	26	9
HANUMANGARH	12	3093	0.50	26	37	47	11	43	76	21	37	5	8	36	36	6
JAIPUR (JK LON)	12	1335		9	55	78	9	53	44	2	10	30	0			

SNCU	Bed strength (N)	Total admissions (N)	Inborn admission rate	Female admissions (%)	Out-born admissions (%)	LBW admissions (%)	Duration of stay < 1 day (%)	Duration of stay ≥ 4 days (%)	Discharged (%)	Causes of Morbidity (%)			Mortality rate (%)	Causes of Mortality (%)		
										RDS	Birth related complication	Sepsis/ Pneumonia/ Meningitis		Prematurity related causes	Birth related complications	Sepsis/pneumonia/ meningitis
KANWATIA HOSPITAL	12	281	0.23	26	24	36	6	50	85	5	16	28	0	0	0	0
JAISALMER	12	692	0.18	21	24	41	10	28	68	3	22	18	5	38	22	28
JALORE	12	1298	0.55	27	16	53	17	12	61	1	34	8	5	22	34	3
JHALAWAR	12	3610	0.25	17	31	59	7	21	79	4	7	7	2	26	9	3
JHUNJHUNU	12	1921	0.53	24	47	45	9	31	79	28	21	3	3	58	25	8
JODHPUR	12	1852	0.04	18	47	59	11	61	84	11	46	10	5	41	18	19
KARAULI	12	2678	0.13	20	44	62	14	11	75	10	17	6	7	50	26	10
KOTA	12	593	0.07	27	25	50	21	22	88	8	11	20	3	53	33	0
NAGAUR	12	3102	0.37	23	31	34	14	11	78	4	11	5	2	7	15	3
PALI	12	2311	0.32	19	36	52	26	29	71	12	22	6	4	47	29	5
PRATAPGARH	12	2009	0.27	23	35	63	15	15	76	7	2	0	1	46	8	4
RAJSAMAND	12	1845	0.23	32	37	57	29	10	67	4	18	5	2	16	27	9
SAWAIMADHOPUR	12	2891	0.30	22	25	54	7	41	78	18	19	44	9	43	33	14
SIKAR	12	1528	0.19	22	30	52	9	29	66	22	9	13	7	94	3	0
SIROHI	12	496	0.13	40	24	41	15	15	84	9	13	45	4	50	20	15
SRIGANGANAGAR	12	1332	0.21	24	27	52	12	43	70	25	19	5	11	40	30	9
TONK	12	4298	0.35	23	31	49	4	26	87	18	8	24	2	56	24	10
UDAIPUR	12	8589	0.20	28	42	63	6	53	65	14	17	8	13	43	18	12

The numbers highlighted indicate the upper & lower limit for the variable.

TAMIL NADU

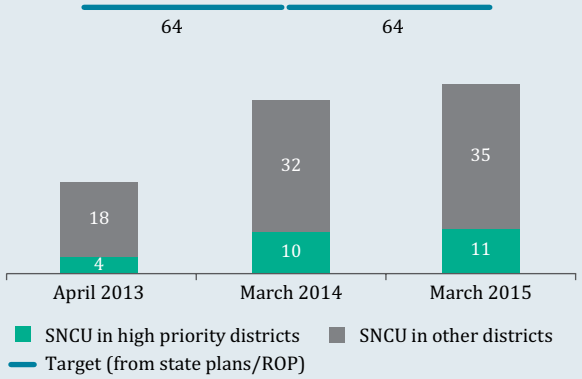
OPERATIONAL STATUS



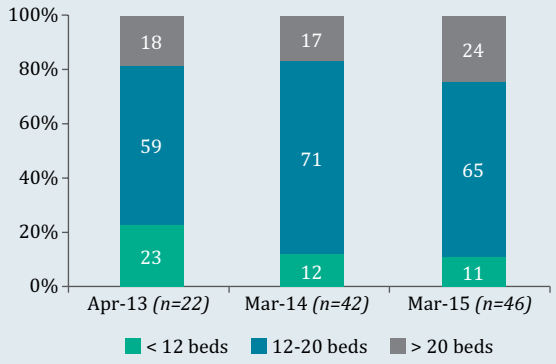
Dots representing SNCUs are plotted randomly within the district boundary.

NMR (SRS 2013)	15	
ENMR (SRS 2013)	11	
Districts	32	
Total SNCUs	46	Chennai district had 5 SNCUs, Cuddalore, Dharmapuri, Kancheepuram, Krishnagiri, Nagapattinam,Tiruchirapalli, Thanjavur, Vellore, Villupuram, Virudhunager had 2 SNCUs each
Districts without SNCU	Nil	
High Priority Districts (HPDs)	7	No HPDs was without SNCU

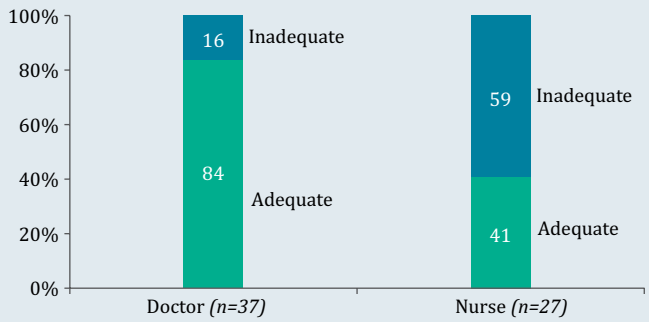
Planned versus Operational (N)



Bed-strength Distribution (%)



Adequacy of Human Resources* (%)



*No data available on doctors for 9 SNCUs and nurses for 19 SNCUs.

Standard Norms

Establishment:

- Any health facility ≥ 3000 deliveries per year

Bed Strength:

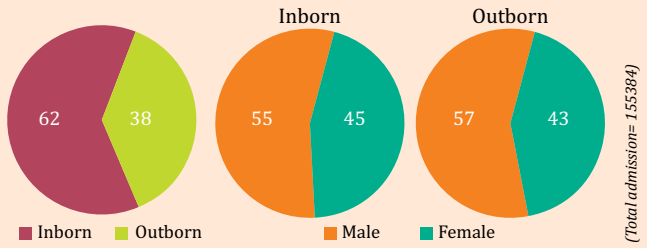
- Minimum 12 beds/unit
- Additional 4 beds per 1000 deliveries/year

Human Resource:

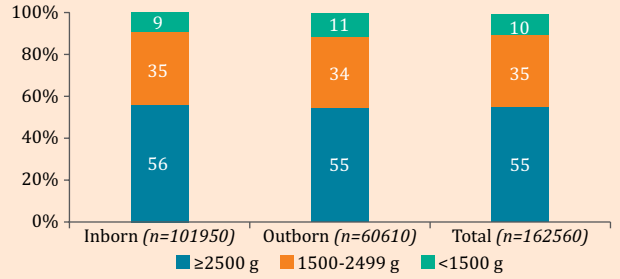
- 1 doctor for 4 beds
- 2 nurses for 3 beds

ADMISSION PROFILE

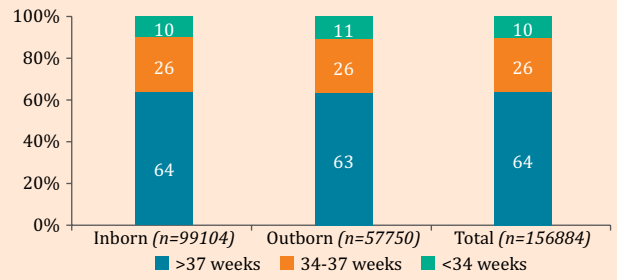
Place of Birth and Gender (%)



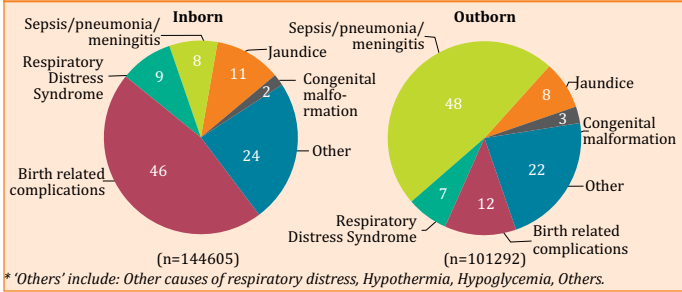
Birth Weight (%)



Gestational Age (%)

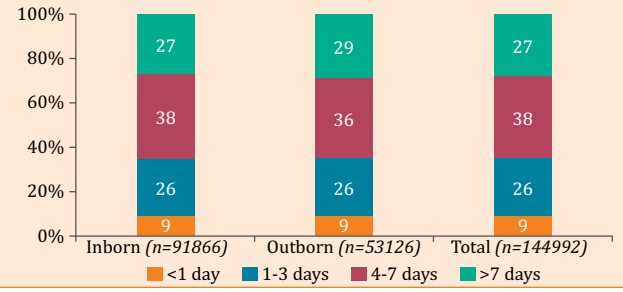


Causes of Admission (%)

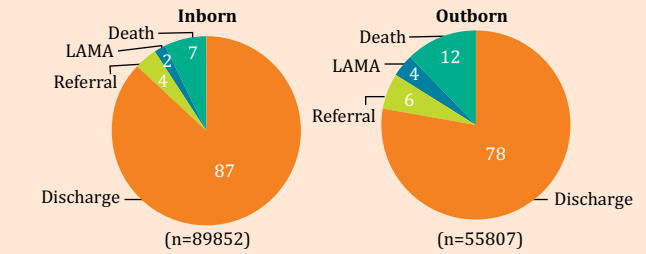


*'Others' include: Other causes of respiratory distress, Hypothermia, Hypoglycemia, Others.

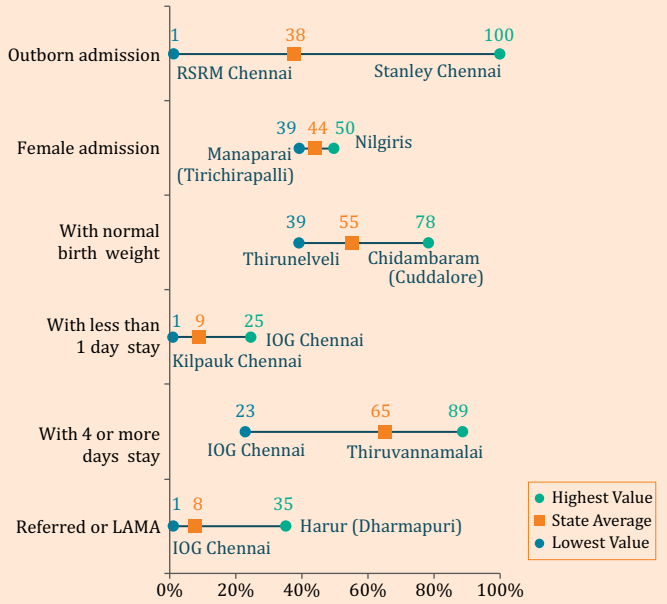
Duration of Stay (%)



Outcome (%)

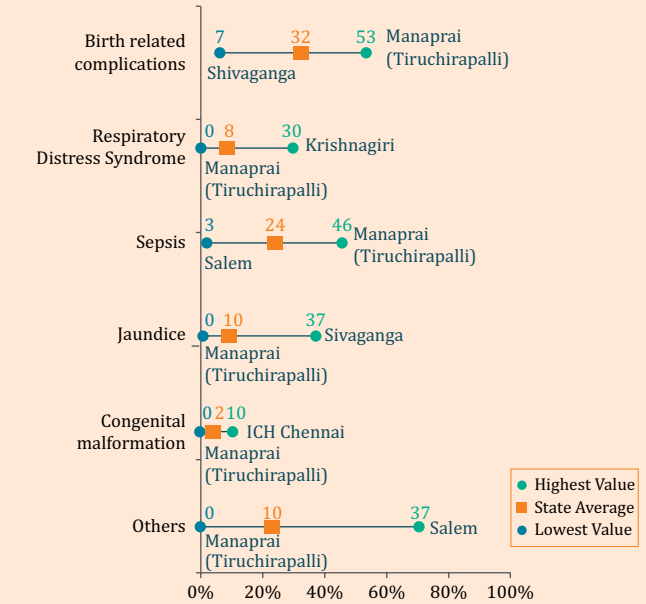


Variations in Key Admission Indicators (%)*



*When data distribution is not symmetrical, mean does not robustly represent the true central value.

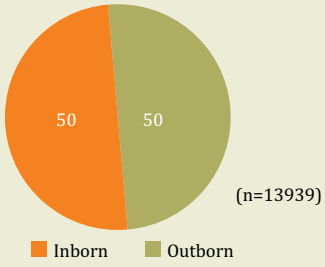
Variations in Causes of Admission (%)



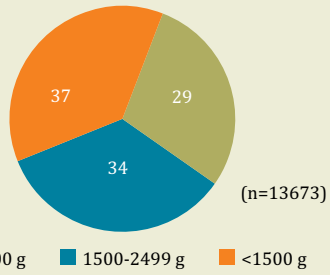
*When data distribution is not symmetrical, mean does not robustly represent the true central value.

