Quality, Equity, Dignity
A Network for Improving Quality of Care
for Maternal, Newborn and Child Health

Addressing inequalities through the MPDSR system: Lessons learned from Sierra Leone

Tuesday, 8 March 2022
1pm Freetown, 2pm Geneva, 6:30pm New Delhi

Addressing inequalities through the MPDSR system: Lessons learned from Sierra Leone

INTRODUCTION | 8 March 2022

Ms Francesca Palestra,
Technical Officer, Maternal Health Team
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WHO Geneva

Addressing inequalities through the MPDSR system: Lessons learned from Sierra Leone

Introduction: Ms Francesca Palestra, Technical Officer, Department of Maternal, Newborn, Child and Adolescent Health and Ageing, WHO Geneva

Part 1: Sierra Leone's experience in implementing the MPDSR system:
Dr Francis Moses, Programme Manager, Reproductive Health and Family Planning Programme
Ministry of Health and Sanitation, Sierra Leone

Part 2: Panel Discussion:
Matron Margaret Mannah, Programme Manager, National Quality Management Programme
Dr James Squire, Programme Manager, National Disease Surveillance Programme
Ministry of Health and Sanitation, Sierra Leone

Questions & Answers

Closing remarks: Ms Francesca Palestra, WHO Geneva

Addressing inequalities through the MPDSR system: Lessons learned from Sierra Leone

QUESTIONS

For the Questions & Answers we invite questions from all participants.

Please place your questions in the CHATBOX

Country Experience:
Addressing Preventable Maternal and Perinatal Deaths During Pregnancy and Childbirth by Implementing The Maternal And Perinatal Death Surveillance And Response (MPDSR) System

Dr Francis Moses
Program Manager for Reproductive Health and Family Planning
Ministry of Health and Sanitation, Sierra Leone

MINISTRY OF HEALTH AND SINITATION
REPUBLIC OF SIERRA LEONE

Content

Key Health and Demographic Statistics

7.5+ Million
Population

51 Hospitals

1,250+
Primary Health Care Units

0.34/1000
Doctors/Nurse/Midwives Density

250,000+
Annual Deliveries

250,000+
Estimated number of Live Births

Key Maternal and Child Health Statistics

ANC1 (98%)
ANC4 (76%)

