

# Implementing and scaling up small and sick newborn care

## Successes, challenges and lessons learned from countries

**Friday, 17 November 2023**

8am New York, 2pm Geneva, 4pm Nairobi, 6.30pm New Delhi

Today we celebrate [World Prematurity Day](#). This day raises awareness for the challenges of preterm birth and celebrates the lives of preterm infants and their families worldwide.

*This webinar is co-hosted by the Department for Maternal, Newborn, Child and Adolescent Health and Ageing, WHO Geneva and UNICEF New York.*



# Agenda

**Welcome and introduction:** Dr Anshu Banerjee, Director, Department for Maternal, Newborn, Child, Adolescent Health and Ageing, WHO Geneva

## **Part 1: Small and Sick Newborn Care- Where are the gaps?**

- **Progress across 106 countries for small and sick newborn care:** Dr Gagan Gupta, Senior Advisor, Maternal and Newborn Health, UNICEF New York
- **Scaling up access to quality inpatient care for preterm babies in Ghana:** Dr Chris Fofie, Deputy Director, Reproductive and Child Health Unit, Family Health Division, Ghana Health Service

## **Part 2: Small and Sick Newborn care- What are the Solutions?**

**Panel of experts** *moderated by Dr Queen Dube, Newborn Health Lead, Department for Maternal, Newborn, Child, Adolescent Health and Ageing, WHO Geneva*

- Dr Felix Bundala, Director for Reproductive, Maternal, Newborn and Child Health, Ministry of Health, Tanzania
- Dr Dennis Marke, Program Manager, Health Systems Strengthening, Ministry of Health and Sanitation, Sierra Leone
- Dr Md. Jahurul Islam, Program Manager, National Newborn Health Program & Integrated Management of Childhood Illness, Directorate General of Health Services, Ministry of Health and Family Welfare, Bangladesh
- Dr Syeda Humaida Hasan, Consultant, Department of Neonatology, Chittagong Medical College Hospital, Bangladesh

**Questions & Answers with the audience**

**Closing remarks:** Dr Gagan Gupta & Dr Queen Dube

# Welcome and introduction



**Dr Anshu Banerjee**

Director, Department for Maternal, Newborn, Child and Adolescent Health and Ageing, WHO Geneva

A photograph of a hospital ward. In the foreground, a man is sitting in a white plastic chair, holding a newborn baby wrapped in a pink blanket. The man has his eyes closed and a gentle smile. In the background, there are several hospital beds with white frames and bedsheets. A nurse in a white uniform is standing near one of the beds, and another person is visible further back. The ward has large windows with pink curtains and a poster on the wall. The overall atmosphere is calm and focused on the care of the newborn.

Part 1:

## Small and Sick Newborn Care Where are the gaps?

# National assessment of small and sick newborn care in Ghana

---

DR CHRIS FOFIE

17<sup>TH</sup> NOVEMBER, 2023



Implementing and scaling up small and sick newborn care: Successes, challenges and lessons learned from countries

# Background to the Assessment

---

## Substantial progress in under-5 mortality reduction

- U5MR fell by 55% from 99.7 (2000) to 44.7 (2020) per 1000 livebirths (lbs)
- 39,214 U5 children died in 2020 compared to 66,852 in 2000

## Neonatal death reduction has not seen similar success

- Ghana's NMR fell by a moderate 36% from 35.8 to 22.9 (2000-2020) per 1000 live births
- NMR comprised over 51% of Ghana's U5MR

## Inequities in access to services and outcome of care

- by region, district, education, sex of baby and other social determinants

*Assessment was to know the situation of facility care for newborns to identify gaps that are contributing to the deaths*

# Objectives

---

1. Describe newborn care **workload** and **mortality trends** (2019- 2021) in hospitals providing specialized care for newborns in the country and **match these to availability of trained HRH.**
2. Classify the **level of newborn care** available in newborn care units (NBCUs) within facilities across the country
3. Describe newborn **admission and referral practices**
4. Directly observe NBCUs and assess care provided to babies on admission at these units.
5. Describe client perspectives on **respectful and supportive care** available in NBCUs in the country



# Design and Scope of the Assessment

---

- **Design:** descriptive cross-sectional
- **Target respondents**
  - ✓ Facility and Newborn care unit in-charges, pharmacists and caregivers/mothers whose babies were on admission at the time of the assessment, Health information officers, etc. across the country
- **Quantitative component**
  - ✓ Questionnaire developed pulling together templates from WHO, EMEN-QI, National strategy and standards; validated by key stakeholders.
  - ✓ Tools translated into REDCap data collection software


















# Data collection and Ethics

- **Data collection teams:** Pediatricians, Regional Newborn Focal persons, Health Information Officers, Other health professionals – 2-3 per region working together in teams
- **Training** of data collectors including the use of the REDCap software and agreement of the operational definitions of the variable
- **Ethics:** Clearance from the Ghana Health Service ERC and strict adherence to COVID-19 protocols



# Data sources and Variables

1. Facility records and registers
2. Direct interviews with respondents
3. Observations and inventory taking

Instrument name	Fields	View PDF	Instrument actions
Form 1. Facility Identification	57		Choose action ▾
Form 2. Facility Statistics	23		Choose action ▾
Form 3a. Human Resources for Health 2020	63		Choose action ▾
Form 3b. Human Resources for Health 2021	63		Choose action ▾
Form 3c. Human Resources for Health 2022	63		Choose action ▾
Form 4. Care Services	196		Choose action ▾
Form 5a. Drugs on the ward or unit	94		Choose action ▾
Form 5b. Drugs in the facility pharmacy	83		Choose action ▾
Form 6. Admission into the Newborn Care Unit	28		Choose action ▾
Form 6b Discharge Into The Newborn Care Unit	34		Choose action ▾
Form 7. Referral Practices at the Newborn Care Unit	40		Choose action ▾
Form 8. Observations at the Newborn Care Unit	73		Choose action ▾
Form 9. Preterm Care at Birth and After	27		Choose action ▾
Form 10. Kangaroo mother care Assessment	85		Choose action ▾
Form 11. Quality of Care for Mothers and Newborns	77		Choose action ▾

# Key Findings 1

---

- **Assessment coverage**
  - Assessment covered 185 facilities with newborn care units
  - 59% (154 out of 261) administrative districts with newborn care units
- **Workload/ Caseload and mortality trends**
  - 64% of all mortalities documented across the 185 facilities were early neonatal deaths
- **Human resources for health**
  - Inadequate and inequitable distribution of human resource (Particularly neonatologists, pediatricians, neonatal nurses and pediatric nurses)
  - Ratio of neonatal nurses in 2021 was 1:3727 and 1:638 for medical officers

## Key Findings 2

---

- **Equipment/ Services**

- Only 27% of facilities (n=50) had access to blended oxygen
- On average, 74% of facilities at district hospital level or higher had access to CPAP
- 77% of facilities offer phototherapy while 25% have capacity for Exchange blood transfusion