MORTALITY PROFILE

Place of Birth (%)

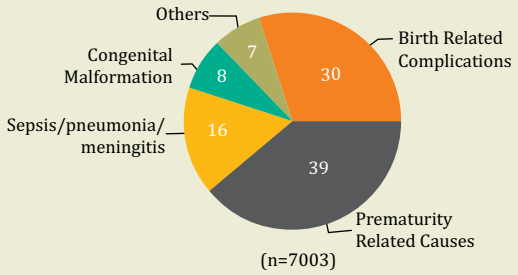


Weight at Birth (%)

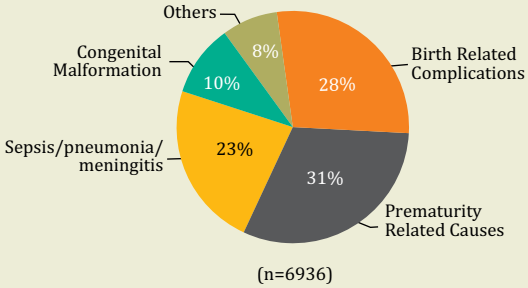


Causes of Mortality (%)

Inborn

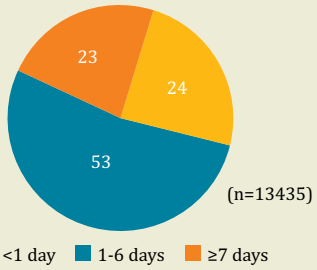


Outborn

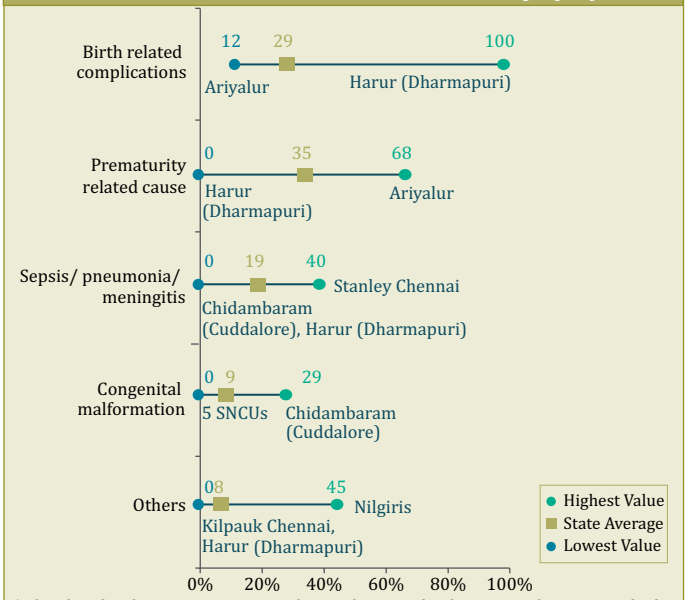


** 'Others' include: Other causes, Cause not established.*

Distribution by Age (%)



Variations in Causes of Mortality (%)



**When data distribution is not symmetrical, mean does not robustly represent the true central value.*

KEY FINDINGS

- All 32 districts (including seven HPDs) had SNCU. In the last two years, 24 new SNCUs had been operationalized in the state with 7 being in the HPDs. Most SNCUs had 12 or more beds (89%) and adequate doctors (84%). Only 41% of SNCUs had adequate nurses.
- Nearly 55% of admitted babies had normal birth weight and 64% were full term babies. 35% babies stayed for 3 or less days including 9% with less than 1 day stay.
- Birth related complications in inborn babies and sepsis in outborn babies were attributed as the main cuase of admission in nearly half of admissions.
- Adverse outcomes and referrals were higher among outborn (22%) admissions than among inborn (13%) admissions.
- Prematurity related causes and birth related complications were the most common causes of death for both inborn and outborn admissions.
- 53% of the deaths occurred during 1-6 days of life and more than 70% of the deaths were among LBW babies.

WAY FORWARD

- Higher number of inborn admissions as well as deaths due to birth related complications calls for focused attention on quality of intrapartum care being provided in the facilities.
- Higher proportion of birth and prematurity related complications among both inborn and outborn admissions suggest need to focus on quality of antepartum and intrapartum care.
- Strengthen community level interventions for early identification and referral of small and sick newborns and develop linkages between community and facilities.

Statistics at a Glance (April 2013-March-2015)

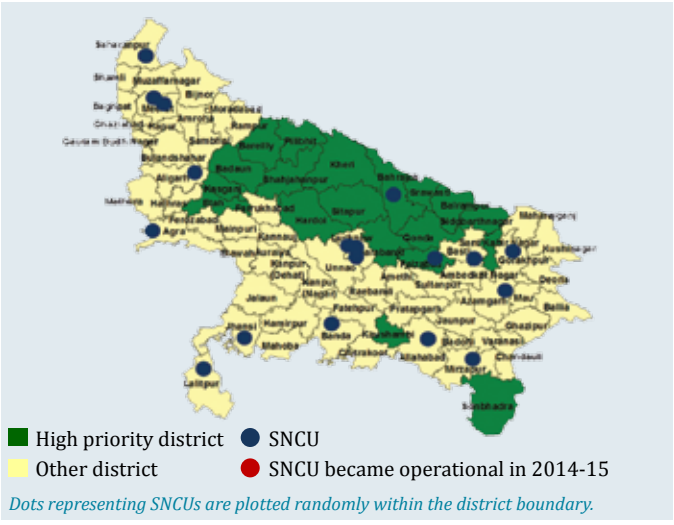
SNCU	Bed strength (N)	Total admissions (N)	Inborn admission rate	Female admissions (%)	Out-born admissions (%)	LBW admissions (%)	Duration of stay < 1 day (%)	Duration of stay ≥ 4 days (%)	Discharged (%)	Causes of Morbidity (%)			Mortality rate (%)	Causes of Mortality (%)		
										RDS	Birth related complication	Sepsis/ Pneumonia/ Meningitis		Prematurity related causes	Birth related complications	Sepsis/ pneumonia/ meningitis
ARIYALUR	10	1949	0.26	42	56	42	9	57	77	10	9	18	2	68	12	3
ARUPPUKOTTAI	17	1505	0.17	41	54	42	6	78	78	12	15	15	4	48	18	14
VIRUDHNAGAR	15	1490	0.17	44	31	47	7	75	81	22	29	23	3	35	33	10
CHENGALPET	22	5733	0.25	42	28	45	2	87	88	15	23	9	8	29	37	16
KANCHIPURAM	20	2649	0.21	44	43	33	7	67	85	10	25	20	1	33	15	24
COIMBATORE	25	4011	0.22	44	47	57	13	63	78	12	24	19	15	28	27	34
CHIDAMBARAM	15	638	0.22	43	7	22	11	78	87	6	18	32	1	29	29	0
CUDDALORE	15	2370	0.25	44	19	22	9	82	90	15	22	24	2	29	24	14
DHARMAPURI	20	8587	0.46	45	35	40	11	62	85	13	33	6	11	48	33	14
HARUR	12	1100	0.36	43	56	39	22	47	64	15	19	18	0	0	100	0
DINDIGUL	20	2971	0.17	42	43	43	8	71	85	14	36	13	3	16	55	8
ERODE	20	2711	0.28	47	40	52	6	62	84	19	25	13	6	56	20	7
HOSUR	12	1496	0.15	43	46	55	10	57	84	22	26	14	6	42	26	19
KRISHNAGIRI	20	1973	0.17	43	35	52	17	51	88	30	32	11	2	41	33	15
KALLAKURICHI	12	1879	0.14	41	50	47	9	58	80	14	22	17	1	44	26	15
VILLUPURAM	20	5505	0.27	42	38	40	5	70	80	2	24	21	16	24	37	28
KANNIYAKUMARI	15	1958	0.38	45	27	45	5	71	91	16	21	23	7	51	21	10
KARUR	8	1995	0.36	43	27	30	6	57	88	4	22	16	3	31	27	13
KUMBAKONAM	8	1488	0.20	47	30	41	18	54	75	5	36	23	9	33	29	20
THANJAVUR	30	5372	0.13	43	45	57	8	74	70	29	22	11	19	35	30	19
MADHURAI	40	9822	0.25	44	50	53	7	61	84	8	22	20	13	28	31	28
MANAPARAI	12	1475	0.33	39	40	33	8	68	81	0	53	46	2	17	46	25
TRICHY	25	5145	0.21	43	44	46	3	81	85	12	21	12	11	38	29	18

SNCU	Bed strength (N)	Total admissions (N)	Inborn admission rate	Female admissions (%)	Out-born admissions (%)	LBW admissions (%)	Duration of stay < 1 day (%)	Duration of stay ≥ 4 days (%)	Discharged (%)	Causes of Morbidity (%)			Mortality rate (%)	Causes of Mortality (%)		
										RDS	Birth related complication	Sepsis/ Pneumonia/ Meningitis		Prematurity related causes	Birth related complications	Sepsis/ pneumonia/ meningitis
NAGAPATTINAM	21	1176	0.18	42	21	40	5	76	89	26	11	12	3	32	30	11
GOVT PERIYAR HOSPITAL – MAYILADUTHURAI	8	1828	0.25	44	17	35	5	53	89	6	19	7	4	60	23	5
RSRM, CHENNAI	45	4839	0.27	47	1	47	3	85	89	10	24	16	8	34	33	16
STANLEY CHENNAI	20	1182		43	100	22	6	79	87	2	15	32	4	21	13	40
IOG - CHENNAI	40	7216	0.35	46	6	55	25	23	90	7	9	11	9	35	18	20
ICH & HC, CHENNAI	40	6763		42	97	45	8	62	77	10	18	15	20	29	22	21
KILPAUK MCH, CHENNAI	40	3625	0.33	44	21	36	1	69	91	13	27	9	7	36	39	18
NAMAKKAL	18	1803	0.38	46	41	45	7	67	89	23	19	13	4	47	25	25
THE NILGIRIS	15	1128	0.41	50	13	50	12	67	83	11	22	8	2	14	14	27
PERAMBALUR	15	1394	0.29	46	33	37	14	49	85	8	18	20	6	28	33	34
PUDUKOTTAI	14	2659	0.15	46	43	37	9	53	87	11	27	15	6	43	32	14
RAMANATHAPURAM	15	1531	0.16	45	40	40	6	74	88	16	27	29	7	32	27	29
SALEM	18	7134	0.44	46	38	47	13	60	82	8	14	3	13	41	30	13
SIVAGANGA	8	2948	0.41	47	14	29	3	85	89	5	7	18	1	37	37	7
THENI	30	4085	0.36	43	25	49	9	63	90	15	24	11	7	27	28	27
THIRUNELVELI	42	5106	0.31	45	34	61	8	61	59	12	21	20	13	33	25	17
VELLORE	43	7412	0.36	45	45	47	24	45	78	16	27	10	14	38	26	18
THIRUPATHUR	12	3295	0.23	43	56	41	3	80	94	10	30	14	3	10	60	15
TIRUPUR	20	2569	0.22	46	21	51	7	70	79	19	24	20	6	45	28	16
THIRUVALLUR	12	2293	0.23	44	35	42	7	73	86	2	16	12	2	34	25	19
THIRUVANNAMALAI	20	4308	0.21	42	47	35	3	89	86	28	19	14	5	36	34	10
THIRUVARUR	15	3632	0.35	41	28	39	2	81	88	11	31	18	7	52	23	10
THOOTHUKUDI	20	3636	0.34	47	24	43	6	67	88	11	22	10	6	49	24	10

The numbers highlighted indicate the upper & lower limit for the variable.

UTTAR PRADESH

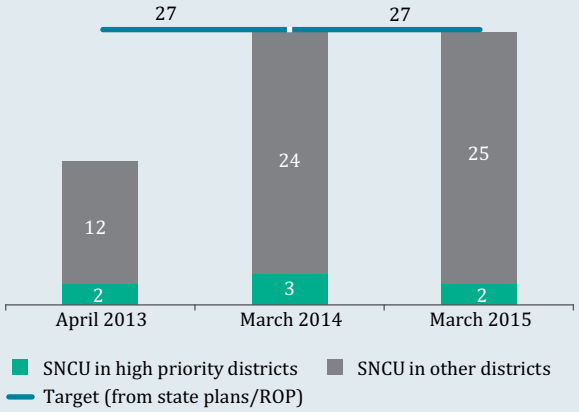
OPERATIONAL STATUS



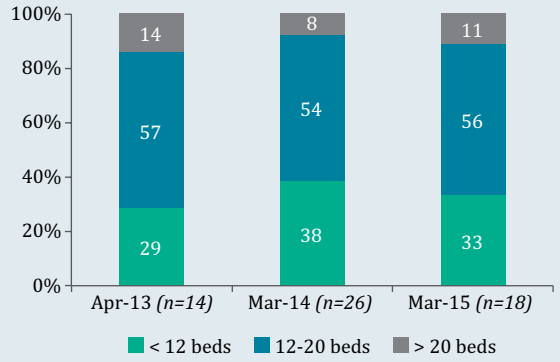
Dots representing SNCUs are plotted randomly within the district boundary.

NMR (SRS 2013)	35	
ENMR (SRS 2013)	27	
Districts	75	
Total SNCUs	27	Lucknow district had 3 SNCUs, and Aligarh and Meerut districts had 2 SNCUs each
Districts without SNCU	52	
High Priority Districts (HPDs)	19	17 HPDs had no SNCU viz., Badaun, Balrampur, Barabanki, Bareilly, Etah, Gonda, Hardoi, Kasganj, Kaushambi, Kheri, Pilibhit, Sant Kabir Nagar, Shahjahanpur, Siddharthnagar, Sitapur, Sonbhadra, Shrawasti

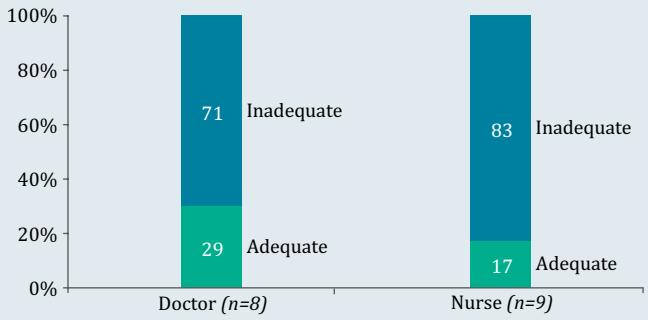
Planned versus Operational (N)



Bed-strength Distribution (%)



Adequacy of Human Resources* (%)



No data available for Doctor = 10 SNCUs and Nurse = 9 SNCUs.