83%
Institutional Birth Rate

87%
Skilled Birth Attendant Rate

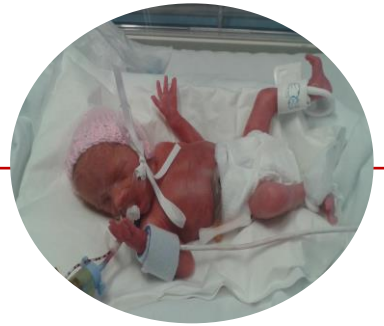
54.5
Early Initiation of Breast Feeding

81%
Newborn Dried After Birth

21%
Modern Contraceptive prevalence rate

Key Impact Indicators

717/100,000
Maternal Mortality Rate

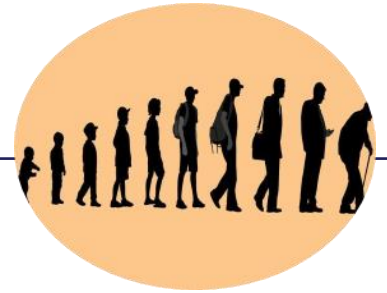


24/1000
Stillbirth Rate

31/1000
Neonatal Mortality Rate

122/1000
Under-five Mortality Rate

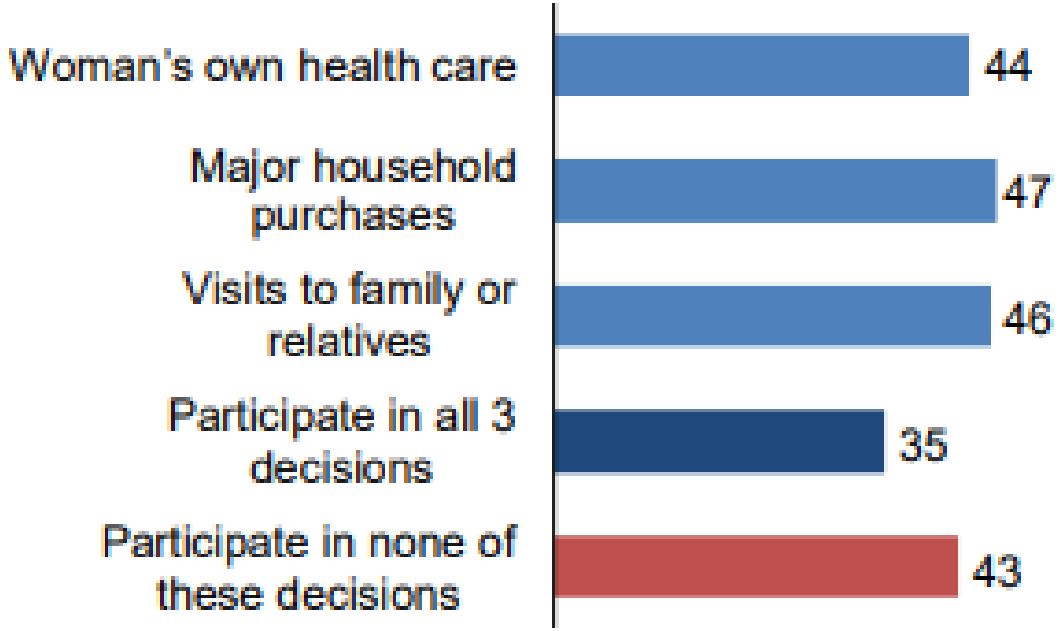
106/1000
Adolescent Birth Rate



54.3
Life Expectancy at Birth

Gender Related Statistics

Percentage of married women participating in decision making



Percentage of women participating in decision Making for Family Planning among current user of FP

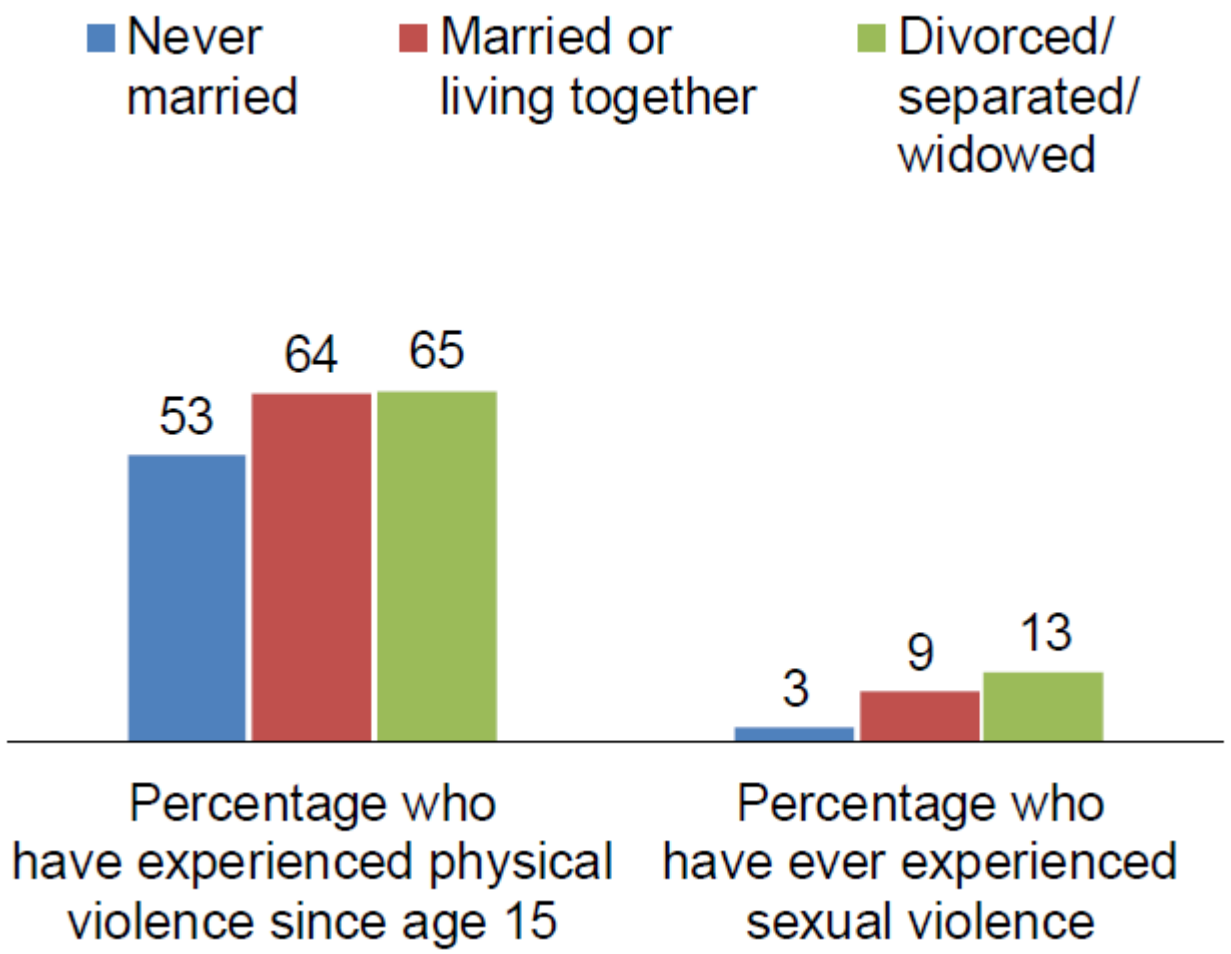
Background characteristic	Mainly wife	Wife and husband jointly	Mainly husband	
Age				
15-19	55.6	36.8	7.5	0.0
20-24	43.6	38.0	18.4	0.0
25-29	50.6	32.9	16.5	0.0
30-34	46.5	38.1	15.3	0.1
35-39	52.8	35.2	12.0	0.0
40-44	53.3	32.7	13.9	0.0
45-49	46.2	39.2	14.6	0.0
Total	49.7	35.5	14.8	0.0

