

## Neonatology

### STAFF

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### IMPORTANT ACHIEVEMENTS IN 2015

- Extension of the service of the Department of Neonatology with increase in the NICU and SNCU beds from 2<sup>nd</sup> October 2015. At present the department is running with 100 beds.
- Genetic testing & counseling centre at the department of neonatology, SSKM hospital.

### SERVICE INFORMATION

**Neonatal Intensive Care Unit:** It comprises of 33 beds with one stabilization bed in the 2<sup>nd</sup> floor (Including 8 Surgical NICU beds )

**Special New Born Care Unit:** 42 beds at 3<sup>rd</sup> Floor and 25 beds at ground floor of new Neonatology building.

**Postnatal Ward:** 52 lying in bed. Located at 1st floor, G&O building.

### Activities

- Level III care of sick newborns including ventilation, parenteral nutrition, neonatal surgery,
- Neurodevelopment clinic and Follow up services. The unit is equipped with 18 conventional ventilators and 1 high
- Frequency ventilator, 3 bubble CPAP. Amplitude EEG for continuous brain function monitoring with Video EEG,

- Digital X-ray, ultrasound, echo cardiograph are also available in-house. A side laboratory is working for bed side
- Investigations like complete blood count, micro ESR, hematocrit, blood gas estimation, serum electrolytes.
- Estimation and blood grouping. The unit provides services for ROP screening and laser therapy and hearing
- Screening before discharge. Cardiac surgery for congenital heart disease in collaboration with Department of Cardiothoracic Surgery and Department of Cardiology has been started .

**Neurodevelopment Clinic:** On Monday, Wednesday & Friday in new Neonatology building, 1st floor, 2 pm to 6 pm. Follow up for high risk NICU graduates, premature babies with facilities for motor, neurological, vision, hearing , cognitive examination and early intervention under one roof.

**Neonatal OPD:** All Working weekdays at in new Neonatology building ( Monday to Friday from 9 am to 2pm, Saturday 9 am to 12 Noon)

**Neonatal and fetal surgery OPD:** At new Neonatology building, ground floor, on Tuesday and Saturday.

Regular neonatal surgeries performed at neonatal surgery OT.

Total Neonatal surgery done in 1 yr average 150 (from December 2013 – November 2014): 134

#### **RBSK (Rastriya Bal Swasthya Karyakram under Govt. of India)**

Govt. of India has selected neurodevelopment clinic as nodal collaborative centre for Rastriya Bal Swasthya Karyakram for detection of developmental delay and early intervention in West Bengal as well as for Eastern India. Training of the professionals of child development from various districts from West Bengal and MP has been started under this project.

#### **Human Milk Bank**

The Chief Minister, Govt. of West Bengal has inaugurated Eastern India's first Human Milk Bank at the ground floor of new building for Institute of Neonatology, IPGME&R, SSKM Hospital on 7th August, 2013. This is the most advanced and well equipped human milk bank in India. Admitted babies in NICU and SNCU are getting pasteurised milk from this milk bank.

#### **Departmental Sterile Supply Division for NICU**

Departmental sterile supply division situated at the ground floor of G&O building. This division is meant for supplying sterile articles & linens for resuscitation and daily care of the newly born babies admitted in NICU & SNCU to prevent sepsis.

#### **Satellite Unit**

A satellite unit of Department of Neonatology, IPGME-SSKM hospital, comprising of SNCU, Neonatal ward and NICU has been developed in MR Bangur hospital in 2011. Neurodevelopment follow-up services and ROP screening has been opened for M. R. Bangur Hospital SNCU babies.

#### **Retinopathy of Prematurity clinic**

Screening for retinopathy of prematurity (ROP) of preterm and sick babies required oxygen in NICU and SNCU, IPGME. & various SNCUs of west Bengal and others referred from other health care facilities. This service is available every week on Wednesday from 04:00PM onwards at 1st floor, New building for Institute of Neonatology. In-house LASER therapy (emergency) is also done at NICU for babies, diagnosed as ROP.

## SERVICE INFORMATION

### Statistics report for 2010-2014 NICU

year	Total live birth	Inborn admission	Outborn admission	Survival rate at NICU
2010	2579	1143	219	93.17%
2011	2938	1107	292	92.9%
2012	3223	883	407	92%
2013	3400	875	320	88.4%
2014	3802	903	289	88.7%

### OPD statistics (April 2015 – November 2015)

S. No.	OPD	No of cases
1	Neonatal Medicine OPD	3171
2	Neonatal Surgery OPD	167
3	Neurodevelopment Clinic	2700
4	RBSK OPD	4207