Standard Norms

Establishment:

- Any health facility ≥ 3000 deliveries per year

Bed Strength:

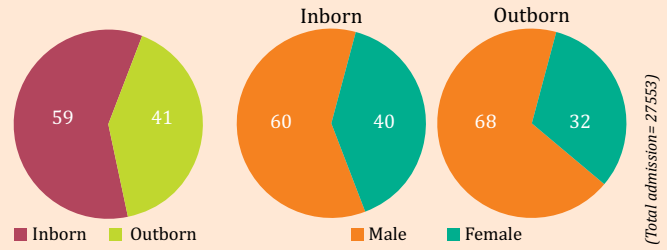
- Minimum 12 beds/unit
- Additional 4 beds per 1000 deliveries/year

Human Resource:

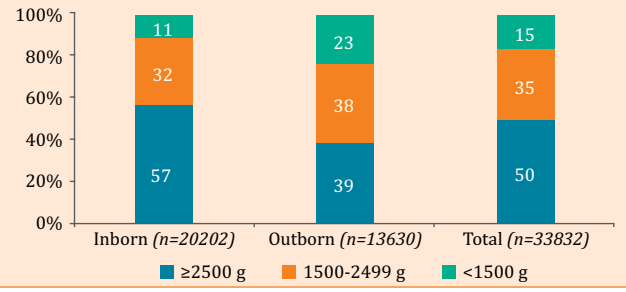
- 1 doctor for 4 beds
- 2 nurses for 3 beds

ADMISSION PROFILE

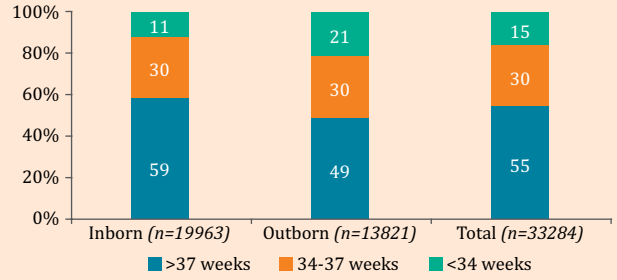
Place of Birth and Gender (%)



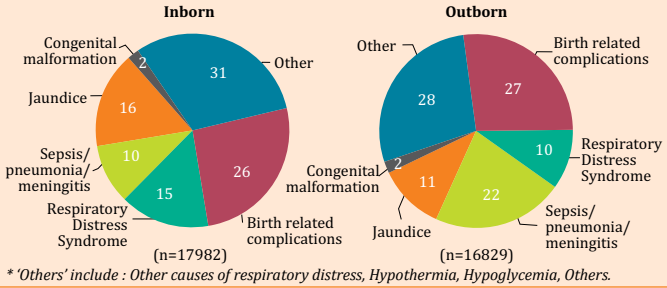
Birth Weight (%)



Gestational Age (%)

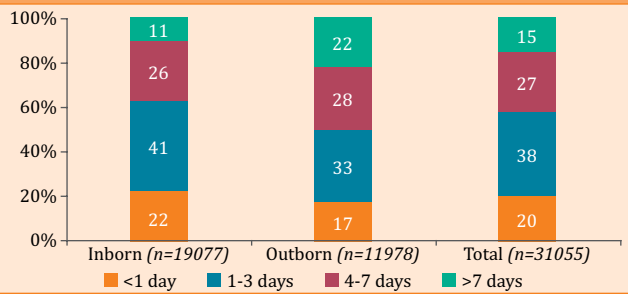


Causes of Admission (%)

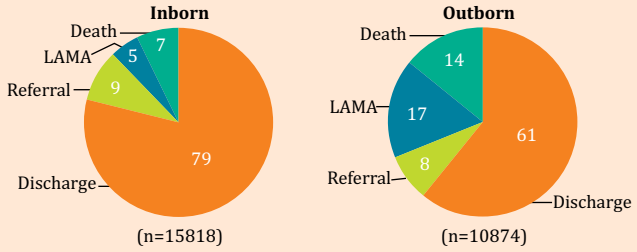


** 'Others' include : Other causes of respiratory distress, Hypothermia, Hypoglycemia, Others.*

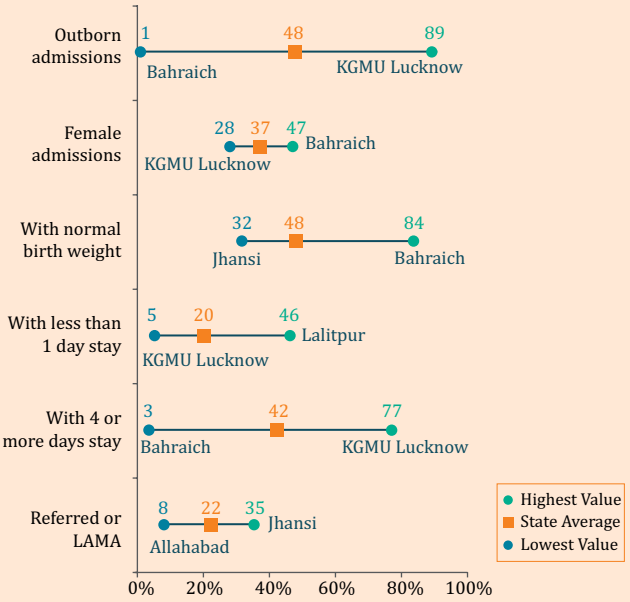
Duration of Stay (%)



Outcome (%)

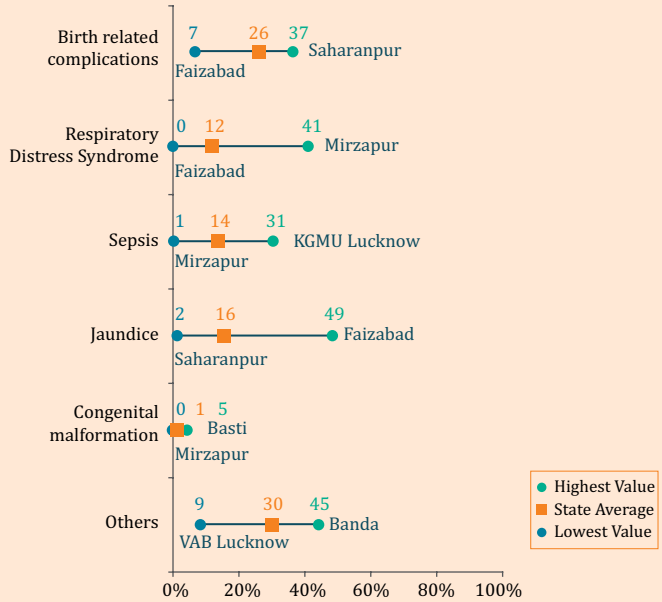


Variations in Key Admission Indicators (%)*



**When data distribution is not symmetrical, mean does not robustly represent the true central value.*

Variations in Causes of Admission (%)*

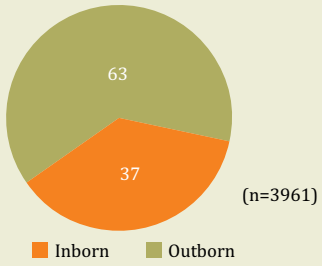


**When data distribution is not symmetrical, mean does not robustly represent the true central value.*

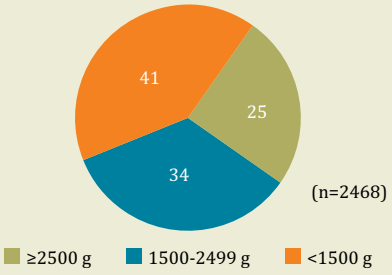
MORTALITY PROFILE

Note: Some SNCUs had reported irregularly/ reported for 2013-14 only; hence these SNCUs have not been considered in the analysis from Admission Profile onwards.

Place of Birth (%)

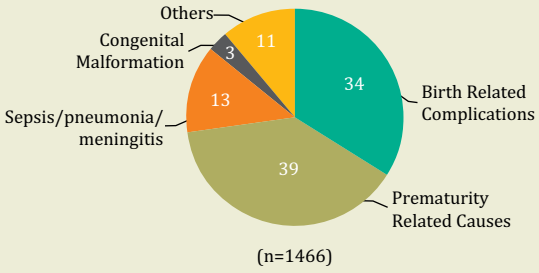


Weight at Birth (%)



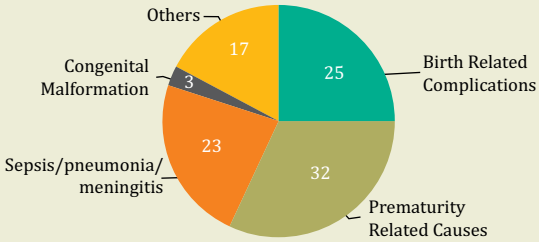
Causes of Mortality (%)

Inborn



(n=1466)

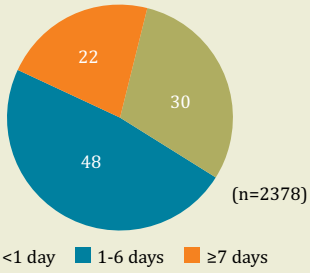
Outborn



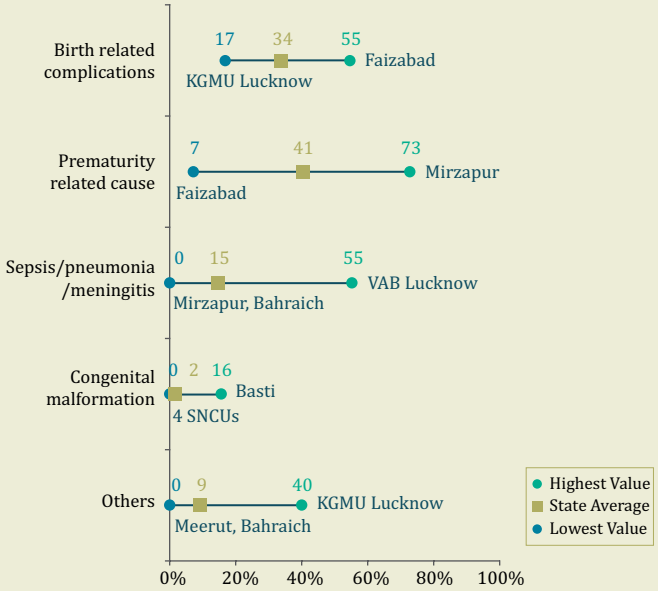
(n=2495)

** 'Others' include : Other causes, Cause not established.*

Distribution by Age (%)



Variations in Causes of Mortality (%)*



**When data distribution is not symmetrical, mean does not robustly represent the true central value.*

KEY FINDINGS

- The state had only 27 SNCUs: 96% of the districts and almost 90% of HPDs did not have a SNCU. Most of the SNCUs had inadequate doctors and nurses in position.
- Nearly 60% of inborn admissions were of birth weight ≥2500g and >37 weeks of gestation, while for outborn admissions ther figures were 50%.
- Most newborns were admitted for causes grouped under the 'others' category followed by birth related complications. Inborn babies had shorter stay in the SNCUs and better outcome.
- Majority of the mortality in the SNCUs were among babies with birth weight <1500g (41%) and those aged 1-6 days (48%). Mortality among inborn and outborn babies were mostly due to prematurity related causes and birth related complications.
- There was considerable intra-state variation among the admission and mortality indicators.

WAY FORWARD

- Prioritize establishment of SNCUs especially in HPDs or make arrangements for alternative mechanism for care of small and sick newborns.
- Majority of inborn admissions were of adequate birth weight and gestation. With 'others' being recorded as the most common cause of admission, admission protocol and diagnostic capacity need to be reviewed and structured.
- Inborn and outborn admissions had different profiles. While outcomes were worse among those outborn, referral rates were similar in both the groups. Triage protocols and referral linkages need to be improved.
- Higher percentage of birth related complications and prematurity related causes as causes of mortality suggest need to focus on quality of antenatal, intrapartum and postnatal care.

Statistics at a Glance (April 2013-March-2015)

SNCU	Bed strength (N)	Total admissions (N)	Inborn admission rate	Female admissions (%)	Out-born admissions (%)	LBW admissions (%)	Duration of stay < 1 day (%)	Duration of stay ≥ 4 days (%)	Discharged (%)	Causes of Morbidity (%)			Mortality rate (%)	Causes of Mortality (%)		
										RDS	Birth related complication	Sepsis/ Pneumonia/ Meningitis		Prematurity related causes	Birth related complications	Sepsis/ pneumonia/ meningitis
ALIGARH JN	14	905		36	23	49	13	53	73	23	24	16	20	29	32	23
CMS DWH, AZAMGARH	12	1117	0.19	38	15	44	9	63	78	16	13	10	8	48	20	15
DWH LALITPUR	12	2980	0.32	33	43	54	46	17	83	18	20	26	7	43	21	31
KGMU LUCKNOW	32	1657	0.05	28	89	65	5	77	60	2	26	31	51	16	17	23
LUCKNOW VAB	12	1241	0.26	39	13	31	9	65	83	11	28	22	18	11	25	55
LUCKNOW VJB	20	1121	0.36	41	12	36	8	29	79	2	19	4	3	30	49	16
DWH SAHARANPUR	14	1935	0.16	39	23	60	12	42	70	24	37	7	12	58	27	5
AGRA M C	16	2151	0.19	33	85	65	13	48	64	13	20	15	14	54	31	13
ALAHABAD ML MC	10	486		35	71	46	18	49	79	3	31	29	21	29	30	31
B.R.D.MEDICAL COLLEGE GORAKHPUR	43	4034	0.50	35	76	63	18	54	53	10	35	15	24	34	40	13
JHANSI MLB	10	771	0.18	46	67	68	17	51	39	22	33	12	50	51	23	13
DISTRICT WOMEN HOSPITAL, MEERUT	10	661	0.19	40	10	51	30	21	62	4	34	2	4	42	46	13
MEERUT LLRM	10	1147	0.25	37	59	66	6	69	63	15	32	20	13	36	31	28
DWH FAIZABAD	9	1290		38	15	23	10	33	86	0	7	11	3	7	55	29
DWH BANDA	14	692	0.28	37	24	40	42	25	67	7	20	16	5	38	34	25
V. R. T. K. WH, BASTI	14	963	0.14	34	16	50	18	55	84	4	13	18	3	41	34	6
MIRZAPUR	14	1160	0.14	34	1	37	31	8	82	41	29	1	6	73	20	0

SNCU	Bed strength (N)	Total admissions (N)	Inborn admission rate	Female admissions (%)	Out-born admissions (%)	LBW admissions (%)	Duration of stay < 1 day (%)	Duration of stay ≥ 4 days (%)	Discharged (%)	Causes of Morbidity (%)			Mortality rate (%)	Causes of Mortality (%)		
										RDS	Birth related complication	Sepsis/ Pneumonia/ Meningitis		Prematurity related causes	Birth related complications	Sepsis/ pneumonia/ meningitis
DWH, BAHRAICH	4	1309	0.19	47	1	16	46	3	82	16	20	2	0	50	50	0
ALIGARH M C*	20	2838		42	22	41	22	40	86	15	28	13	6	40	36	17
PRATAPGARH*	12	1447		25	55	40	16	37	67	9	33	28	15	19	59	10
SHAHJAHANPUR*	16	1063		38	25	59	17	45	74	46	13	9	13	43	24	19
GVSM MC KANPUR*	10	1245		34	75	42	20	71	70	3	22	24	23	33	40	17
LAKHIMPUR KHERI*	8	328		29	13	35	21	57	59	5	33	34	1	33	67	0
DWH VARANASI*	6	493		48	4	44	9	35	80	2	26	32	4	22	61	17
DWH BULANDSHAHAR*	8	535		33	4	28	11	1	91	57	22	12	3	100	0	0
FEMALE HOSPITAL, MORADABAD*	14	429		43	2	39	24	10	88	28	10	2	1	0	100	0
DWH ETAWAH*	5	50		44	14	34	31	12	78	0	10	14	0			