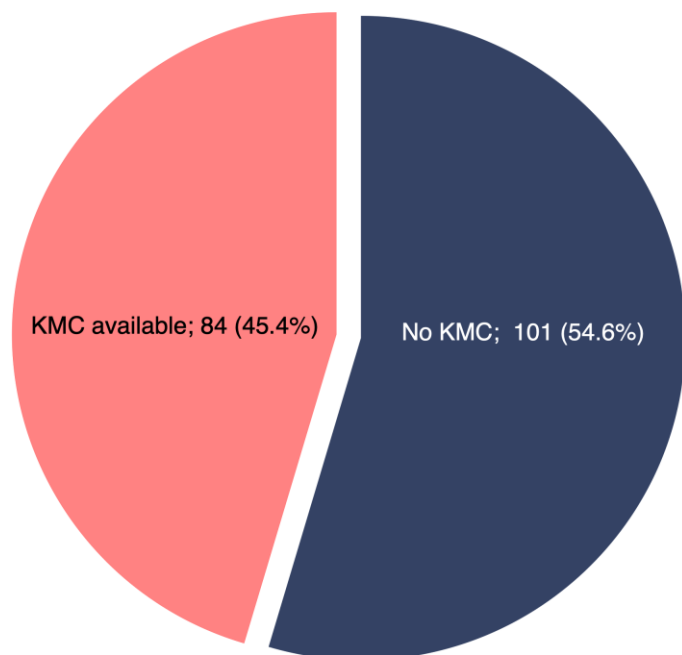
- **Level of care**

- 31.4% (58 /185) of facilities assessed offer level IIA services
- Level IIA services available in 19.2% of districts (50/261)

- **KMC**

- No designated room or space for KMC in 54.6% of facilities assessed

# A focus on preterm/ LBW : Gaps & Opportunities



KMC Parameter	Number of facilities (N=84)	% of facilities
<b>KMC Practice within facilities</b>		
Staff who have managed a baby on KMC over 12 months	74	88.1%
Continuous education of parents with KMC children	53	63.1%
KMC practice is scheduled	49	58.3%
KMC 8hrs or more	31	36.9%
Facilities with all staff on duty trained as KMC trainers	5	6.0%
<b>Inputs for care at the KMC unit</b>		
Feeding Chart for inpatients	69	82.1%
KMC records for babies in separate book	63	75.0%
Register for children managed in KMC	63	75.0%
Number of facilities using national manual for training	54	64.3%
Trained person for neurological assessment of preterms	22	26.2%
Facilities with trained physiotherapist	5	6.0%
<b>Arrangements for caregivers' needs at KMC</b>		
Handwashing facility in each room @ KMC	52	61.9%
Bathroom for mothers	50	59.5%
Toilet facilities for mothers	46	54.8%

Thermal care service		Zone of the country			
		Northern N=35	Middle N=69	Southern N=81	Overall N=185
<b>KMC space or room</b>		22 (62.9%)	25 (36.2%)	37 (45.7%)	84 (45.4%)
<b>Radiant warmers</b>	<b>Standard</b>	32 (91.4%)	37 (53.6%)	61 (75.3%)	130 (70.3%)
	<b>All types</b>	32 (91.4%)	62 (89.9%)	67 (82.7%)	161 (87.0%)
<b>Incubator</b>		27 (77.1%)	48 (69.6%)	65 (80.3%)	140 (75.7%)

# Next Steps -1

- Further analysis ongoing at subnational level to inform decision making and guide policy makers in planning resource mobilization
- Findings serve as guide for all partners intervention and in line with organizing care within the Networks of Practice

Further analysis of variables (preterm/LBW)		
code	description	remarks
34	facility level by KMC availability	investment and siting of facilities
38	facility ownership by KMC availability	investment and siting of facilities
54	GPS code	geographical access to care
399	ABR	support services and follow up care
401	OAE	support services and follow up care
405	ROP screening	support services and follow up care
415	ambulance (referral)	referral practices
423	mother's hostel	no separation
427	lounge for mothers	no separation
429	breastfeeding/expression room	no separation
431	bathroom facility	WASH in health
433	counselling and psychosocial support	experience of care
439	feeding preterms	capacity
699	structured post discharge care	admission and discharge practices
700	follow up	admission and discharge practices
726	thermal care	referral practices
727	continued bf during referral	referral practices
924	training in neurological assessment	support services and follow up care
926	space for outpatient KMC	support services and follow up care
940	KMC outpatient register	support services and follow up care
952	facilities that refer to level 2 facilities	referral practices
701-704	bereavement	psychosocial support

# Next Steps -2

- Findings complement and feed into ongoing work eg revised MNCH indicators in DHIMS
- Policy briefs / Investment case
  - Siting NCUs
  - HRH interventions
  - equipment and supplies, etc

Zone	Regions in the zone	# of districts in zone	# of NBCUs covered	# (%) districts with NBCUs
Northern	Northern, North East, Savannah, Upper East, and Upper West	55	35	31 (56.4%)
Middle	Ahafo, Ashanti, Bono, Bono East, Eastern and Oti	114	69	54 (47.4%)
Southern	Central, Greater Accra, Volta, Western and Western North	92	81	69 (75%)
TOTAL		260	185	154

# Conclusions

---

- Ghana has not achieved the ENAP minimum target of 80% districts with Level 2
- No region in Ghana has achieved the 80% target for districts with CPAP services
- HRH: Availability, equitable distribution, continuous capacity strengthening are key issues
- More than half of existing NBCUs do not have room/space for KMC
- The Assessment provides key findings for targeted and accelerated action



# Thank you

---





## Part 2:

Small and Sick Newborn Care  
What are the solutions?

# Panel of experts

*Moderated by Dr Queen Dube, Newborn Health Lead, Department for Maternal, Newborn, Child, Adolescent Health and Ageing, WHO Geneva*



**Dr Felix Bundala**  
Director for Reproductive, Maternal,  
Newborn and Child Health  
Ministry of Health, Tanzania



**Dr Dennis Marke**  
Program Manager, Health  
Systems Strengthening  
Ministry of Health and  
Sanitation, Sierra Leone



**Dr Md. Jahurul Islam**  
Program Manager, National  
Newborn Health Program & IMCI  
Directorate General of Health  
Services, Ministry of Health and  
Family Welfare, Bangladesh



