

## SMALL AND SICK NEWBORN CARE AT PRIMARY & SECONDARY HEALTHCARE FACILITIES IN PAKISTAN:

### DEVELOPMENT OF NATIONAL GUIDELINES & TRAINING PACKAGE

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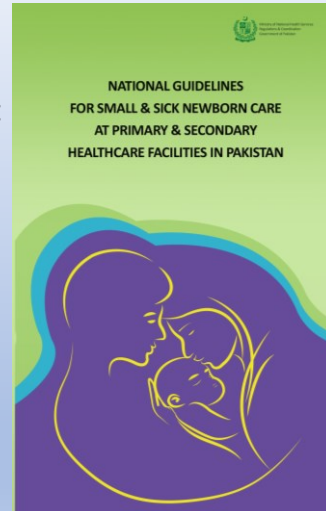
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## INTRODUCTION

- Total population (2023) = 241.49 million (24 crore)
- Annual number of births in Pakistan (2020) = 6.046 million
- Annual number of deaths in Pakistan (2021) = 2,51,000
- NMR of Pakistan 39/1000 LB (2021)
- 70% conducted by skilled birth attendants (2020)
- 66% conducted in institutions (2020)
- Access to skilled birth attendant in urban = 70%
- Access to skilled birth attendant in rural = 30%
- Neonatal deaths from asphyxia.....25%
- Serious neurological sequelae ..... 25%

- *Levels & Trends in Child Mortality: Estimates Developed by the UN Inter-agency Group for Child Mortality Estimation Report 2022; UNICEF 2023*
- *United Nations Children's Fund, The State of the World's Children 2021: On My Mind – Promoting, protecting and caring for children's mental health, UNICEF, New York, October 2021.*

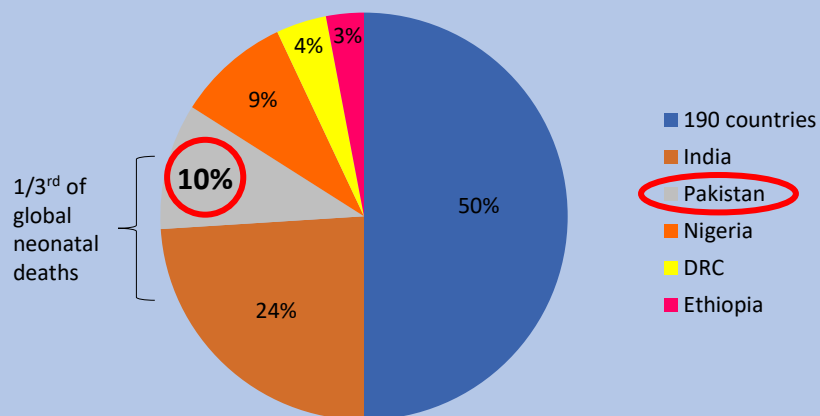
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## TARGETS SET THROUGH SDGs & ENAP

- SDG 3.2                    12/1000 lb by 2030
- ENAP                        10/1000 lb by 2035

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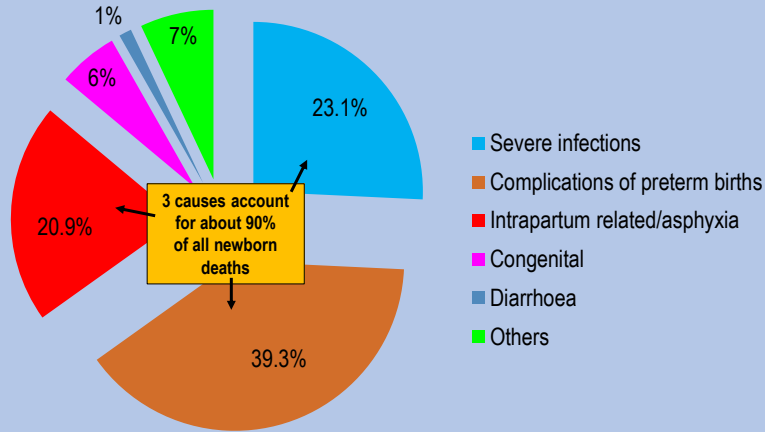
## CONTRIBUTION IN NEONATAL DEATHS: 2016 (n = 2.6 m)



• Levels & Trends in Child Mortality: Estimates Developed by the UN Inter-agency Group for Child Mortality Estimation 2017

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## MAJOR CAUSES OF NEWBORN DEATHS: Situation in Pakistan 2015



• Maternal & newborn health disparities Pakistan: Unicef 2015

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## National Policy Progress: 2019 ENAP tracking report