The numbers highlighted indicate the upper & lower limit for the variable.
**These SNCUs were not considered for state analysis as data was not available for 2014-15.*

UTTARAKHAND

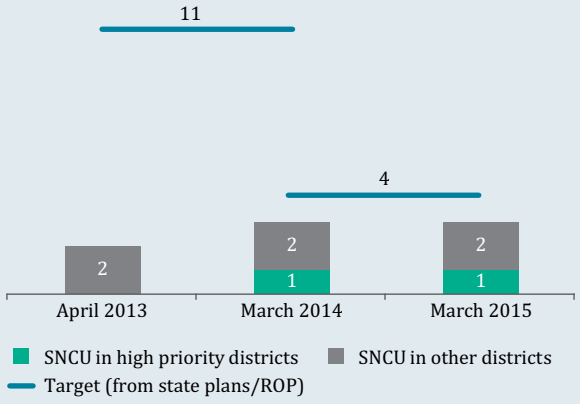
OPERATIONAL STATUS

High priority district | SNCU
Other district | SNCU became operational in 2014-15

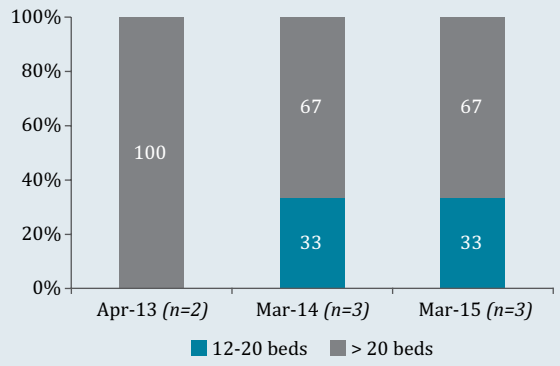
Dots representing SNCUs are plotted randomly within the district boundary.

NMR (SRS 2013)	NA	
ENMR (SRS 2013)	NA	
Districts	13	
Total SNCUs	3	
Districts without SNCU	10	
High Priority Districts (HPDs)	3	2 HPDs were without SNCU viz., Garhwal and Tehri Garhwal

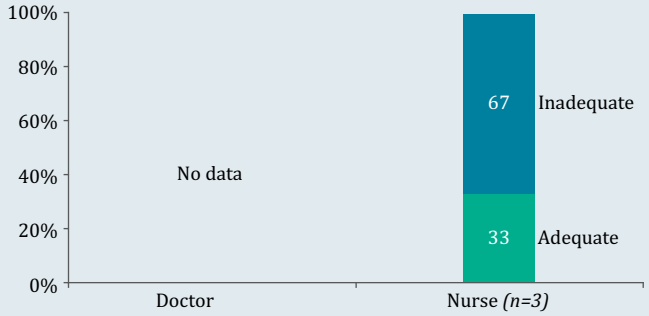
Planned versus Operational (N)



Bed-strength Distribution (%)



Adequacy of Human Resources* (%)



**No data reported for Doctors in SNCUs.*

Standard Norms

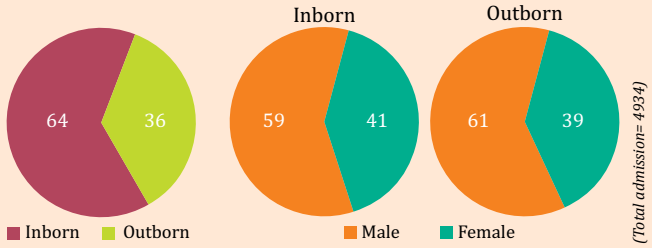
Establishment:
- Any health facility ≥ 3000 deliveries per year

Bed Strength:
- Minimum 12 beds/unit
- Additional 4 beds per 1000 deliveries/year

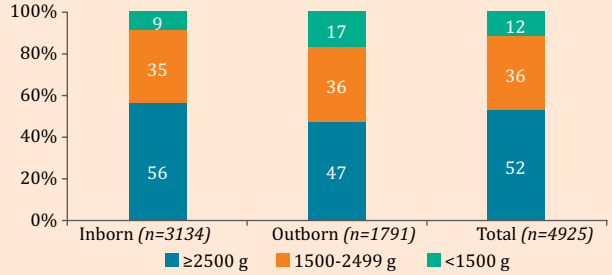
Human Resource:
- 1 doctor for 4 beds
- 2 nurses for 3 beds

ADMISSION PROFILE

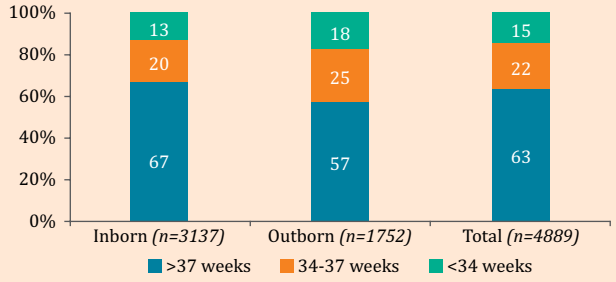
Place of Birth and Gender (%)



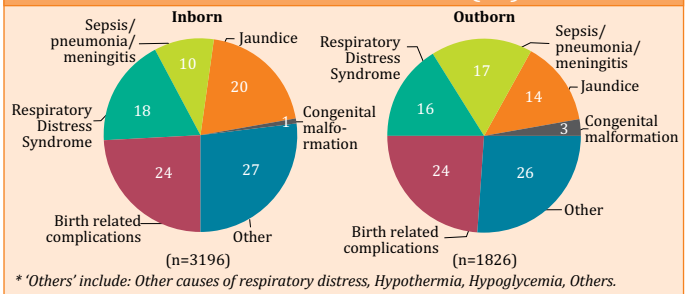
Birth Weight (%)



Gestational Age (%)

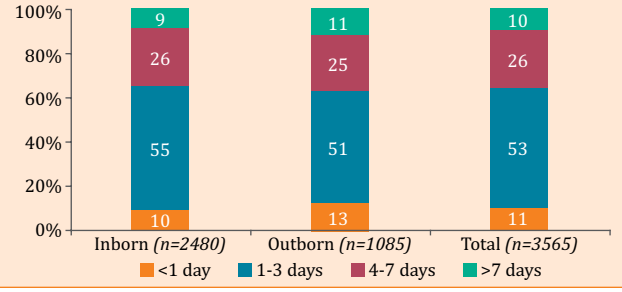


Causes of Admission (%)

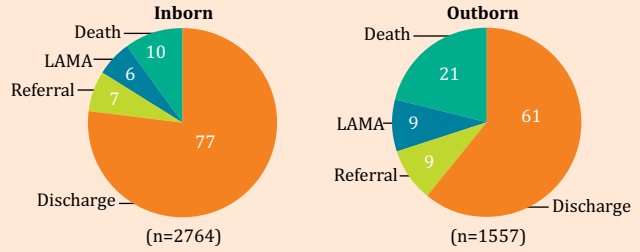


'Others' include: Other causes of respiratory distress, Hypothermia, Hypoglycemia, Others.

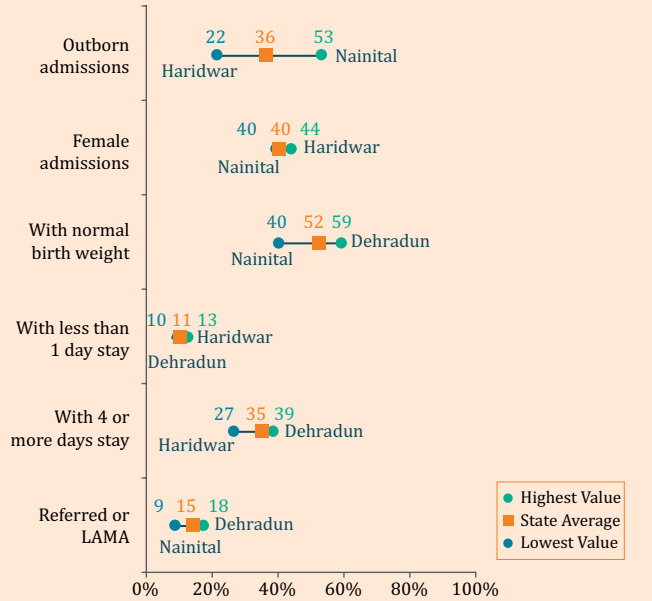
Duration of Stay (%)



Outcome (%)

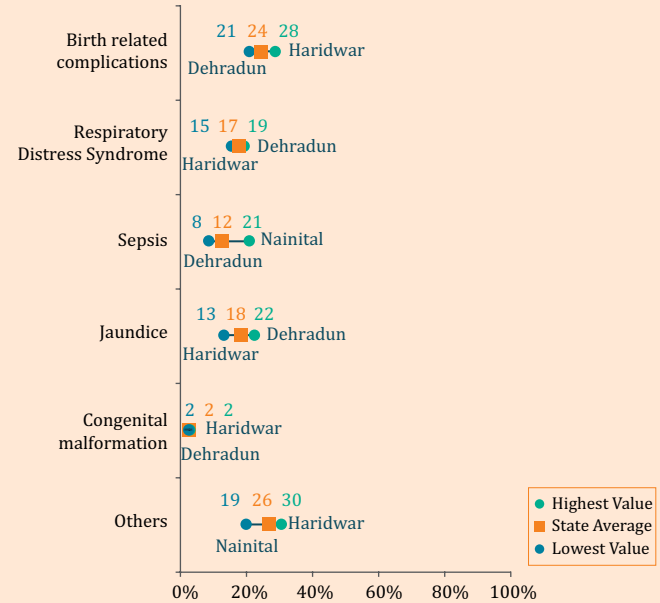


Variations in Key Admission Indicators (%)*



When data distribution is not symmetrical, mean does not robustly represent the true central value.

Variations in Causes of Admission (%)*

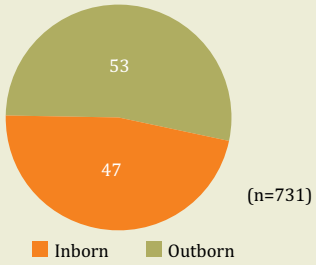


When data distribution is not symmetrical, mean does not robustly represent the true central value.

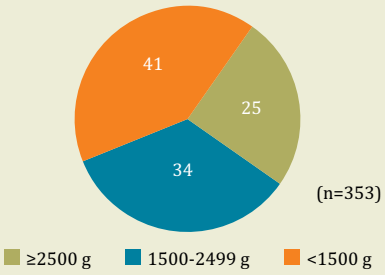
MORTALITY PROFILE

Note: No data available for February and March 2015.

Place of Birth (%)

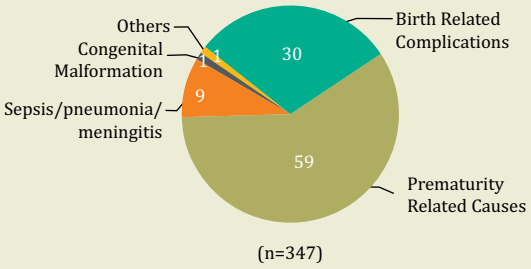


Weight at Birth (%)



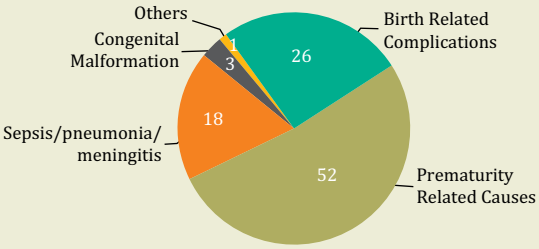
Causes of Mortality (%)

Inborn



(n=347)

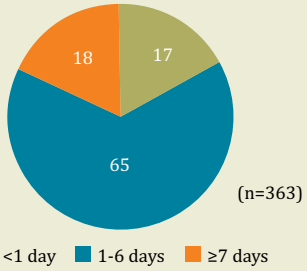
Outborn



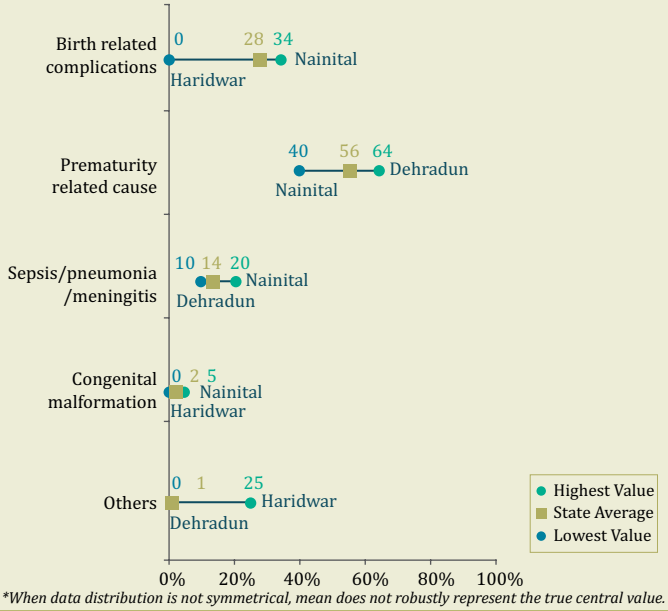
(n=384)

** 'Others' include: Other causes, Cause not established.*

Distribution by Age (%)



Variations in Causes of Mortality (%)*



**When data distribution is not symmetrical, mean does not robustly represent the true central value.*

KEY FINDINGS

- The state had just three operational SNCUs across 13 districts. Only one of the three HPDs had a SNCU. No SNCU had been operationalized in 2014-15. Only one SNCU had adequate nurse: bed ratio.
- About 64% of all admissions to the SNCU were inborn. Inborn and outborn admissions had similar profiles for gender, birth weight, gestational age, morbidity and duration of stay distribution. Death, referral and LAMA rates were higher for those outborn.
- Most deaths in the SNCUs were among newborns weighing <1500 g and of 1-6 day age. Prematurity related causes and birth related complications were the frequent causes of death.