Key Gender Related Statistics

GBV

Overall, 61% of women aged 15 to 49 have experienced physical, sexual, or emotional violence since age 15.

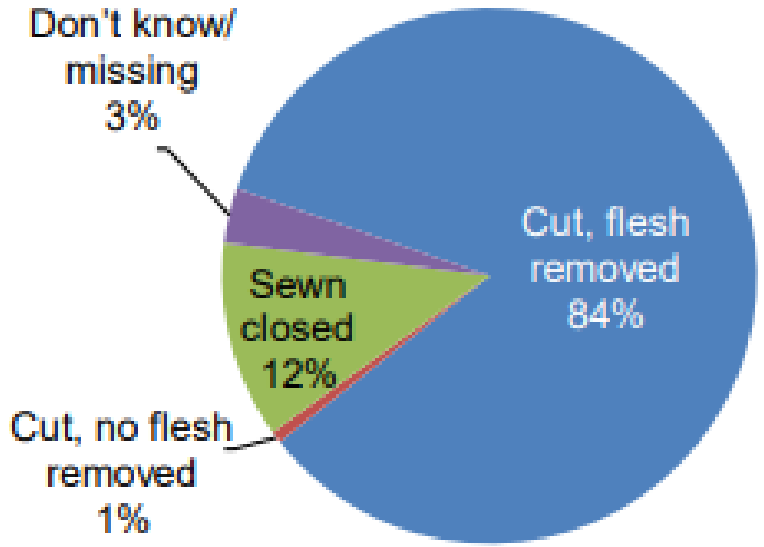
Women's Experience of Violence by Marital Status (DHS 2019)