	AFG	BAN	BHU	IND	MAL	NEP	PAK	SRL
NNAP	Green	Green	Green	Green	Green	Green	Red	Green
NNMR reduction target	Green	Green	Green	Green	Green	Green	Green	Green
SBR reduction target	Red	Green	Green	Green	Green	Green	Red	Green
EPRP includes NBH	Green	Green	Green	Green	Green	Green	White	Green
PNDR system in place	Yellow	Green	Green	Yellow	Green	Green	Yellow	Green
QI process (Perinatal) in place	Yellow	Green	Green	Green	Yellow	Green	Green	Green
Care of Small & Sick NB strategy	Green	Green	Red	Green	Red	Green	Red	Green
NBH indicators in HMIS	Red	Yellow	Green	Red	Red	Red	Red	Green

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## AIM

- To achieve target set by ENAP
- To standardize and facilitate healthcare workers at Primary & Secondary Healthcare facilities in management of small & sick newborns
- Part of effort to accelerate progress on implementation of UHC-BP at country level

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## INITIATIVE & DEVELOPMENT PARTNERS

- Ministry of National Health Services
- Neonatology Group of PPA
- Pakistan Pediatric Association
- WHO Pakistan
- UNICEF Pakistan

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## TIMELINE FOLLOWED

- Guideline book
  - Initiated in May-June 2022
  - Guidelines completed in June 2023
  - Published and launched on July 22, 2023
- Training manual
  - Curriculum and agenda for training developed
  - First test 'Training of Trainers' conducted on May 9-11, 2023, in Lahore attended by senior clinicians from all regions of Pakistan
  - Second test ToT done on 22-24<sup>th</sup> August in Karachi
  - Curriculum and agenda for training finalized
  - Training manual for facilitators being organized
  - Regular trainings initiated in November 2023

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## GUIDELINES DEVELOPMENT PROCESS

- Neonatology Group of PPA given the task of development of guidelines
- Team of Neonatologists formulated:
  - International
  - National
    - Balochistan
    - Federal, GB & AJK
    - KP
    - Punjab
    - Sindh
- Divided into:
  - Editors
  - Associate editors
  - Regional focal persons
  - Contributors

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- Khyber Pakhtunkhwa Prof. Saima Ali
- Punjab Dr. Sikandar Hayat
- Sindh Dr. Muhammad Sohail Salat
- Federal Dr. Shireen Gul

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## CONTRIBUTORS

- Total contributors = 55
- Qualified neonatologists from all regions of Pakistan
- Pediatricians with special interest in neonatology (where qualified neonatologists were not available)
- Public health specialists from WHO & UNICEF
- Chapters divided in contributors

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## CONTRIBUTION OF CHAPTERS FROM REGIONS & ORGANIZATIONS

• Development partners & experts	
• Prof. Z. A. Bhutta	1
• Prof. of Obs & Gynae (Antenatal care)	1
• WHO	1
• UNICEF	2
• International	3
• Balochistan	3
• Federal	11
• KP	2
• Punjab	32
• Sindh	16

**Total chapters 72**

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## FORMAT OF GUIDELINE BOOK: Sections

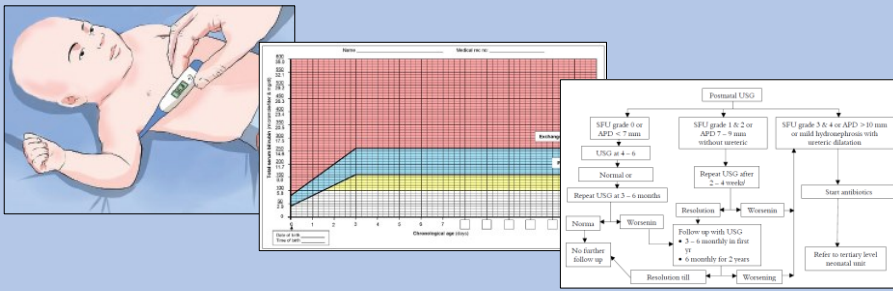
Section 1 Background & framework	• Epidemiology, SDG, ENAP, Quality assurance, Antenatal care, Standards for setting up neonatal units
Section 2 General guidelines	• General guidelines e.g., Dress code, history, examination, neonatal transport, admission & discharge procedures etc.
Section 3 Management of specific problems	• Clinical guidelines e.g., hypoglycemia, hypocalcemia, oxygen therapy, surfactant therapy, infections etc.
Section 4 Common procedures	• Neonatal procedures e.g., temperature measurement, lumbar puncture, exchange transfusion, I/V cannulation etc.