**Dr Syeda Humaida Hasan**  
Consultant, Department of  
Neonatology Chittagong Medical  
College Hospital, Bangladesh



# Medical Equipment Management and Maintenance in Sierra Leone

**Dr Dennis Marke**  
**Manager - Health Systems Strengthening Program**  
**17<sup>th</sup> Nov 2023**

# Background

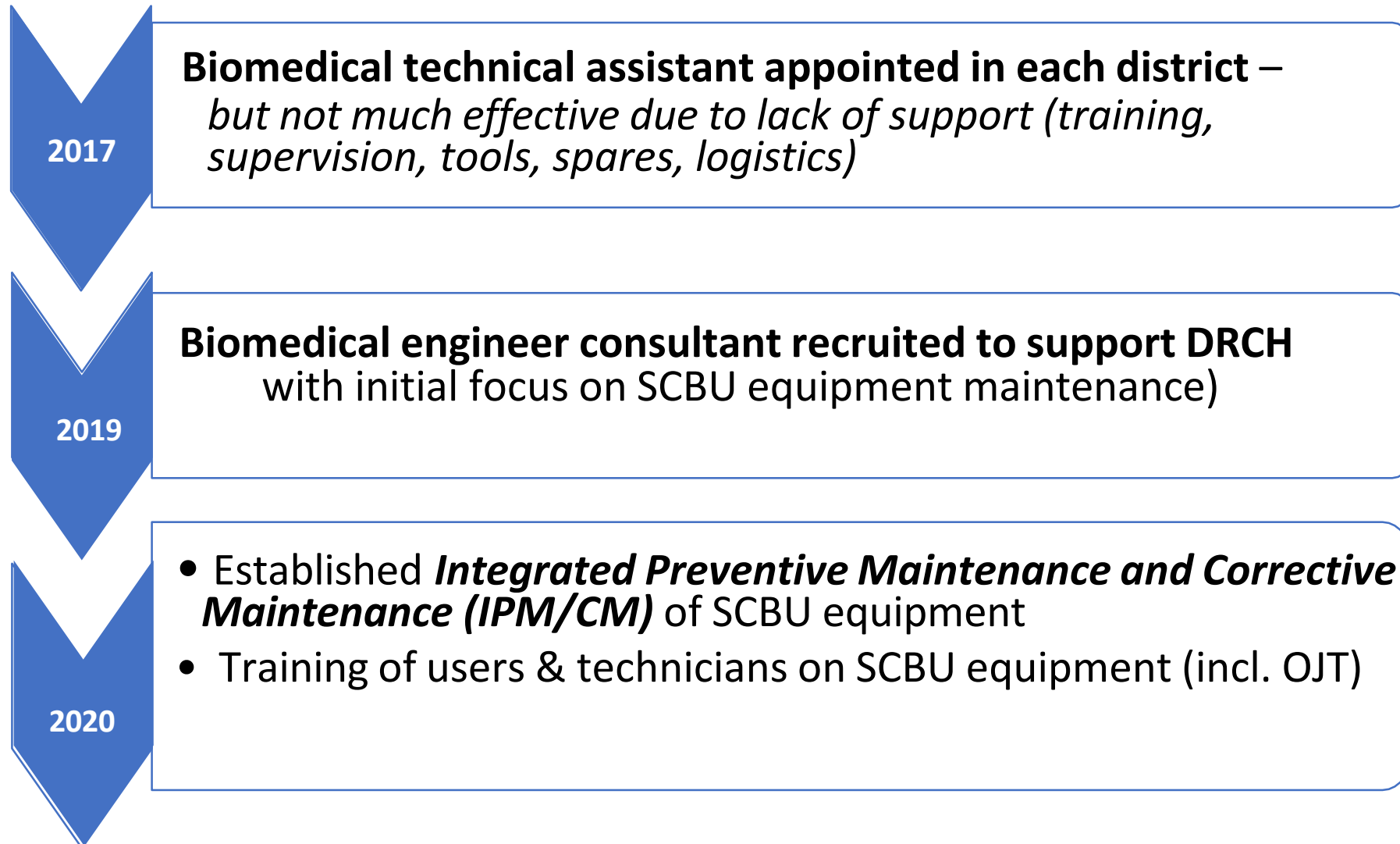
Various high-quality equipment & devices have been procured to provide quality services and staffs at Special Care Baby Units (SCBUs) are trained to use them. However, because of .....

- Unclear medical equipment management, maintenance responsibility and governance structure at national, district and health facility levels
- Reactive approach (repair and replace medical equipment when broken) is the common practice

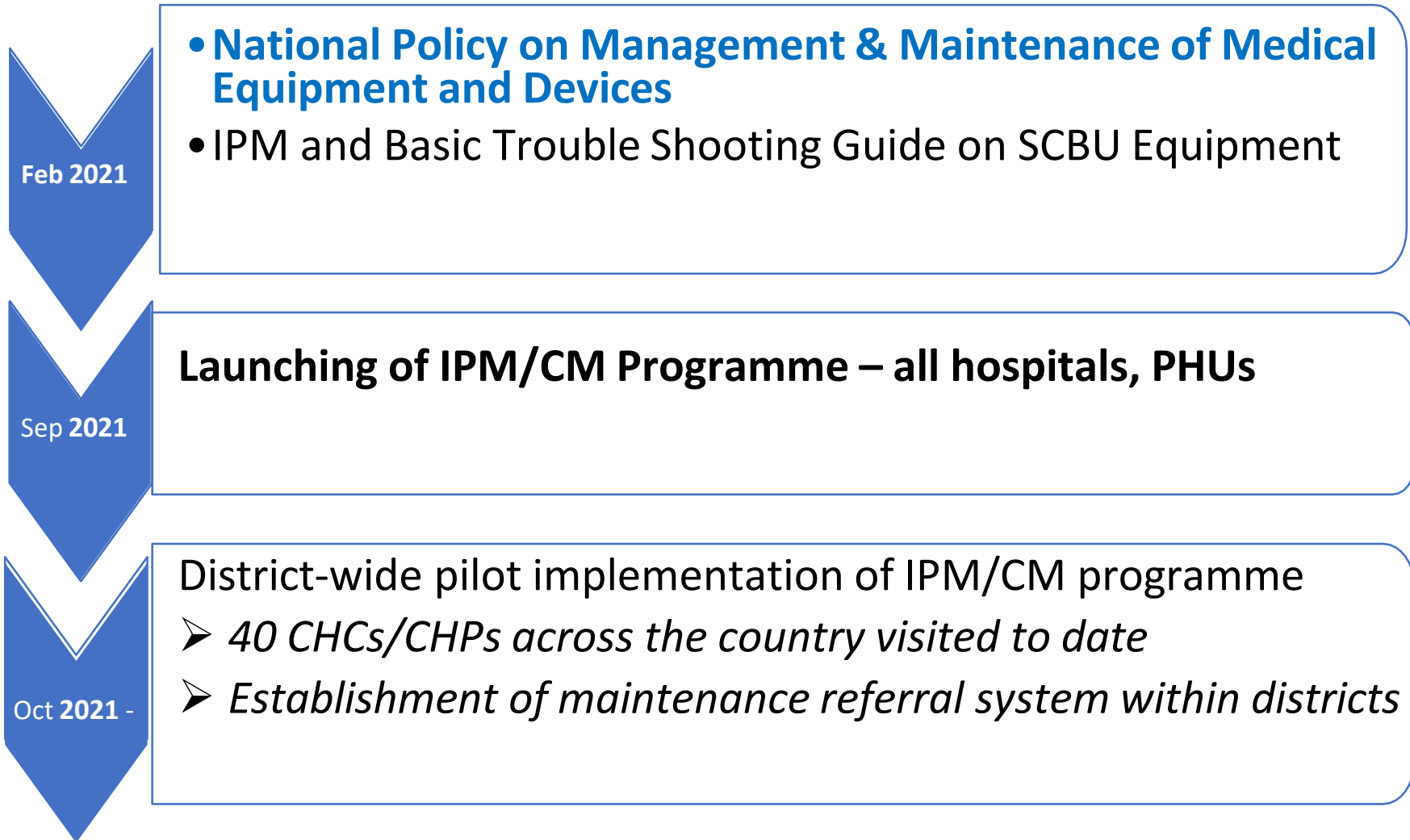
*Regular functionality of the high-quality equipment was a challenge faced at many SCBUs and cost of operation was higher in initial days*