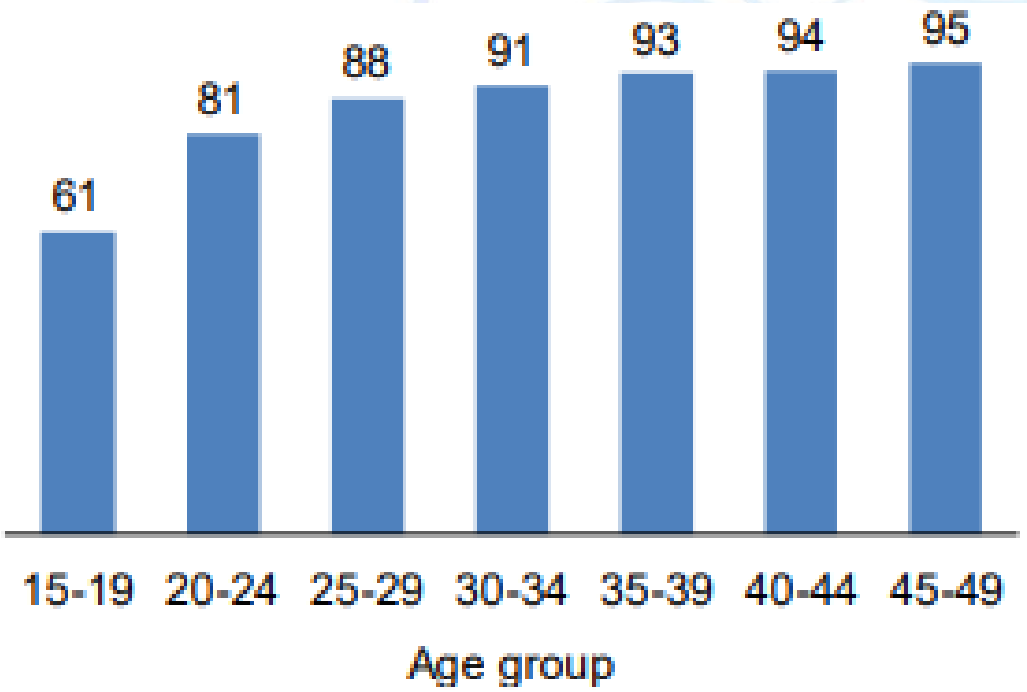
Prevalence of Female Genital Cutting

83% of women age 15-49 are circumcised

Types of female genital cutting



Female genital cutting by age



In Summary

Poor Gender and Women's Empowerment Indicators

Inadequate Skilled Human Resources for Health

Relatively Good Process Indicators for RMNCAH (Good ANC Coverage and Institutional delivery rates)

Poor Outcome Indicators (High Maternal, Perinatal and Child Mortality Rates)

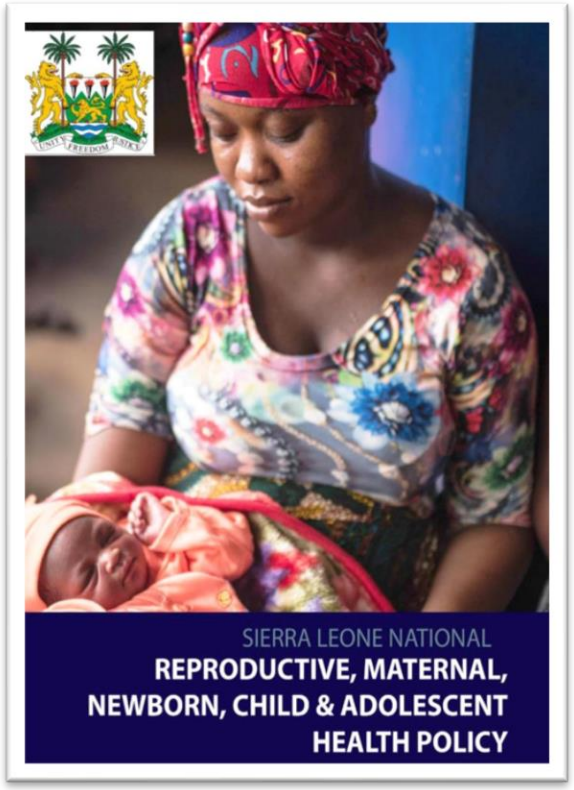
Goals of RMNCAH Investment Case and Midterm Development Plan

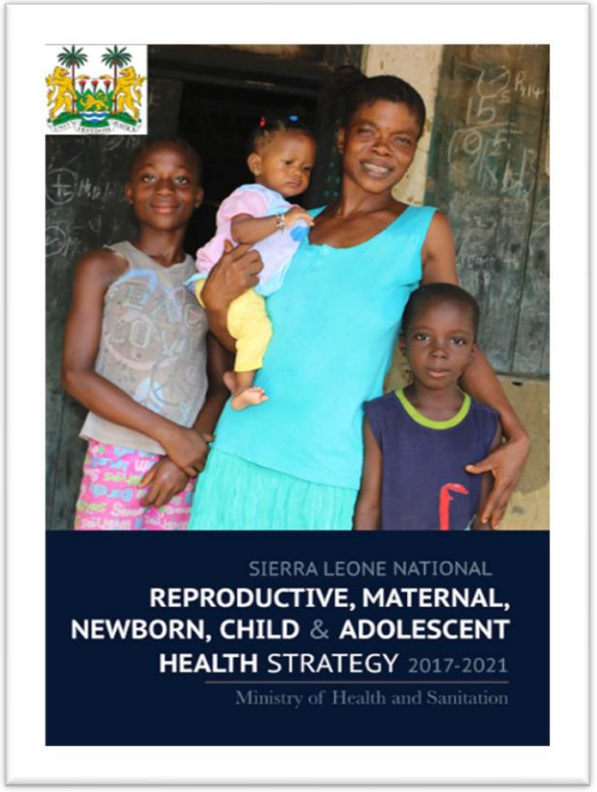
- Achieve **gender equity and equality** in all sectors and enable women to take their rightful position in national development, and political leadership and decision-making;