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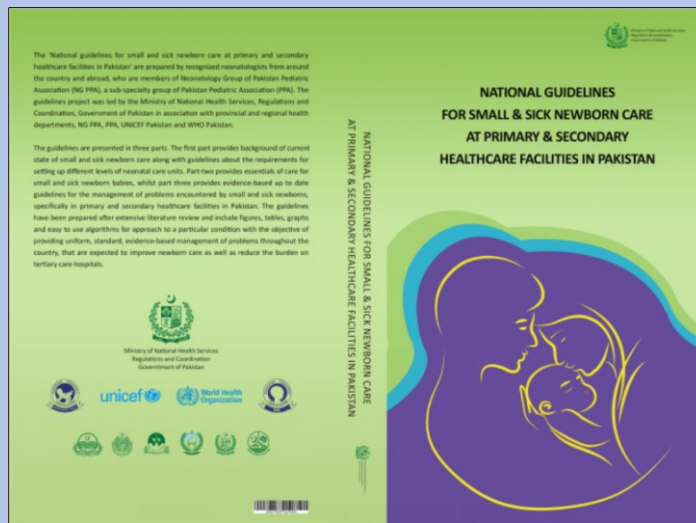
# DESIGNING & COMPOSING

- Size of book: Letter size 8.5 x 11 inches
- Graphic designers involved for pictures, figures and diagrams
- Composing by professional composer
- Printed by printers of UNICEF & WHO



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# COVER DESIGN



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# SECTIONAL COLOR THEMES: Section 1

## Section 1 Background & Framework

**Sustainable Development Goals and Newborn Health Status in Pakistan** Chapter 2

The vision regarding newborn health in Pakistan... The Sustainable Development Goals (SDGs) are a set of 17 global goals that were adopted by the United Nations in 2015. The goal related to newborn health is SDG 3.6, which aims to reduce the global road traffic deaths and injuries by half by 2020. The goal is to be achieved by 2020, and the target is to reduce the global road traffic deaths and injuries by 50% by 2020.

**Table 2.1: Dimensions of maternal mortality**

Maternal mortality	Essential Assessment Services/Accessibility	Essential Assessment Services/Availability
• Maternal mortality ratio	• Essential Assessment Services/Availability	• Essential Assessment Services/Availability
• Stillbirths	• Lack of timely ANC visits	• Lack of timely ANC visits
• Incomplete abortion	• Home delivery	• Home delivery
• Unassisted vaginal delivery	• Lack of timely referral	• Lack of timely referral
• Incomplete abortion	• Lack of timely referral	• Lack of timely referral
• Unassisted vaginal delivery	• Lack of timely referral	• Lack of timely referral
• Incomplete abortion	• Lack of timely referral	• Lack of timely referral
• Unassisted vaginal delivery	• Lack of timely referral	• Lack of timely referral

# SECTIONAL COLOR THEMES: Section 2

## Section 2 General Guidelines

**General Guidelines for Management of Head and Neck Injuries in Children and Adolescent Patients** Chapter 21

**13. Management of head and neck injuries**

- Primary survey
- Secondary survey
- Triage
- Resuscitation
- Definitive care
- Discharge

**14. Management of facial injuries**

- Facial trauma
- Facial fractures
- Facial lacerations
- Facial contusions
- Facial abrasions
- Facial bruising
- Facial swelling
- Facial pain
- Facial deformity
- Facial disfigurement
- Facial dysfunction
- Facial infection
- Facial bleeding
- Facial bruising
- Facial swelling
- Facial pain
- Facial deformity
- Facial disfigurement
- Facial dysfunction
- Facial infection
- Facial bleeding

**15. Management of neck injuries**

- Neck trauma
- Neck fractures
- Neck lacerations
- Neck contusions
- Neck abrasions
- Neck bruising
- Neck swelling
- Neck pain
- Neck deformity
- Neck disfigurement
- Neck dysfunction
- Neck infection
- Neck bleeding
- Neck bruising
- Neck swelling
- Neck pain
- Neck deformity
- Neck disfigurement
- Neck dysfunction
- Neck infection
- Neck bleeding





## FORMAT OF TRAINING

### 3-day training for doctors of Primary & Secondary Healthcare facilities in Pakistan

#### Day-1

- Neonatal resuscitation

#### Day-2

- Essential newborn care
- Prevention of infections
- Neonatal transport

#### Day-3

- Oxygen therapy
- NIV
- nHFT
- nCPAP
- CMV
- Approach to respiratory failure

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## Summary

- Initiative of MoNHS, supported by PPA, UNICEF Pakistan, WHO Pakistan
- Prepared by members of Neonatology Group of PPA
- The guidelines are expected to standardize and facilitate healthcare workers at Primary & Secondary Healthcare facilities in management of small & sick newborns
- Book took about one year to prepare
- Training curriculum developed, two batch of 50 trainers trained & regular trainings expected to start in October 2023
- **NEWBORN CARE IS EXPECTED TO IMPROVE SIGNIFICANTLY IF GUIDELINES ARE FOLLOWED & SUSTAINABILITY ENSURED BY THE GOVERNMENT. Otherwise, it will be just another book on the shelf of a library.**

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## ACKNOWLEDGEMENTS FROM THE EDITORS

- MoNHS Government of Pakistan
- Pakistan Pediatric Association
- UNICEF Pakistan
- WHO Pakistan
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- Regional focal persons (Shireen, Saima, Bashir, Sohail, Sikandar)
- Contributors (All 55)
- Graphic designers (Mrs. Fasiha, Ms. Sameen)
- Composer (Anil)
- Printer (Pictorial Printers)
- **Better halves**

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# THANK YOU

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