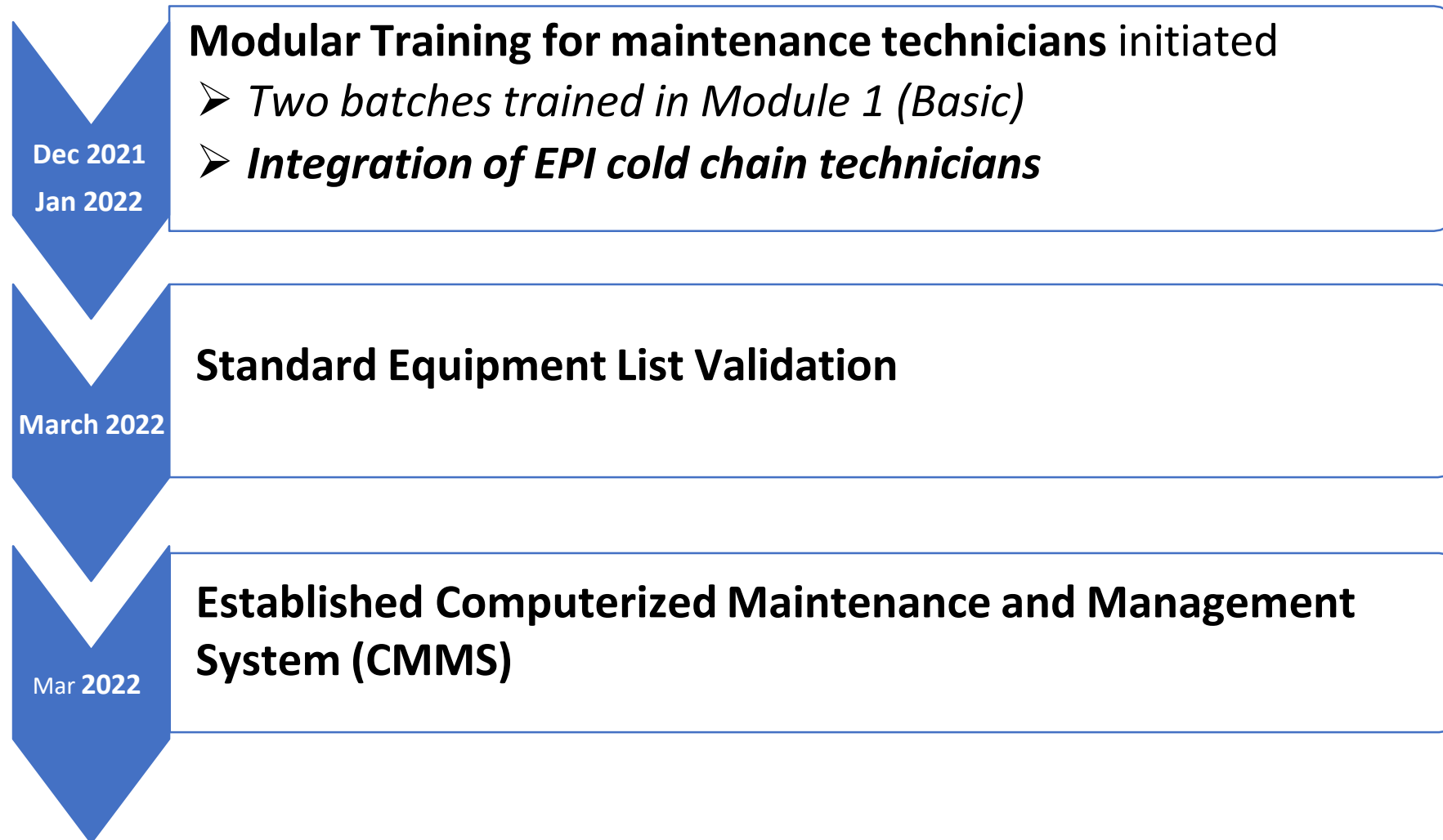
# Evolution of “Maintenance and management of Medical Equipment and Devices in Sierra Leone”



# Evolution of “Maintenance and management of Medical Equipment and Devices in Sierra Leone”

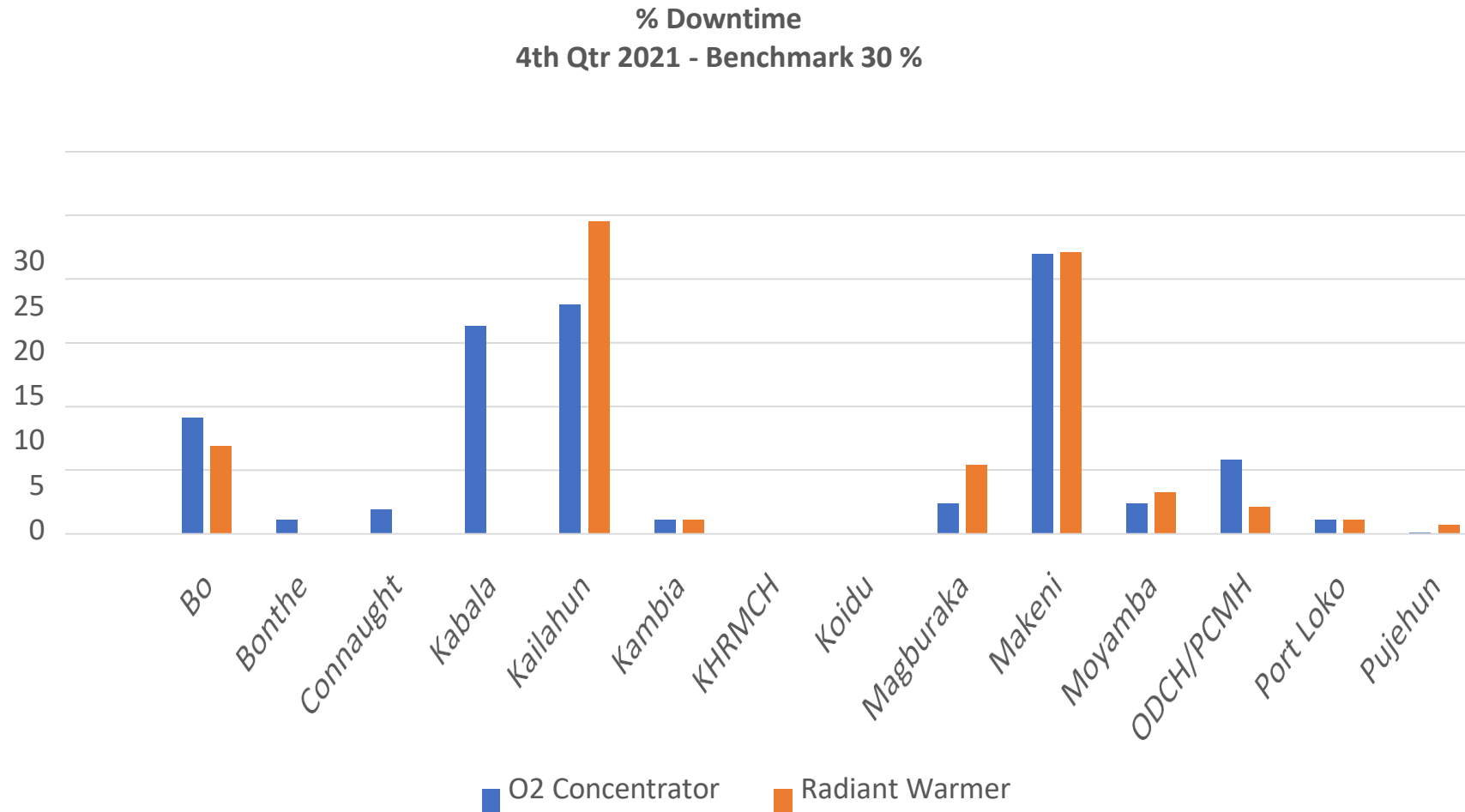


# Evolution of “Maintenance and management of Medical Equipment and Devices in Sierra Leone”





# Monitoring of downtime: District Hospitals (O2 Concentrator and Radiant Warmer)



# Remaining challenges: Maintenance Management

- ***Human resources*** for maintenance at facility level (skills and number)
- ***Logistics***: Operating budget, spares and supplies, basic tools and equipment
- ***Maintenance Workshop Management***: infrastructure, operation, system and procedures, programs and strategies, documentation, “5S” concept