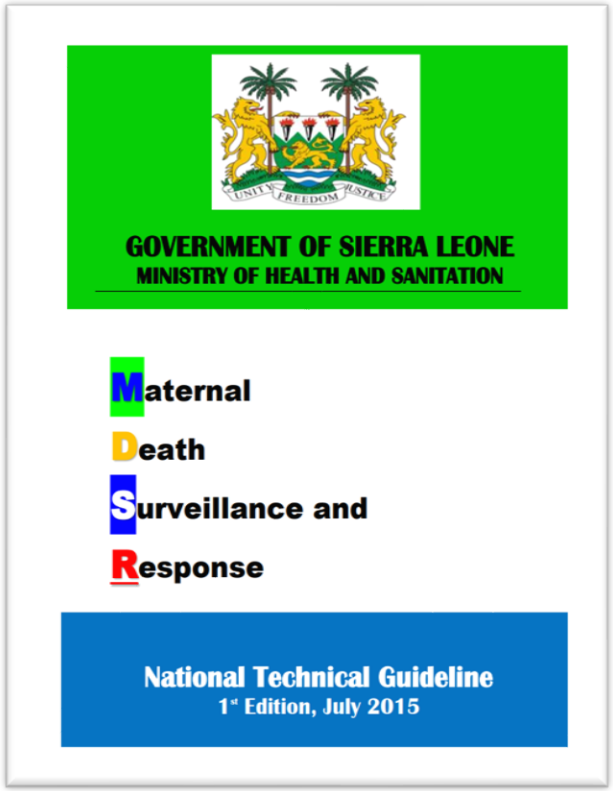
- Eliminate all forms of **GBV and Discrimination**
  - Drastically reduce (**by more than 50 percent**) the number of women experiencing GBV

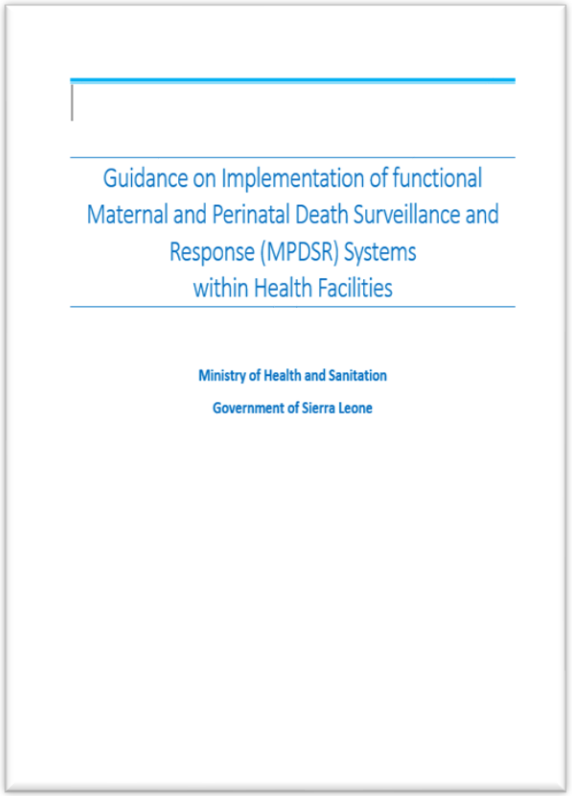
- **Health Systems Strengthening** for RMNCAH
  - Accelerate reduction of preventable deaths of women, children and adolescents and ensure their health and well being.