WAY FORWARD

- The state needs to prioritize establishment of new units and make arrangements for alternative mechanisms for care of sick newborns, in the meanwhile.
- With high rates of normal birth weight and full term babies being admitted (more so for inborn admissions), admission protocols need to be reviewed and structured.
- Peripartum and early neonatal care and referral linkages need strengthening to reduce prematurity related causes and birth related complications.

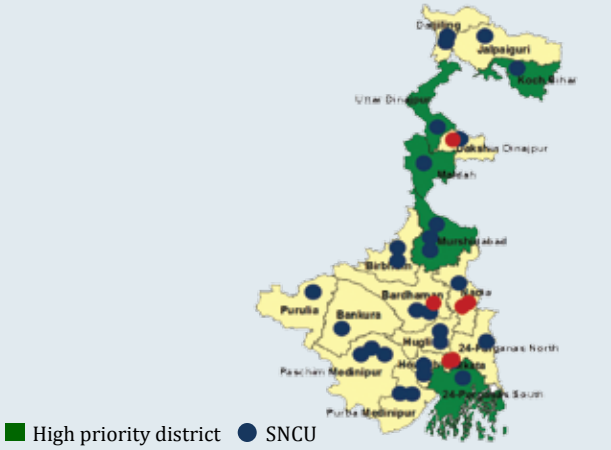
Statistics at a Glance (April 2013-March-2015)

SNCU	Bed strength (N)	Total admissions (N)	Inborn admission rate	Female admissions (%)	Out-born admissions (%)	LBW admissions (%)	Duration of stay < 1 day (%)	Duration of stay ≥ 4 days (%)	Discharged (%)	Causes of Morbidity (%)			Mortality rate (%)	Causes of Mortality (%)		
										RDS	Birth related complication	Sepsis/ Pneumonia/ Meningitis		Prematurity related causes	Birth related complications	Sepsis/ pneumonia/ meningitis
MEDICAL COLLGE HALDWANI-NAINITAL	24	1291	0.41	40	53	60			65	16	28	21	21	40	34	20
FEMALE HOSPITAL, HARIDWAR	12	1000	0.41	44	22	49	13	27	86	15	28	12	1	63	0	13
DOON FEMALE HOSPITAL- DEHRADUN	24	2643	0.35	40	34	41	10	39	68	19	21	8	17	64	25	10

The numbers highlighted indicate the upper & lower limit for the variable.

WEST BENGAL

OPERATIONAL STATUS

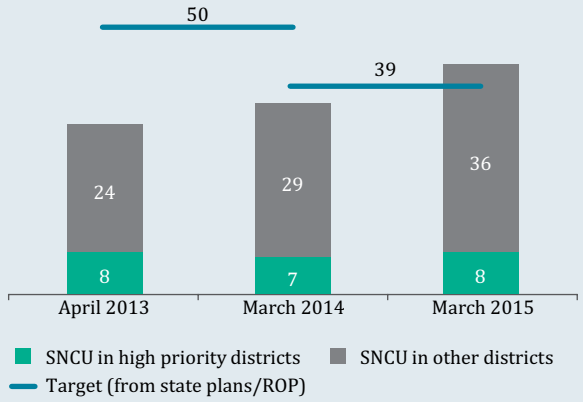


High priority district | SNCU
Other district | SNCU became operational in 2014-15

Dots representing SNCUs are plotted randomly within the district boundary.

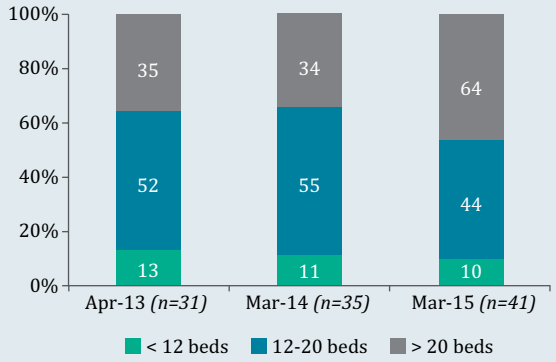
NMR (SRS 2013)	21	
ENMR (SRS 2013)	16	
Districts	19	
Total SNCUs	44	Kolkata district had 10 SNCUs; Bardhaman, Murshidabad, Nadia, Paschim Medinipur districts had 3 SNCUs each; Birbhum, Dakshin Dinajpur, Darjiling, Howrah, Hugli, Purba Medinipur, Uttar Dinajpur had 2 SNCUs each
Districts without SNCU	Nil	
High Priority Districts (HPDs)	5	No HPD was without SNCU

Planned versus Operational (N)

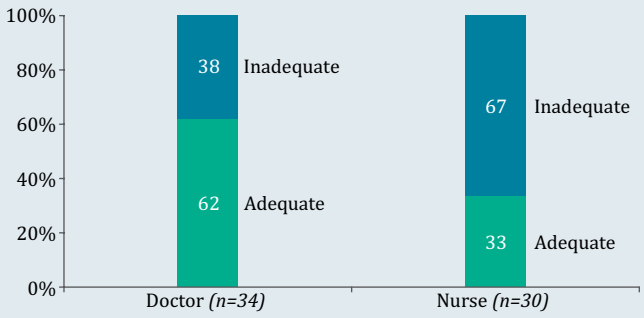


**Data not available for 3% of SNCUs for 2013-14 and 5% of the SNCUs for 2014-15.*

Bed-strength Distribution* (%)



Adequacy of Human Resources* (%)



**No data available for Doctors in 10 SNCUs and for Nurses in 14 SNCUs.*

Standard Norms

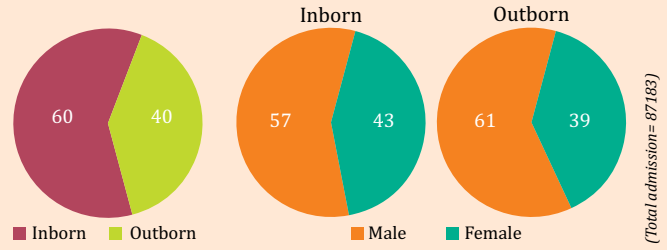
Establishment:
- Any health facility ≥ 3000 deliveries per year

Bed Strength:
- Minimum 12 beds/unit
- Additional 4 beds per 1000 deliveries/year

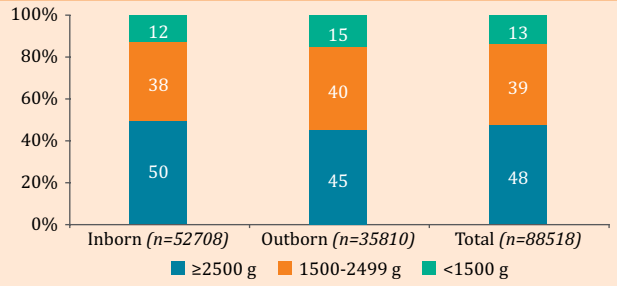
Human Resource:
- 1 doctor for 4 beds
- 2 nurses for 3 beds

ADMISSION PROFILE

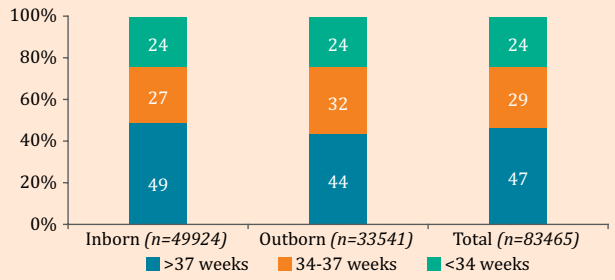
Place of Birth and Gender (%)



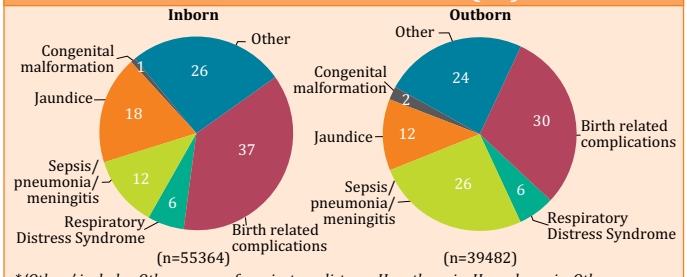
Birth Weight (%)



Gestational Age (%)

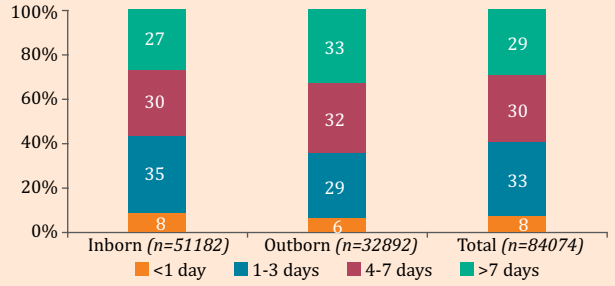


Causes of Admission (%)

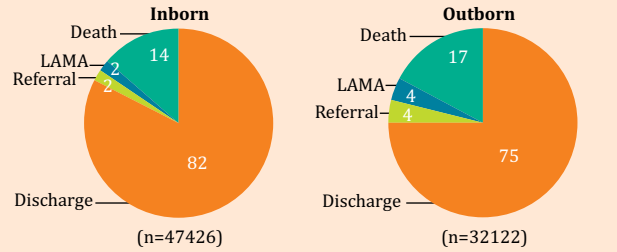


'Others' include : Other causes of respiratory distress, Hypothermia, Hypoglycemia, Others.

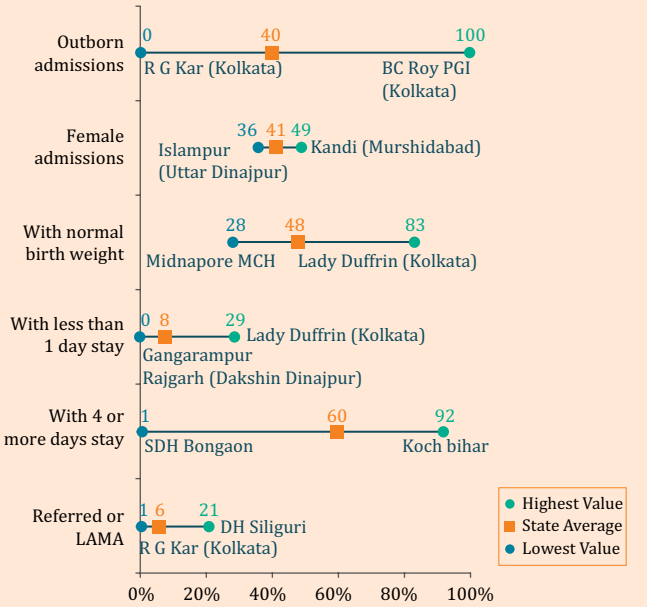
Duration of Stay (%)



Outcome (%)

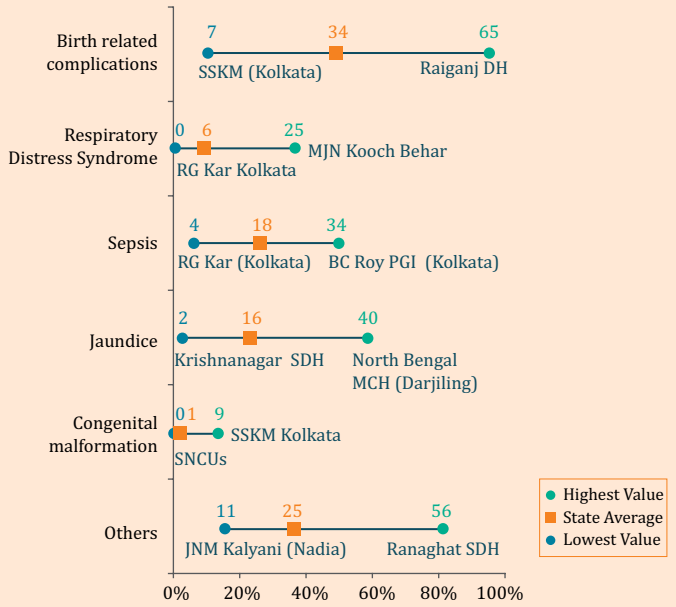


Variations in Key Admission Indicators (%)*



When data distribution is not symmetrical, mean does not robustly represent the true central value.

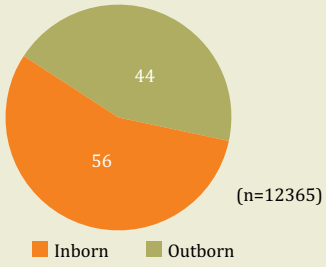
Variations in Causes of Admission (%)*



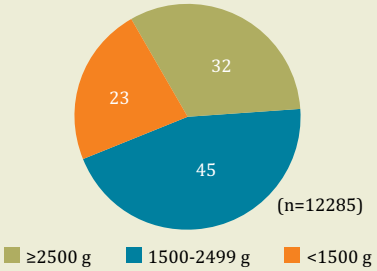
When data distribution is not symmetrical, mean does not robustly represent the true central value.