# Required actions

- Clarify the governance structure for maintenance and management of medical equipment and devices
- Make equipment maintenance and management central to management functions of MoHS top management, DMOs, and MS
- Establishment of Regional Maintenance Referral Workshop Units cum skills lab for biomedical technicians
- Establish continuous training program and opportunities for maintenance technicians similar to other health professionals
- Increase the number of pin-code maintenance staff and create an attractive career path for this cadre
- Include 'hidden costs of medical technology' in the health operational budget



# Thank You!

World Prematurity Day, 2023

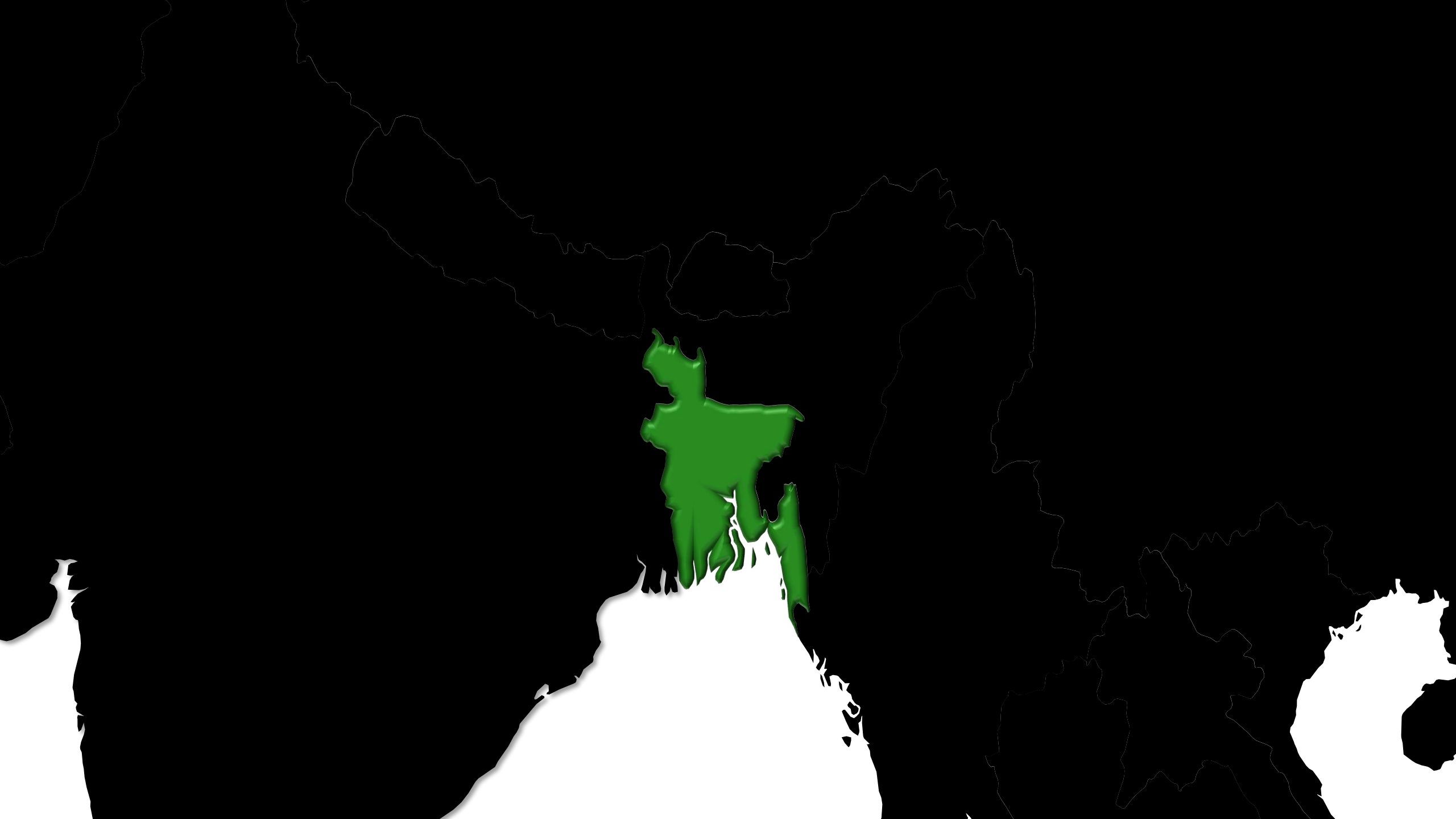
# Addressing Prematurity Challenges in Bangladesh