Institutionalization of MPDSR in Sierra Leone









MPDSR is embedded in Sierra Leone's National Policy and Strategy for RMNCAH

MDSR
Nationwide

PDSR
In 13 Hospitals with SCBUs

MPDSR System Objective

Reporting System

To generate accurate and timely maternal and perinatal mortality data

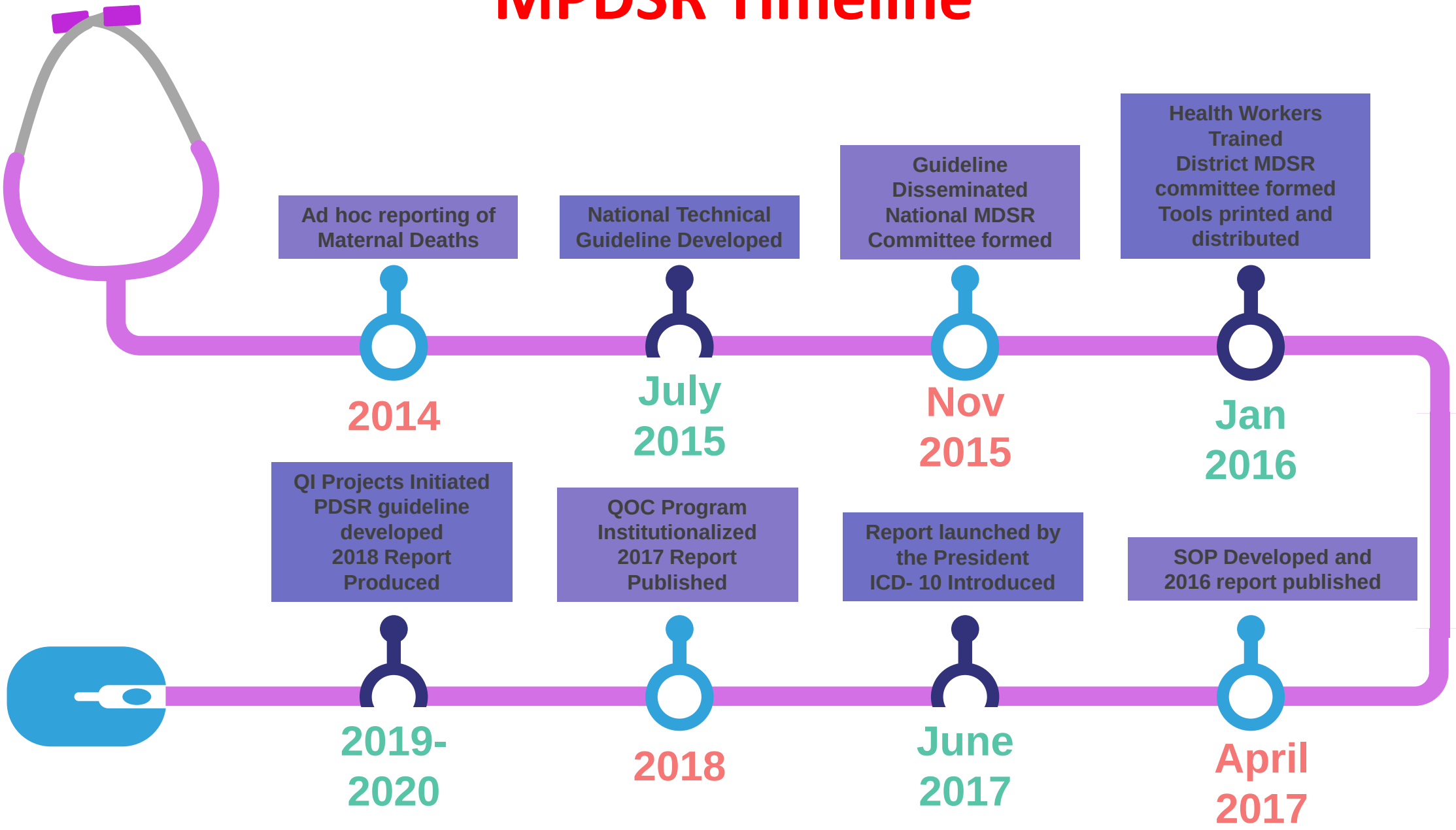
Review System

To **identify** major medical and non-medical causes of maternal and perinatal death.

To formulate appropriate **interventions** to address these causes.