MORTALITY PROFILE

Place of Birth (%)

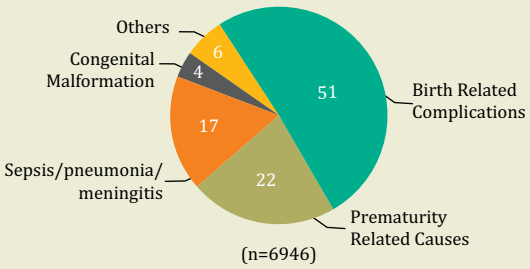


Weight at Birth (%)

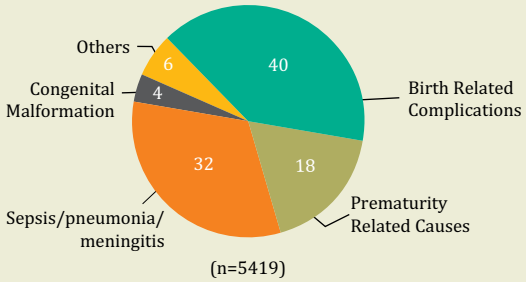


Causes of Mortality (%)

Inborn

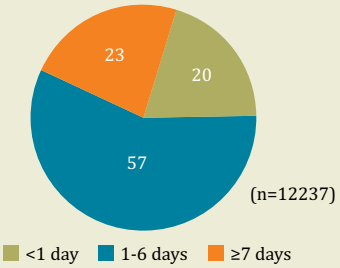


Outborn

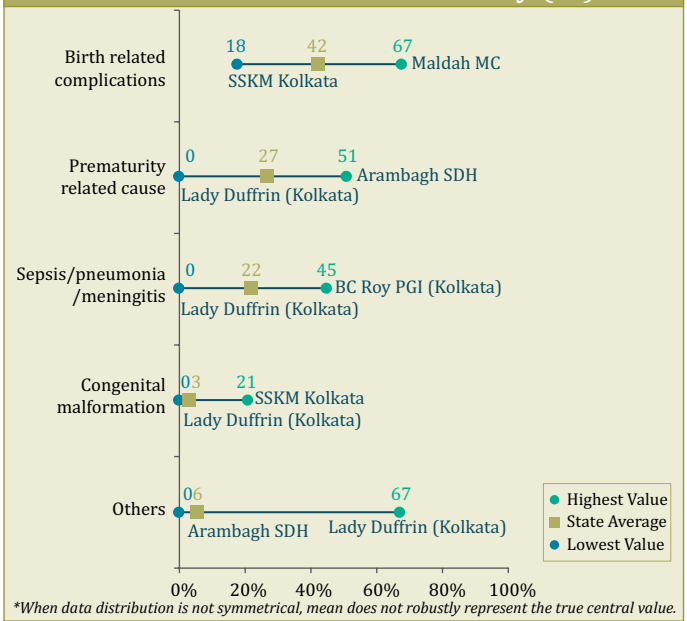


** 'Others' include: Other causes, Cause not established.*

Distribution by Age (%)



Variations in Causes of Mortality (%)*



**When data distribution is not symmetrical, mean does not robustly represent the true central value.*

KEY FINDINGS

- All districts (19/19) had an SNCU including all HPDs (5/5). In the last 2 years, 11 new SNCUs had been operationalized in the state. Most (90%) SNCUs had 12 or more beds. Doctors were adequate in 62% SNCUs but only 33% of SNCUs have adequate nurses.
- Inborn admissions (60%) were much more than that of outborn admissions. More than half (56%) of the deaths were among inborn admissions.
- Nearly half (48%) of admitted babies had normal birth weight and 47% were full term babies. More inborn babies had normal weight and were full term compared to outborn babies.
- 41% babies stayed for 3 or less days including 8% with less than 1 day stay.
- Birth related complications was the most common cause of death for both inborn and outborn admissions. The second most common cause of death among inborns was prematurity related causes and among outborns was sepsis/pneumonia/meningitis
- 57% of the deaths occurred during 1-6 days of life and close to 70% of the deaths were among LBW babies.

WAY FORWARD

- State needs to look into the HR issues for strengthening the existing network of SNCUs.
- Higher number of inborn admissions as well as deaths calls for focused attention on quality of intrapartum care being provided in the facilities.
- Since majority of the admissions are normal weight and full term, the facilities needs to look into the admission/discharge protocols.
- Higher proportion of birth and prematurity related complications among both inborn and outborn admissions suggest need to focus on quality of antepartum and intrapartum care.

Statistics at a Glance (April 2013-March-2015)

SNCU	Bed strength (N)	Total admissions (N)	Inborn admission rate	Female admissions (%)	Out-born admissions (%)	LBW admissions (%)	Duration of stay < 1 day (%)	Duration of stay ≥ 4 days (%)	Discharged (%)	Causes of Morbidity (%)			Mortality rate (%)	Causes of Mortality (%)		
										RDS	Birth related complication	Sepsis/ Pneumonia/ Meningitis		Prematurity related causes	Birth related complications	Sepsis/pneumonia/ meningitis
ABINASH DUTTA MATERNITY HOME, KOLKATA	20	1944	0.45	44	8	32	21	30	97	3	18	8	1	10	60	20
DR. B.C. ROY POST GRADUATE INSTITUTE, KOLKATA	36	1404	0.00	36	100	64	4	85	75	6	33	34	20	17	34	45
KOLKATA CNMCH	40	4953	0.14	44	39	55	10	68	74	6	42	19	24	25	43	25
KOLKATA MCH	110	8564	0.35	44	20	48	7	63	87	6	25	20	18	32	26	25
KOLKATA NRS MEDICAL COLLEGE AND HOSPITAL	32	4039	0.21	42	29	55	18	42	82	10	24	17	14	26	30	32
LADY DUFRIN VICTORIAL HOSPITAL, KOLKATA	32	798	0.17	45	2	17	29	17	91	2	16	10	0	0	33	0
M R BANGUR HOSPITAL, TOLLYGUNGE, KOLKATA	50	2767	0.14	43	43	56	6	72	85	6	19	22	10	30	30	25
CHITTARANJAN SEVA SADAN	24	2967	0.11	41	42	41	9	60	80	5	19	19	6	23	30	34
SSKM, KOLKATA	26	853	0.23	42	29	68	2	81	86	10	7	7	11	21	18	12
R.G. KAR MC	51	2060	0.34	46	0	52	3	38	92	0	39	4	8	13	46	29
IMAMBARA DISTRICT HOSPITAL, CHINSURAH, HOOGHLY	30	3809	0.16	42	48	45	12	68	79	8	31	14	10	39	36	20
ARAMBAGH SDH	36	828	0.06	39	49	52	1	79	78	8	30	23	11	51	30	19
BURDWAN MCH	90	7083	0.09	40	57	58	10	43	77	10	33	22	20	25	43	26
DURGAPUR SDH	20	1229	0.08	40	48	56	8	71	81	4	30	29	15	26	43	26
ASANSOL SDH	20	756	0.04	42	44	67	4	78	75	2	39	28	19	24	39	23
GANGARAMPUR SDH	10	934	0.10	39	41	45	0	62	87	5	34	18	7	33	43	20
DISTRICT HOSPITAL, BALURGHAT	10	808	0.06	41	32	58	5	79	72	9	39	23	16	8	57	29
MURSHIDABAD MCH	30	4230	0.06	41	47	58	9	64	75	7	49	16	17	28	42	21
JANGIPUR SDH	19	2688	0.05	37	66	50	1	52	65	4	55	20	26	25	55	17
KANDI SDH, MURSHIDABAD	20	1811	0.07	49	58	52	2	64	76	4	24	16	12	34	34	19
BSMC&H, BANKURA	30	2274	0.12	39	31	62	3	72	80	2	35	26	16	24	40	31
PURULIA DEBEN MAHATO SH	40	902	0.03	39	48	69	5	80	64	2	36	33	26	32	40	24

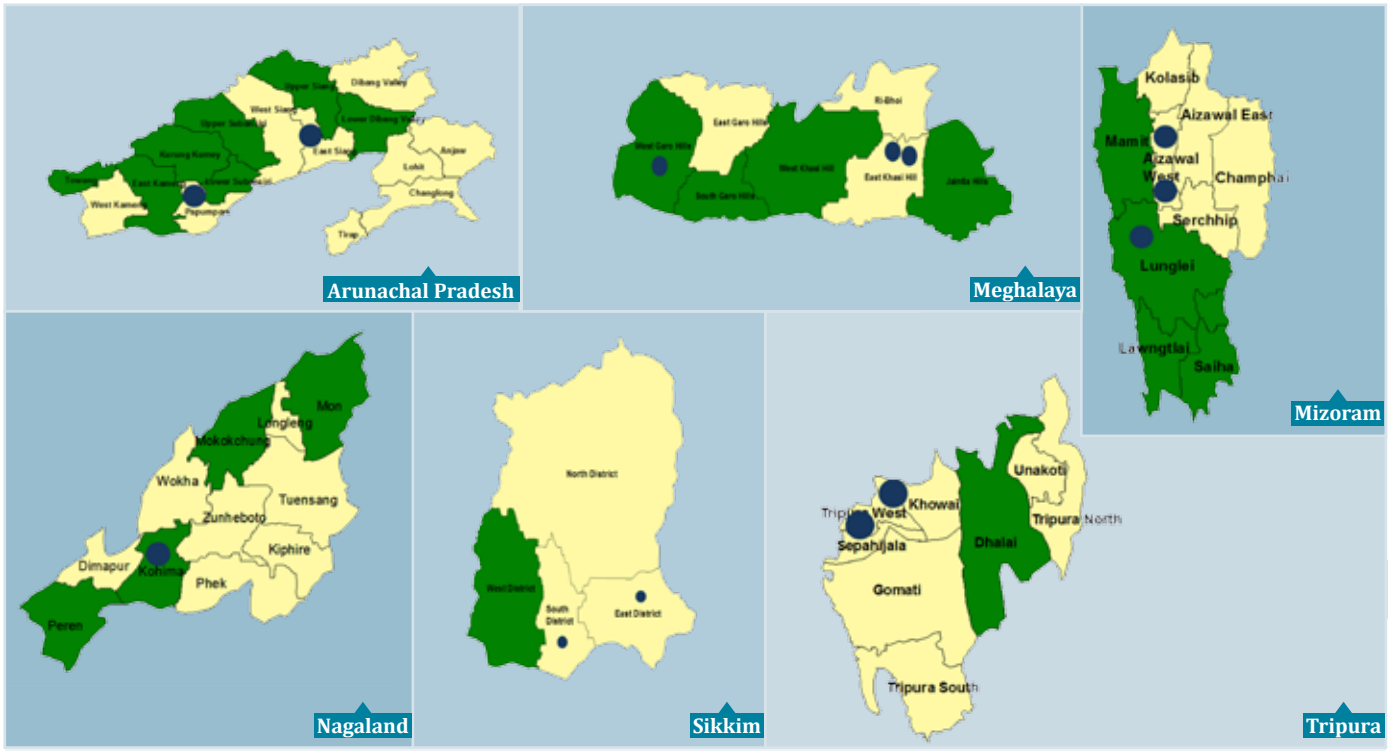
SNCU	Bed strength (N)	Total admissions (N)	Inborn admission rate	Female admissions (%)	Out-born admissions (%)	LBW admissions (%)	Duration of stay < 1 day (%)	Duration of stay ≥ 4 days (%)	Discharged (%)	Causes of Morbidity (%)			Mortality rate (%)	Causes of Mortality (%)		
										RDS	Birth related complication	Sepsis/ Pneumonia/ Meningitis		Prematurity related causes	Birth related complications	Sepsis/pneumonia/ meningitis
DIAMOND HARBOUR S.D. HOSPITAL	15	1079	0.03	38	64	59	6	74	68	6	41	19	23	25	51	18
JHARGRAM DISTRICT HOSPITAL	14	1635	0.09	39	50	62	1	87	84	1	33	19	11	41	41	12
MIDNAPORE MEDICAL COLLEGE, PACHIM MIDNAPORE	28	1257	0.02	36	54	72	3	76	68	7	39	15	27	37	46	15
GHATAL SDH	16	1568	0.09	42	41	49	8	42	83	14	27	8	9	42	30	15
HOWRAH DISTRICT HOSPITAL	20	1440	0.10	41	39	52	4	67	83	5	30	22	9	43	36	10
ULUBERIA SUB DIVISION HOSPITAL		2052	0.11	40	48	48	10	53	84	2	35	14	12	29	46	16
ISLAMPUR SUB DIVISIONAL HOSPITAL	10	999	0.05	36	49	49	0	55	79	4	56	19	18	13	65	10
RAIGANJ DIST. HOSPITAL	12	878	0.04	40	47	50	4	81	75	3	65	12	19	21	56	10
JALPAIGURI SADAR HOSPITAL	19	1920	0.07	37	45	41	2	46	69	2	38	8	16	18	44	8
RANAGHAT SDH	20	462	0.11	41	39	44	2	36	89	1	19	9	6	30	59	4
JNM HOSPITAL, KALYANI		248	0.12	42	52	64	9	73	85	11	48	8	11	43	54	4
KRISHNAGAR SADAR HOSPITAL, NADIA	12	1030	0.02	39	54	70	7	70	71	11	35	16	21	47	33	19
MALDA MEDICAL COLLEGE & HOSPITAL (SNCU)	26	2627	0.05	38	59	56	3	63	60	1	62	23	29	15	67	16
MJN HOSPITAL, COOCH BEHAR	12	920	0.04	38	55	56	0	92	87	25	33	11	12	44	45	5
RAMPURHAT SDH	28	884	0.09	43	46	51	7	81	73	5	46	15	24	27	49	15
SURI SADAR HOSPITAL, SURI, BIRBHUM	14	1704	0.06	39	33	57	5	56	72	8	46	15	19	32	51	9
SILIGURI DISTRICT HOSPITAL	15	1066	0.12	45	29	47	7	74	71	8	27	22	7	36	35	15
NORTH BENGAL MEDICAL COLLEGE & HOSPITAL, DARJEELING	24	4841	0.41	44	14	43	11	40	83	6	29	12	12	14	48	31
KANDI SDH	20	251	0.07	38	57	47	4	63	85	3	22	14	10	25	25	25
TAMLUK DH	8	1249	0.16	41	46	63	3	80	83	7	37	10	12	29	51	15
BARASAT DISTRICT HOSPITAL	16	975	0.05	38	39	37	0	76	88	2	30	17	8	20	48	10
SDH, BONGAON	16	397	0.14	37	22	39	0	1	93	3	37	25	4	19	25	25

The numbers highlighted indicate the upper & lower limit for the variable.

NORTH EAST STATES

Arunachal Pradesh, Meghalaya, Mizoram Nagaland, Sikkim, Tripura

OPERATIONAL STATUS



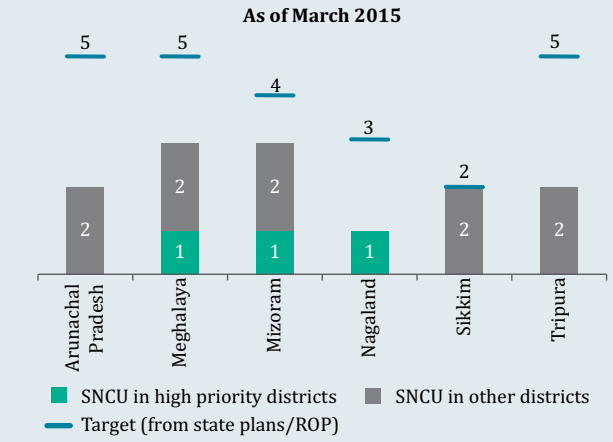
Dots representing SNCUs are plotted randomly within the district boundary.