Sheikh Russel SCANU

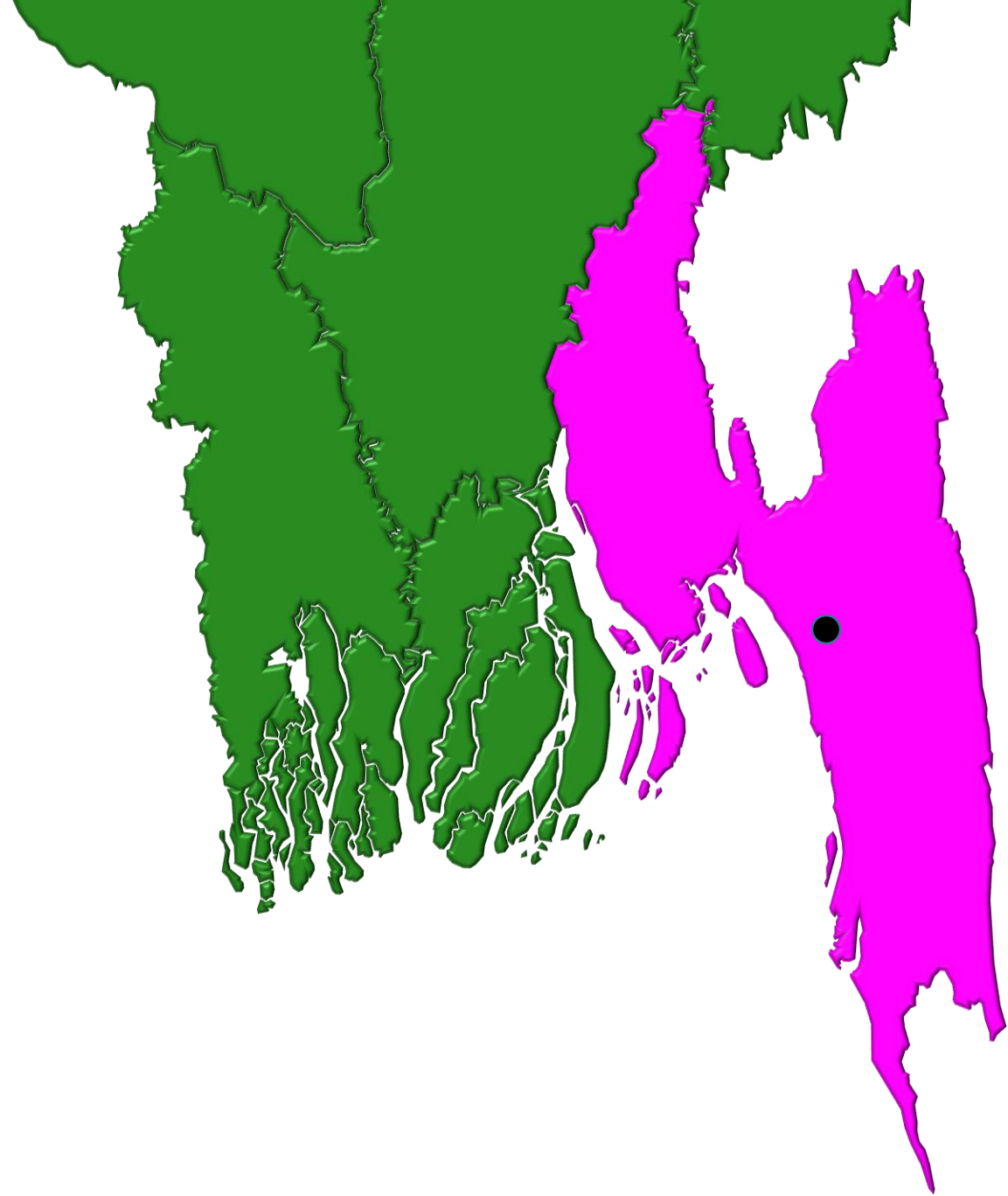
Chittagong Medical College Hospital





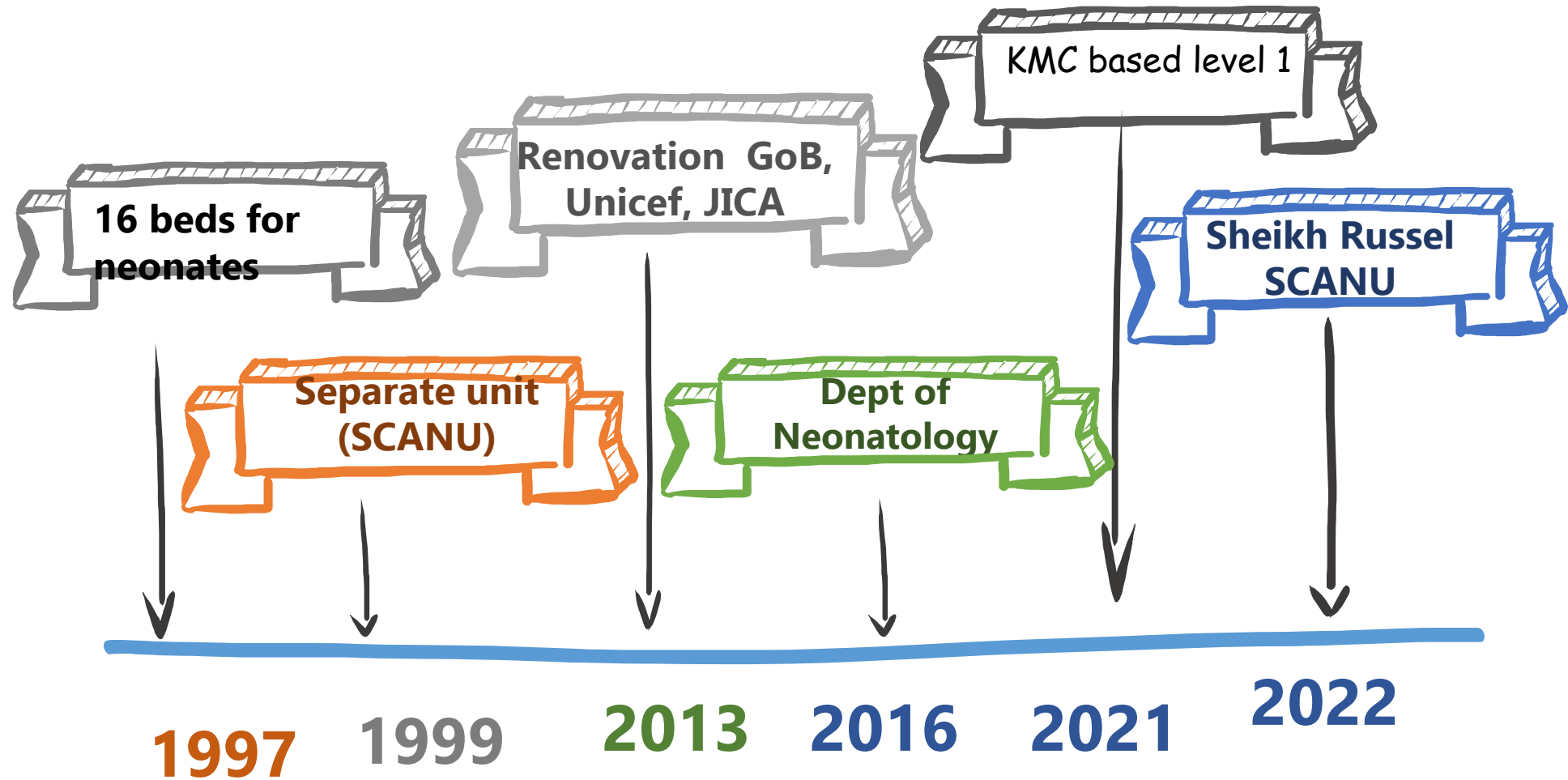








# SCANU establishment





ওয়ার্ড - ৩২

# শেখ রাসেল স্ক্যানু

## Department of Neonatology

### চট্টগ্রাম মেডিকেল কলেজ হাসপাতাল



### স্বাগতম



**আপনি জানেন কি?**

স্ক্যানুতে অধিক সংখ্যক  
লোকের সমাগম হলে  
নবজাতকের মৃত্যু  
ঝুঁকি বাড়ে।

### সতর্কতা



আমাদের পূর্ব অভিজ্ঞতা থেকে বলছি....