### MORTALITY (January 2015 – November 2015)

INBORN			OUTBORN		
Total live births	Total deaths	Inborn NMR	Total Outborn admission	Total deaths	Out born CFR
3689	90	24.39 per 1000 LB	357	60	16.81%

### Month wise statistics of NICU : 2015

Month	Admission			Discharged			Death			Referred in
	Inborn	Outborn	Total	Inborn	Outborn	Total	Inborn	Outborn	Total	Total
Jan-15	44	28	72	24	20	44	08	06	14	28
Feb-15	34	36	70	38	19	57	05	04	09	36
Mar-15	56	25	81	51	24	75	02	06	08	25
Apr-15	50	32	82	49	33	82	06	01	07	32
May-15	47	39	86	43	27	70	08	05	14	39
Jun-15	65	28	93	44	33	77	13	03	16	28
Jul-15	74	28	102	59	27	86	10	04	14	28
Aug-15	100	23	123	73	15	88	09	06	15	23
Sep-15	89	28	117	82	18	100	06	09	15	28
Oct-15	81	50	131	71	33	104	08	12	20	50
Nov-15	108	40	148	83	18	101	15	03	18	40

### Bed occupancy and duration of stay at NICU : 2015

Month	Bed occupancy	Duration of stay (days)		
		Inborn	Outborn	Average
Jan-15	92%	22	17	19.5
Feb-15	90%	25	19	22.0
Mar-15	92%	24	17	20.5
Apr-15	91%	24	25	24.5
May-15	95%	25	23	24.0
Jun-15	88%	23	21	22.0
Jul-15	100%	25	21	23.0
Aug-15	116%	26	17	21.5
Sep-15	119%	29	21	25.0
Oct-15	68%	39	23	31.0
Nov-15	73%	39	15	27.0

## TEACHING & TRAINING ACTIVITY

- **DM neonatology course** 3 year DM Neonatology course permitted by MCI started in 2011 with annual intake of two students.
- **Clinical training for DNB in medical genetics**
- **Post Basic Diploma course in Neonatal Nursing** ( 1 year) approved by Indian Nursing Council & West Bengal Nursing Council.
- **Post graduate training (MD pediatrics)**
- **Training of M.Sc. Nursing students** from this institute and also from other medical colleges .

## RESEARCH LABORATORY SERVICE

### Neonatal microbiology research laboratory

- Blood culture & sensitivity by Bactec method, culture of different body fluid, fungal culture of NICU babies & samples from districts SNCU.
- Identification of pathogen, antimicrobial sensitivity & resistance pattern.

### Genetic Research laboratory:

- Genetic testing & counseling centre at the department of neonatology, SSKM hospital.

## PUBLICATIONS

### Books / Manuals (2012-14)

- Manual of Neonatal Protocols (for doctor and nurses)
- Book on pediatric nursing
- Book on basic newborn care at community level( local language)
- Book on neurodevelopmental follow up and early intervention.

### Journal articles (2012-14)

- Viswanathan R, Singh AK, Basu S, Chatterjee S, Sardar,S, Isaac D , Multi-drug resistant gram negative bacilli causing early neonatal sepsis in India Arch Dis Child Fetal Neonatal Ed (2011). doi:10.1136/archdischild-F2 of 6 2011-300097.
  - Roy S, Singh A, Mukherjee S, Basu S. Neonatal stool shows emergence of CTX-M 9 group extended spectrum  $\beta$ -lactamases in India . Journal of Tropical Pediatrics . 2011, 29(3) : 305-8.
  - Viswanathan R, Singh A, Ghosh C, Mukherjee S, Sardar S and Basu S - Experience of Setting Up a Microbiology Service for rural Facility Based Sick Newborn Care Unit Journal of Tropical Pediatrics, February 2012.
  - Suman Sarkar, Shymal Kumar Sardar, Dinesh Munian, Subham Bhattacharya and Bhuban Majhi - An Anomalous Left Superior Venacava Draining into Left Atrium in association with Fetal Valproate Syndrome, Indian Journal of Pediatrics, May 2012.
  - Amitava Sur, Syamal Kumar Sardar and Anshuman Paria - Left Sided Oesophageal Lung: A Diagnostic Challenge, Case Reports in Pediatrics, February 2013.
  - Amitava Sur, Syamal Kumar Sardar and Anshuman Paria - Caudal Duplication Syndrome, Journal of Clinical Neonatology, March 31, 2013.
  - Mitra S, Saha AK, Sardar SK, Singh AK - Remission of congenital complete heart block without AntoRo/La antibodies, Annals of Pediatric Cardiology, 2013.
  - Anindya Kumar Saha, Syamal Kumar Sardar and Amitava Sur - Congenital sternal cleft along with persistent left sided superior Vena Cava- a rare presentation, Case reports in Pediatrics, June 2013.
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