Name of State*	Districts	Total SNCUs	Districts without SNCU	High Priority Districts (HPDs)	HPDs without SNCU
Arunachal Pradesh	16	2	14	7	All HPDs were without SNCU
Meghalaya	7	3	5	4	3 HPDs had no SNCU viz., Jaintia Hills, South Garo Hills, West Khasi Hills
Mizoram	9	3	7	4	3 HPDs had no SNCU viz., Lawngtlai, Mamit, Saiha
Nagaland	11	1	10	4	3 HPDs had no SNCU viz., Mokokchung, Mon, Peren
Sikkim	4	2	2	1	1 HPD had no SNCU viz., West District
Tripura	8	2	7	1	1 HPD had no SNCU viz., Dhalai

**No data was available for Manipur.*

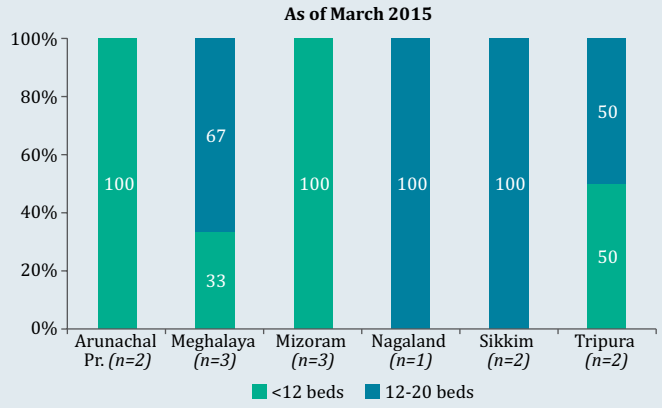
OPERATIONAL STATUS

Planned versus Operational (N)



**No data available for Manipur.*

Bed-strength Distribution (%)



Adequacy of Human Resources (%)

DATA NOT REPORTED

Standard Norms

Establishment:

- Any health facility ≥ 3000 deliveries per year

Bed Strength:

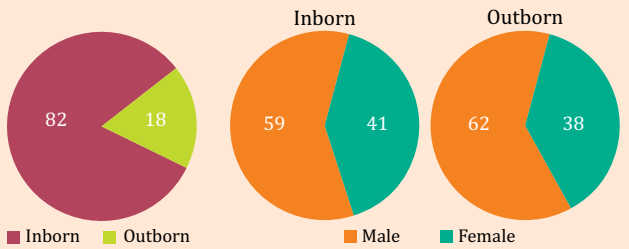
- Minimum 12 beds/unit
- Additional 4 beds per 1000 deliveries/year

Human Resource:

- 1 doctor for 4 beds
- 2 nurses for 3 beds

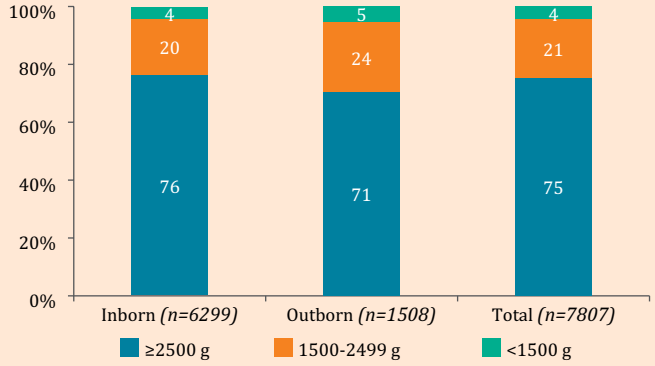
ADMISSION PROFILE

Place of Birth and Gender (%)

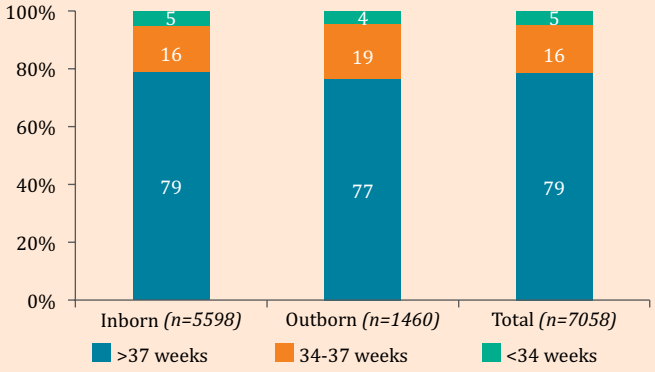


(Total admission= 7824)

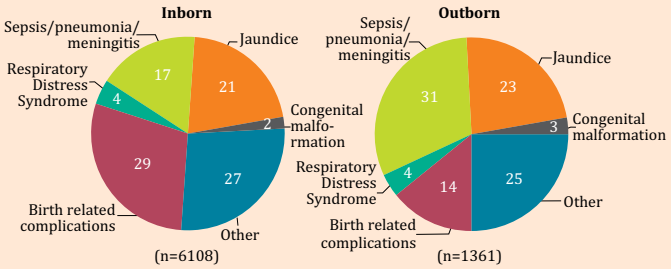
Birth Weight (%)



Gestational Age (%)

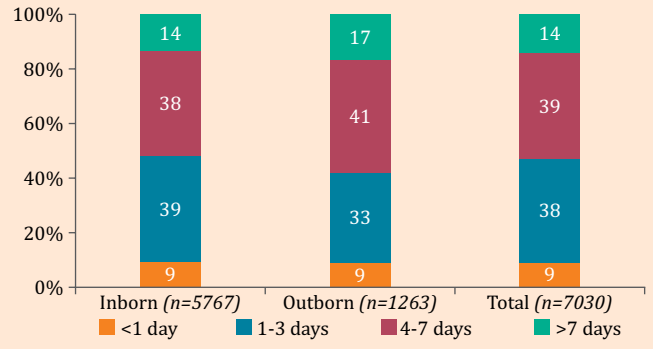


Causes of Admission (%)

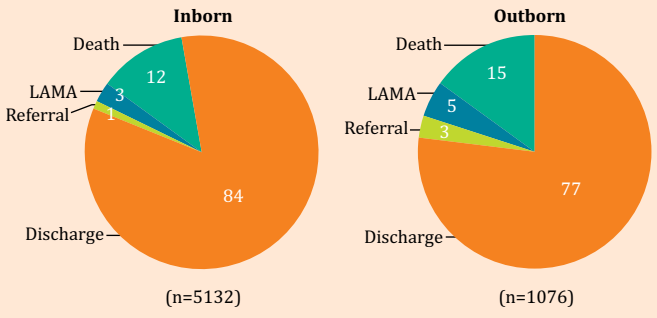


** 'Others' include: Other causes of respiratory distress, Hypothermia, Hypoglycemia, Others.*

Duration of Stay (%)

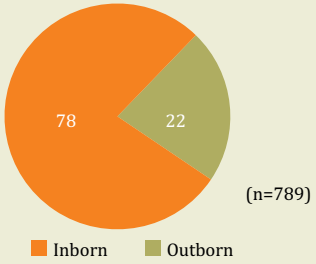


Outcome (%)

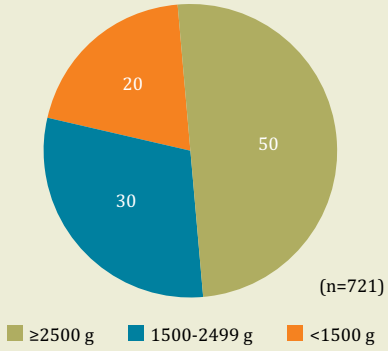


MORTALITY PROFILE

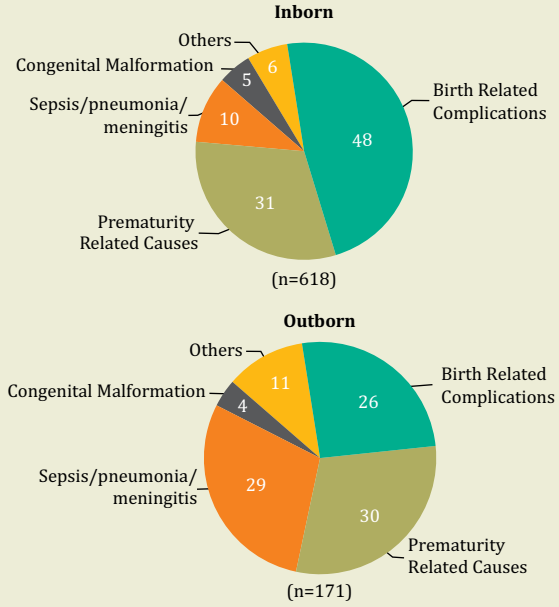
Place of Birth (%)



Weight at Birth (%)

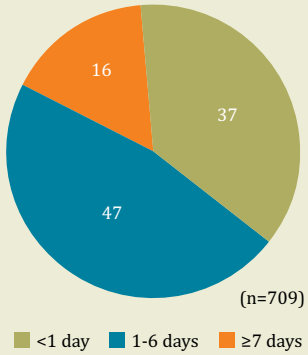


Causes of Mortality (%)



** 'Others' include: Other causes, Cause not established.*

Distribution by Age (%)



KEY FINDINGS

- The SNCU network in the North-East states was weak: most districts, especially HPDs, were without a SNCU and bed strength was mostly low.
- Most of the SNCU admissions were inborn (82%) and males (~60%). Beyond 70% of inborn and outborn admissions were of birth weight ≥2500g and gestational age >37 weeks. Birth related complications, jaundice and 'others' were the predominant reasons for admission. Most babies stayed in the SNCU for 1-3 days. Discharge rates were high for both inborn and outborn admission with relatively better outcomes in the former group.
- Babies with LBW and adequate birth weight contributed equally to the total mortality in the SNCUs. The most common causes of mortality were birth related complications, prematurity related causes and sepsis/ pneumonia/ meningitis (among outborns). Mortality was majorly among those 1-6 day old.

WAY FORWARD

- The SNCU network across N-E states needs to be expanded with expedition and by prioritization of HPDs while meeting requirements for logistic and personnel adequacy.
- Capacity and care protocols (admission, management, discharge) need to be strengthened and standardized across the SNCUs.
- Substantial mortality due to birth related complications calls for improvement in peripartum care.

Statistics at a Glance (April 2013-March-2015)

SNCU	Bed strength (N)	Total admissions (N)	Inborn admission rate	Female admissions (%)	Outborn admissions (%)	LBW admissions (%)	Duration of stay < 1 day (%)	Duration of stay ≥ 4 days (%)	Discharged (%)	Causes of Morbidity (%)			Mortality rate (%)	Causes of Mortality (%)		
										RDS	Birth related complication	Sepsis/pneumonia/ meningitis		Prematurity related causes	Birth related complications	Sepsis/pneumonia/ meningitis
DISTRICT MATERNITY & CHILD HOSPITAL,TURA, MEGHALAYA	10	358	0.13	49	20	36	12	71	87	7	23	20	9	25	66	3
GANESH DAS HOSPITAL, SHILLONG, MEGHALAYA	14	1114	0.07	42	28	31	14	49	76	8	33	24	25	29	49	14
NEIGRIHMS, MAWDIANGDIANG, MEGHALAYA	20	205	0.20	46	41	32	28	34	63	12	7	7	16	64	6	9
AIZAWL WEST DISTRICT, MIZORAM	7	595	0.13	0	19		0		0				0			
CIVIL HOSPITAL, AIZAWL WEST, MIZORAM	7	324	0.12	43	18	35	4	55	88	8	3	18	8	7	30	15
CIVIL HOSPITAL, LUNGLEI, MIZORAM	8	109	0.12	36	39	32	9	60	75	4	21	35	17	33	22	44
KOHIMA, NAGALAND	12	735	0.16	43	29	26	7	42	88	3	24	18	6	20	29	29
NAMCHI DISTRICT HOSPITAL, SIKKIM	13	671	0.27	48	21	15	4	66	87	3	15	32	5	53	44	3
STNM HOSPITAL, SIKKIM	13	791		44	15	19	3	80	92	1	13	27	4	56	25	3
GENERAL HOSPITAL PASIGHAT, ARUNACHAL PRADESH	4	135		43	3	29	23	31	74	4	19	23	6	13	63	25
PAPUMPARE, ARUNACHAL PRADESH	5	13	0.01	46	69	0	38	38	100	0	33	33	0			
AGMC AGARTALA, TRIPURA	10	1371	0.30	46	4	14	10	55	84	2	33	6	11	27	56	7
IGM AGARTALA, TRIPURA	20	1403	0.18	41	16	31	9	39	81	2	41	23	9	29	33	22

The numbers highlighted indicate the upper & lower limit for the variable.

UNION TERRITORIES

Andaman & Nicobar Islands, Chandigarh, Dadra & Nagar Haveli, Daman & Diu, Lakshadweep, Puducherry

OPERATIONAL STATUS

High priority district | SNCU | Other district | SNCU became operational in 2014-15

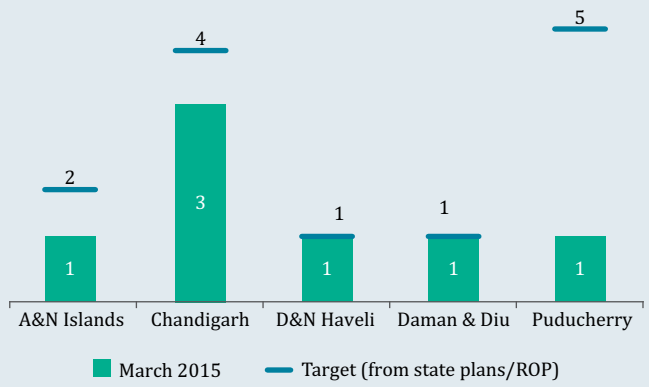
Dots representing SNCUs are plotted randomly within the district boundary.