যে বাচ্চার সাথে  
বেশি লোকজন থাকে  
ইনফেকশনের কারণে  
সেই বাচ্চা বেশি মারা যায়।

থেকে সতর্ক থাকুন  
আপনি সতর্ক হলে  
সময় সময়  
সেখো দিন।





Inauguration by Honorable Minister, 2014

## Visit Honorable Minister of Health & FW, 2018



Honorable Minister and DG health 2022





Visit by Unicef



## World Prematurity day is Observed in Bangladesh Since 2012



**15**  
years

World  
Prematurity  
Day 17 November

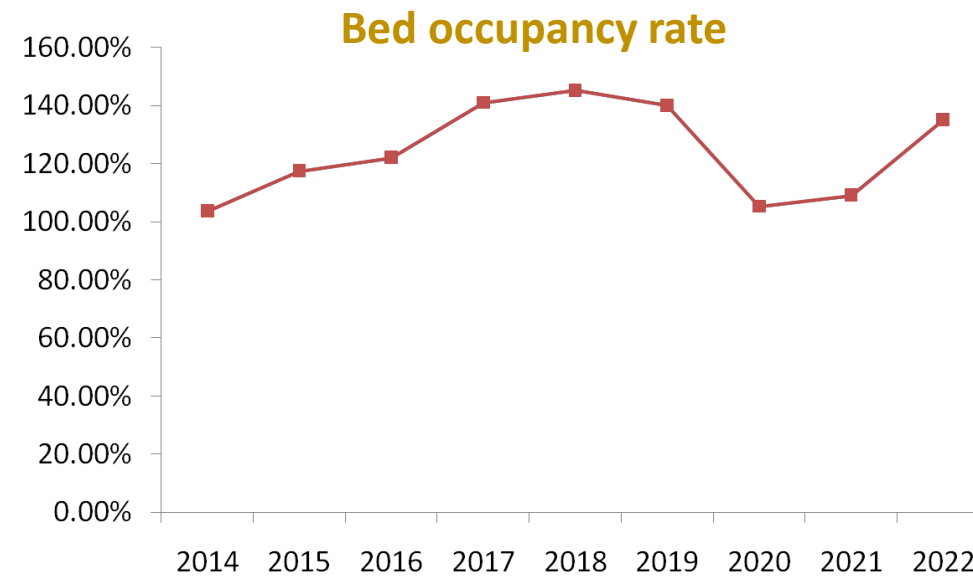
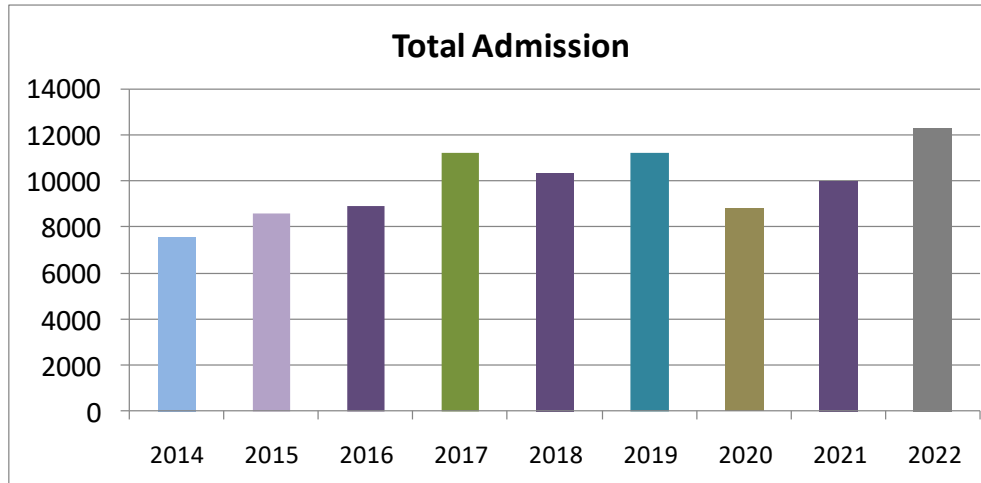
Baby in 10 is born premature. Worldwide.

**small actions  
BIG IMPACT:**  
immediate skin-to-skin care  
for every baby everywhere

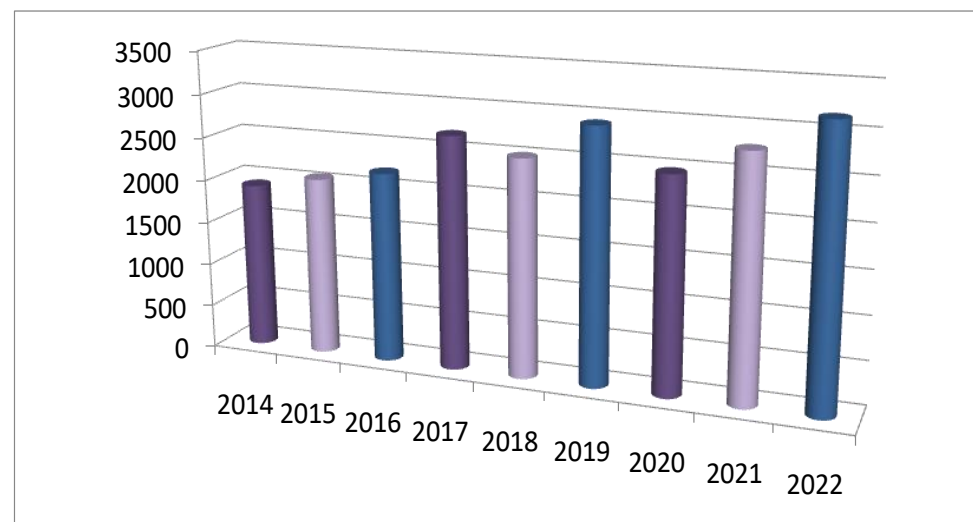
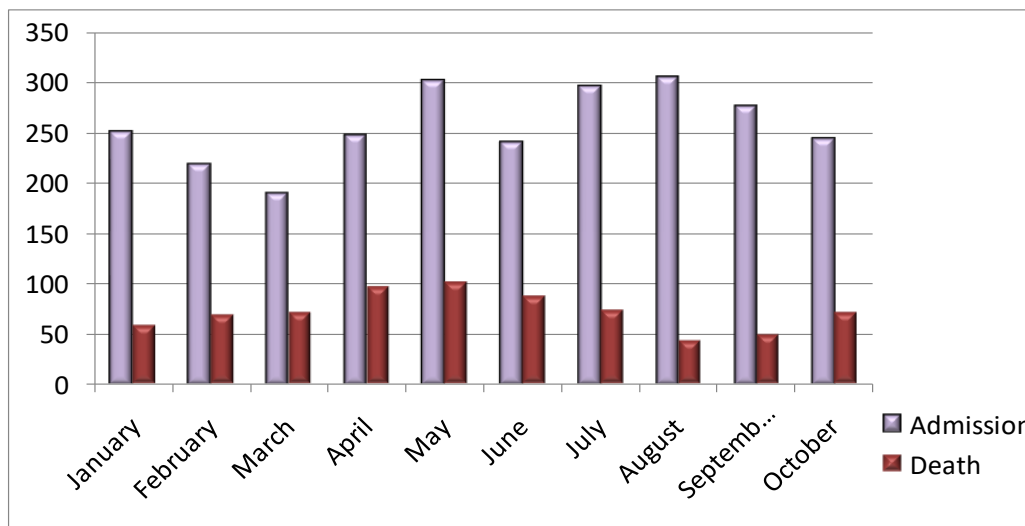
শেখ রাসেল স্ক্যানু  
**Department of Neonatology**  
চট্টগ্রাম মেডিকেল কলেজ হাসপাতাল



# Trends of Admission in Last 9 Years



# Trends of Preterm Admission



# Preterm Care in Level III



# Management at a Glance



# Continuous Positive Airway Pressure (CPAP)



# Care in Level III



**Trophic feeding**



**KMC at level III**

# Kangaroo Mother Care (KMC) based Level I



কিভাবে নবজাতককে  
ক্যাঙ্গারু  
মাদার কেয়ার  
দেবেন?