Name of UTs	Total SNCUs	No. of Districts without SNCU	No. of HPDs	No. of HPDs without SNCU
A&N Islands	1	2	0	0
Chandigarh	3	0	0	0
D&N Haveli	1	0	0	0
Daman & Diu	1	1	0	0
Puducherry	1	3	1	1

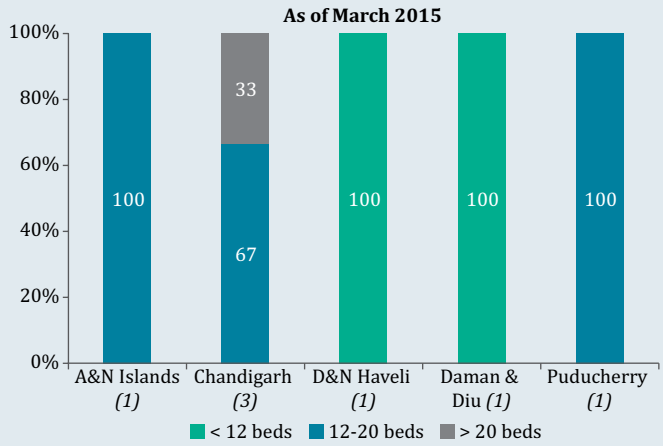
**No data available for Lakshadweep.*

OPERATIONAL STATUS

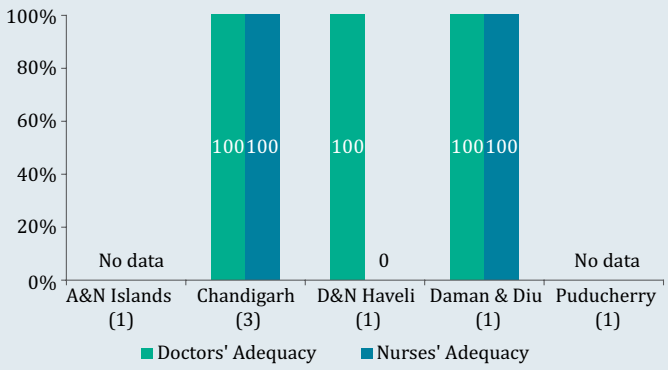
Planned versus Operational (N)



Bed-strength Distribution (%)



Adequacy of Human Resources (%)



Standard Norms

Establishment:

- Any health facility ≥ 3000 deliveries per year

Bed Strength:

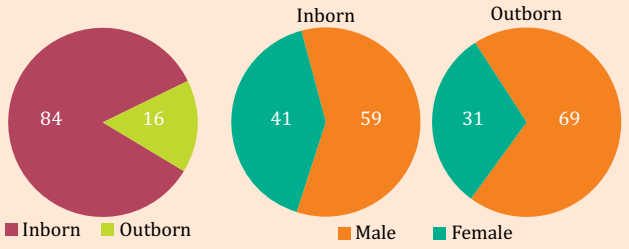
- Minimum 12 beds/unit
- Additional 4 beds per 1000 deliveries/year

Human Resource:

- 1 doctor for 4 beds
- 2 nurses for 3 beds

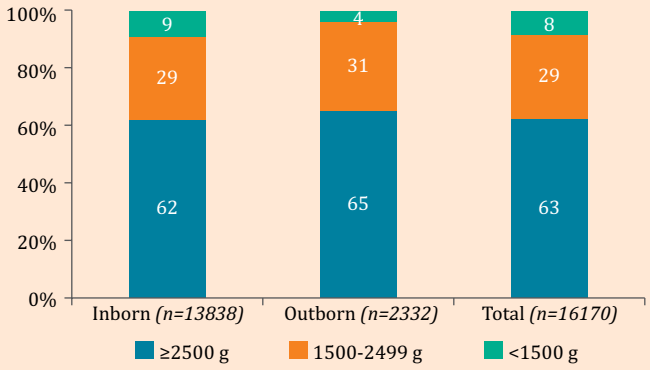
ADMISSION PROFILE

Place of Birth and Gender (%)

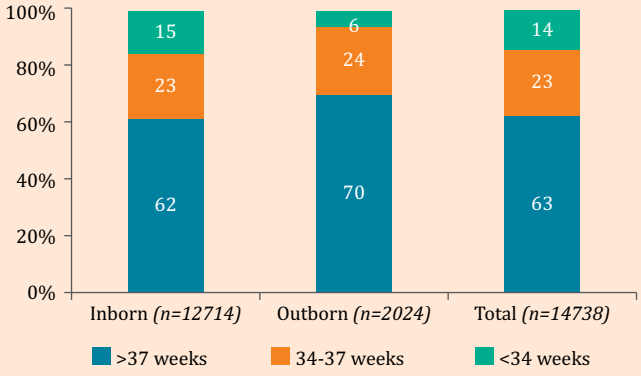


(Total admission= 10163)

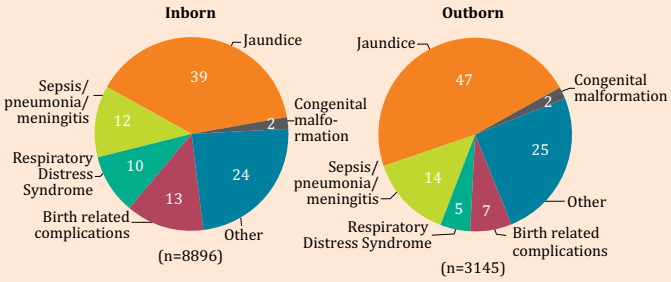
Birth Weight (%)



Gestational Age (%)

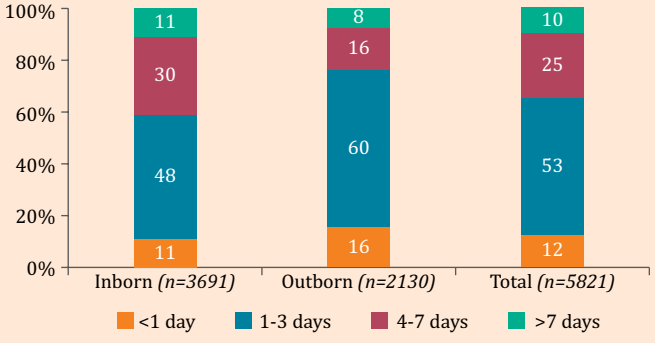


Causes of Admission (%)

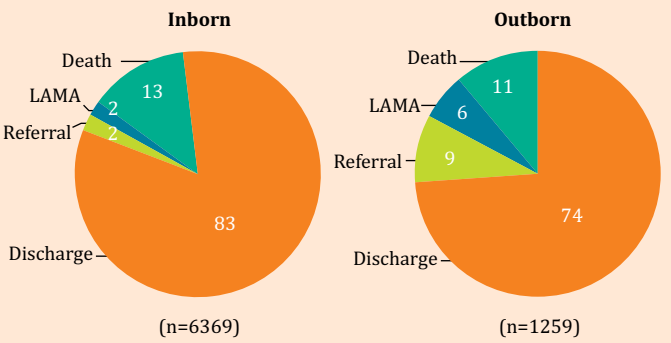


** 'Others' include: Other causes of respiratory distress, Hypothermia, Hypoglycemia, Others.*

Duration of Stay (%)

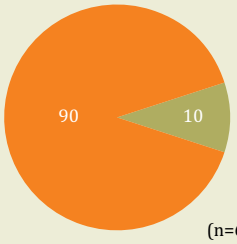


Outcome (%)

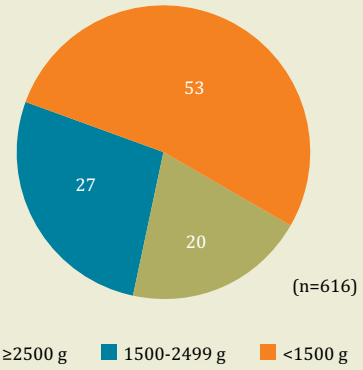


MORTALITY PROFILE

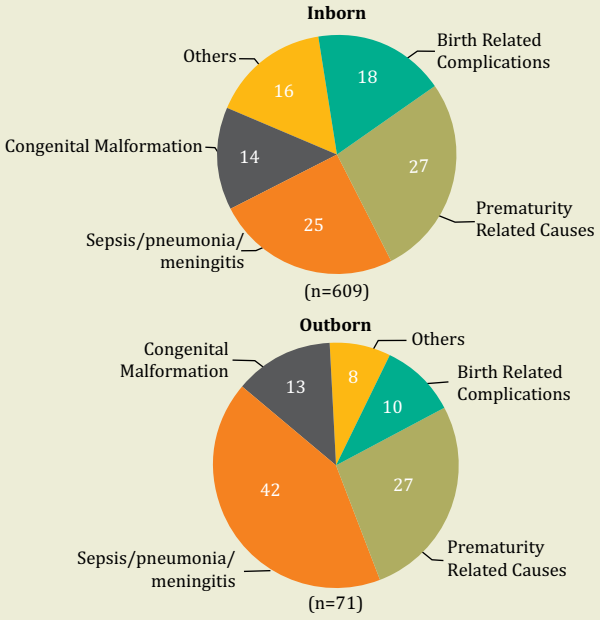
Place of Birth (%)



Weight at Birth (%)

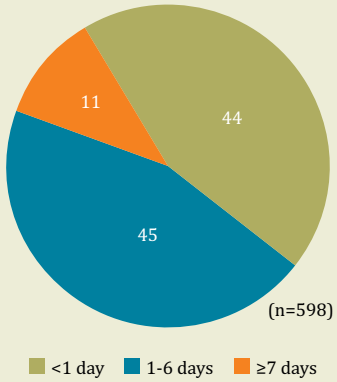


Causes of Mortality (%)



** 'Others' include: Other causes, Cause not established.*

Distribution by Age (%)



KEY FINDINGS

- Each of the UTs had at least one operational SNCU, the number being frequently lower than that targeted. While staffing was mostly adequate, bed strength across SNCUs was variegated.
- Majority of SNCU admissions were inborn and females predominated. Newborns with birth weight ≥2500g and gestation >37 weeks accounted for about 63% of the admissions. Most of the admissions were due to jaundice, sepsis/ pneumonia/ meningitis and 'other' causes. Most of the babies left the SNCU within 3 days. Discharge rates were higher for inborn admissions while referral and LAMA rates were higher among outborns. Death rates were more or less similar.
- Mortality was majorly among VLBW (<1500g) babies followed by those with birth weight of 1500-2499 g. Most of the deaths were in babies <1 day and 1-6 day old (~45% each). Deaths were most commonly due to prematurity related causes and sepsis/ pneumonia/ meningitis.

WAY FORWARD

- While majority of the newborns admitted were of adequate birth weight and gestation, mortality was majorly contributed by VLBW and LBW babies, frequently due to prematurity related causes. This calls for better preparedness to manage such babies at the SNCUs while reviewing the admission protocols. Referral protocols and linkages need to be strengthened.
- Sepsis/pneumonia/meningitis contributed to substantial SNCU burden of mortality. Asepsis at labour and during early neonatal period needs to be ensured.

Statistics at a Glance (April 2013-March-2015)

SNCU	Bed strength (N)	Total admissions (N)	Inborn admission rate	Female admissions (%)	Outborn admissions (%)	LBW admissions (%)	Duration of stay < 1 day (%)	Duration of stay ≥ 4 days (%)	Discharged (%)	Causes of Morbidity (%)			Mortality rate (%)	Causes of Mortality (%)		
										RDS	Birth related complication	Sepsis/pneumonia/ meningitis		Prematurity related causes	Birth related complications	Sepsis/pneumonia/ meningitis
G.B. PANT HOSPITAL, A&N ISLANDS	18	1658	0.29	43	9	39	2	63	95	16	29	16	3	44	33	6
GMCH 32, CHANDIGARH	18	76	0.01	0	0				0	0	0	0	0			
GMSH 16, CHANDIGARH	20	3467	0.16	39	27	37	15	24	77	8	10	10	2	53	23	14
PGIMER, CHANDIGARH	40	2710	0.25	43	4	40	0	95	79	10	8	22	19	22	13	32
SHRI VINOBA BHAVE CIVIL HOSPITAL, D&N HAVELI	11	556	0.05	0	50				0				0			
RAJIV GANDHI GOVT. WOMEN & CHILDREN HOSPITAL (DH), PUDUCHERRY & GOVT. GENERAL HOSPITAL, (DH), KARAIKAL	20	1390	0.18	45	7	29	19	28	97	11	18	6	4	30	30	17
MARWAR GOVT. HOSPITAL, NORTH DAMAN	5	306	0.27	43	3	19	6	56	67	9	17	10	2	60	0	0

The numbers highlighted indicate the upper & lower limit for the variable.

ANNEXURE

Issues with Data Cleaning and Actions Taken

This report has been prepared by aggregating information as made available from the SNCUs across India over a two-year period (Apr 2013- Mar 2015). Although the quality of data has improved considerably compared to the previous two year period (2011-2013), there were still some inconsistencies in the data and frequencies observed across some variables did not match despite cleaning.

Many of the issues highlighted here in the reporting from states have already been taken up by the online reporting of the data from SNCUs. However as the complete transition will take some time it was important to share these issues so that it can be corrected in future.

As indicators have been calculated with the intent to make the most of the data available, it is advised that these be interpret in cognizance of the situation due to missing data.

Issues in the Reporting of Data

1. Data from the states were available in different file format excel spreadsheets/word documents/ scanned pdf copiesand structure had been used for data submission. States that had used excel spreadsheets, had made entries in three separate sheets, namely Section A, B and C. Frequency distributions did not match across the sheets. As unique IDs had not been used for the SNCUs, it was difficult to link the data across these three sections.

2. Wrong/inadequate/inconsistent entry into data fields few are detailed as under:

    a. Name of the facility and the place (district Hospital) was used interchangeably. At times, Acronyms, full forms, similar yet different names or just 'District Hospital' had been entered making it difficult to identify the district or SNCU referred to.

    b. For some records, text was written in numeric fields. For example for the data for columns on number of nurses and doctors trained on FBNC, NSSK, F-IMNCI, 'Yes/No' reponses had been provided.

    c. There was inconsistency in the number of beds in the same SNCU in different months.

    d. Same data entered twice in some of the records submitted by the states making the information was redundant.

3. Some of the SNCU data was incompletely provided. For some states, the whole sections of the reporting requirement (Section B & C) were blank for some months. No information was available for a couple of states.

Actions Taken for Data Cleaning

- A structured excel spreadsheet had to be prepared onto which all data was entered and the analysis done.
- For cleaning the data submitted as excel spreadsheets, Section A was considered as the base and Sections B and C were matched to it.
- Names of the districts and SNCUs were standardized. Through careful inspection and extensive searching on the public domain, records were matched to these and rectified in accordance.
- For the number of beds in the SNCU, if increase in the number of beds seemed reasonable and consistent over the reporting period, the latest reported figure was considered. For others where no plausible trend was obvious, the modal frequency against each SNCU was considered.
- Missing data was reconciled through follow-up with the states. Data duplication was cleaned through detailed manual inspection and automated checks for the over 5000 records.
- Variables for which data quality was much compromised were excluded from analysis.

Notes

Notes

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