- \* নবজাতককে টুপি, ডায়াপার ও মোজা পরিয়ে দিন।
- \* এরপর নবজাতককে মায়ের বুকের মাঝখানে রেখে ভালোভাবে কাপড় দিয়ে বেঁধে রাখুন।
- \* নবজাতকের মাথা একদিকে কাত করে কোমর ও হাত নমনীয়ভাবে মায়ের বুকের ওপর রাখুন।

শেখ হাসিনা মেডিকেল কলেজ হাসপাতাল

# Health Education Regarding Breast Milk Expression

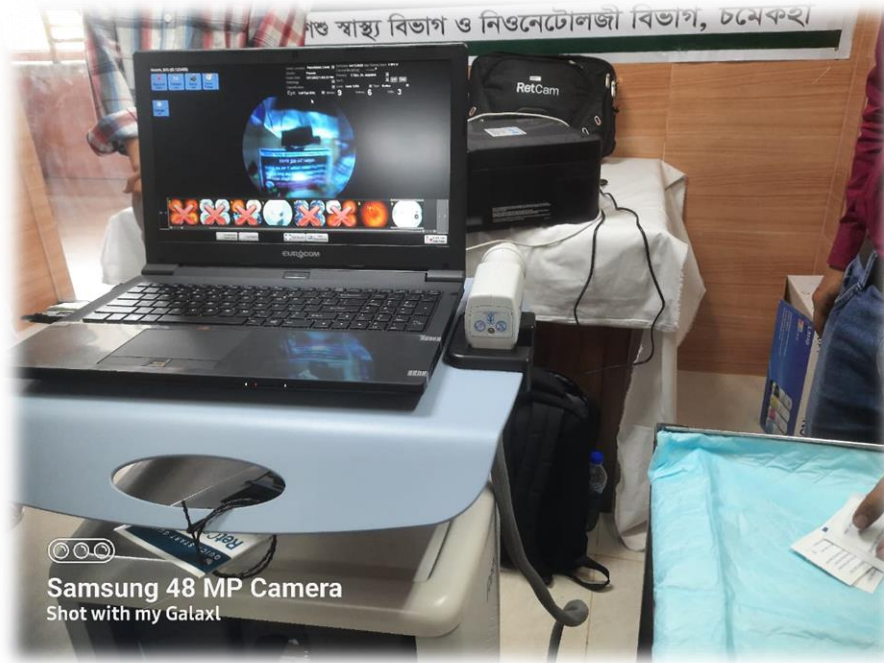




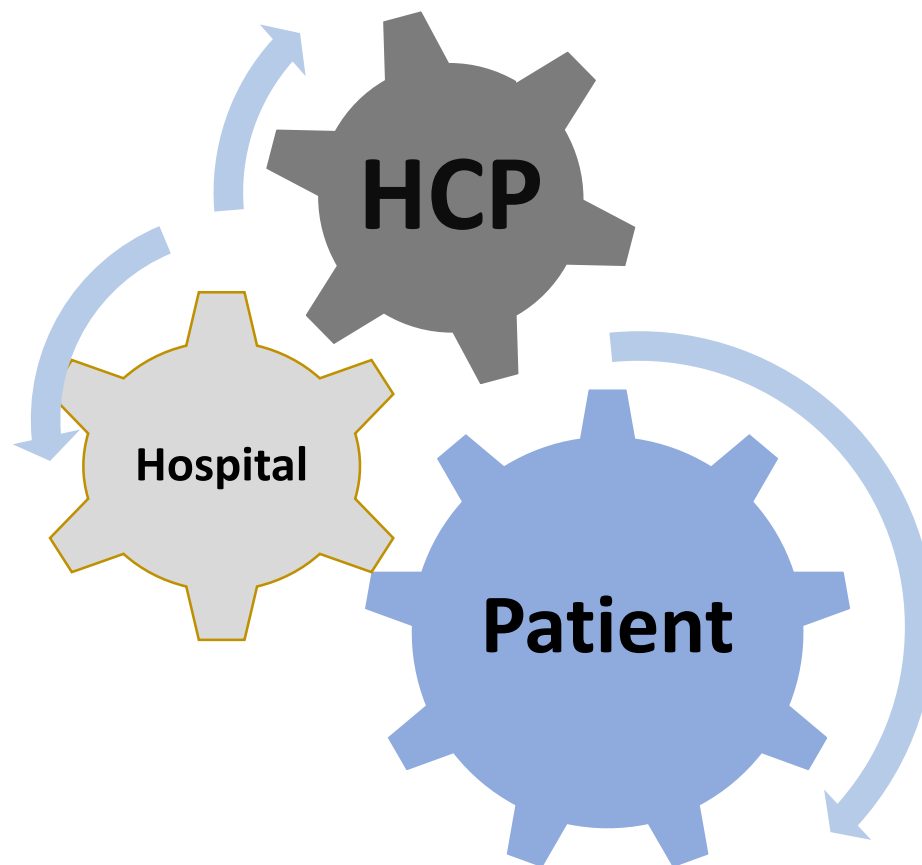
# Audio-visual Counseling



# ROP Screening by RetCam



# Challenges



# Health Care Provider



- Inappropriate ratio (Neonate: Nurse=10:1)
- Rotational workforce



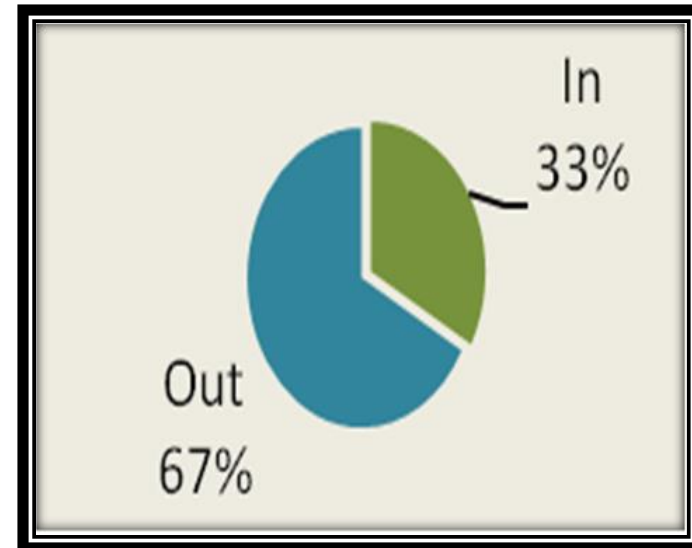
# Hospital Policy

- Admit all sick neonates
- Bed sharing



## Patient Factor

- Out born (67%)
- Very sick and referred from distant place
- Mother admitted in separate hospital



# Challenges



**Asphyxiated and preterm neonates referred from other hospitals**

# Challenges



**Lack of Facilities to Screen Birth Defect**



**Abandoned Neonates**



# Standard vs. Practice

## One Neonate in Single Cot



## Cot Sharing



# Standard vs. Practice

## Micro Burette Set



## Syringe Pump



# Standard vs. Practice

## Traditional Oxygen Hood



## Bubble CPAP



# Standard vs. Practice

## Conventional Phototherapy



## LED Phototherapy



# Tiny warriors to Rising Stars

1 month



3 months



11 months

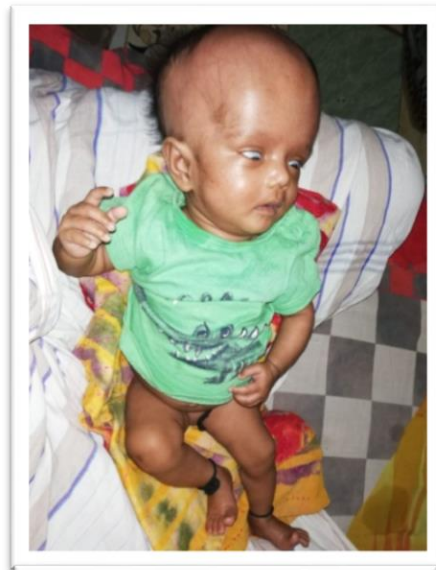


29 wk, 700g,  
proven sepsis

# Tiny warriors to Rising Stars



**29 wk, 1200g,  
Rh incompatibility,  
ROP, Hydrocephalous**



THANK YOU



# Questions & Answers

Please type your questions in the Q&A box.





# Stay engaged

Thank you for joining us today!

Follow the small and sick newborn care series: <https://bit.ly/SSNB2023>

Visit the website: <https://www.qualityofcarenetwork.org/about>