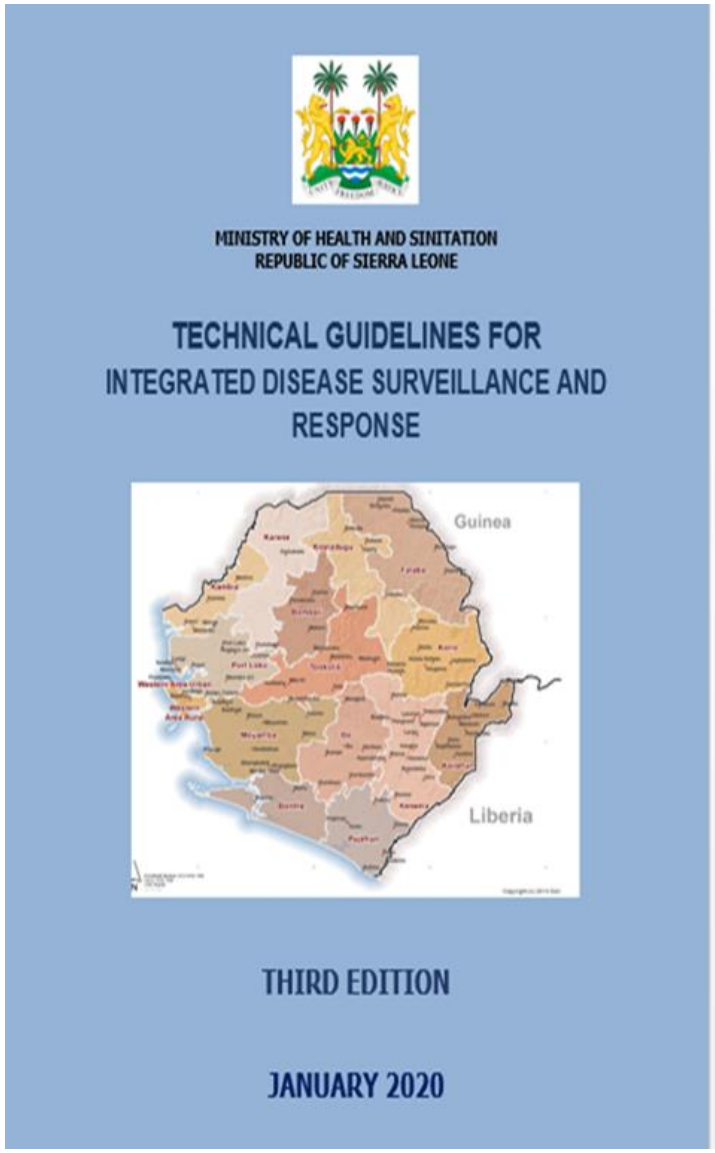
To institute **improvements** in the service delivery system.

MPDSR Timeline



Surveillance System for MPDSR

Maternal and Perinatal Death Screening, Notification and Reporting



	Week:	
Disease	**Cases**	**Deaths**
Acute Flaccid Paralysis		
Acute Viral Haemorrhagic Fever		
Acute jaundice syndrome syndrome		
Adverse events following immunization		
Animal bite – Dog		
Animal Bite – Snake		
Bacterial Meningitis		
Cholera		
COVID-19 (Suspected)		
Diarrhoea with severe dehydration in < 5 years		
Dracunculiasis (Guinea worm)		
Dysentery (Bloody diarrhoea)		
Measles		
Malnutrition severe		
Total Clinical Malaria cases		
Total Malaria cases tested		
Total Malaria cases positive		
Maternal death		
Monkey Pox		
Neonatal Tetanus		
Non-Neonatal Tetanus		
Perinatal and Neonatal Death – Stillbirth		
Perinatal and Neonatal Death - Early Neonatal		
Perinatal and Neonatal Death - Late Neonatal		
Pneumonia severe		
Typhoid Fever		
Yellow Fever		

Monthly Summary Reproductive Health Services - HF3

Facility name and type: **Chiefdom:**

Reporting Officer: **Signature:**

ANC Iron Folic Acid supplementation 3rd repeat			**Outcome of delivery in facility (ref Deliv Reg)**		HPV 1st dose
			Live birth in facility		HPV 2nd dose
ANC deworming medication			Still birth fresh in facility		
ANC 1st visit - screened for syphilis			Still birth macerated in facility		
ANC IPTp 1st dose			Birth weighed within 24 hours		
ANC IPTp 2nd dose			Birth weight under 2.5 kg		Normal Delivery
ANC IPTp 3rd dose			Live birth <=36 weeks gestation		Assisted Vaginal Deli
			Breastfed within 1 hour of birth		Caesarian Section

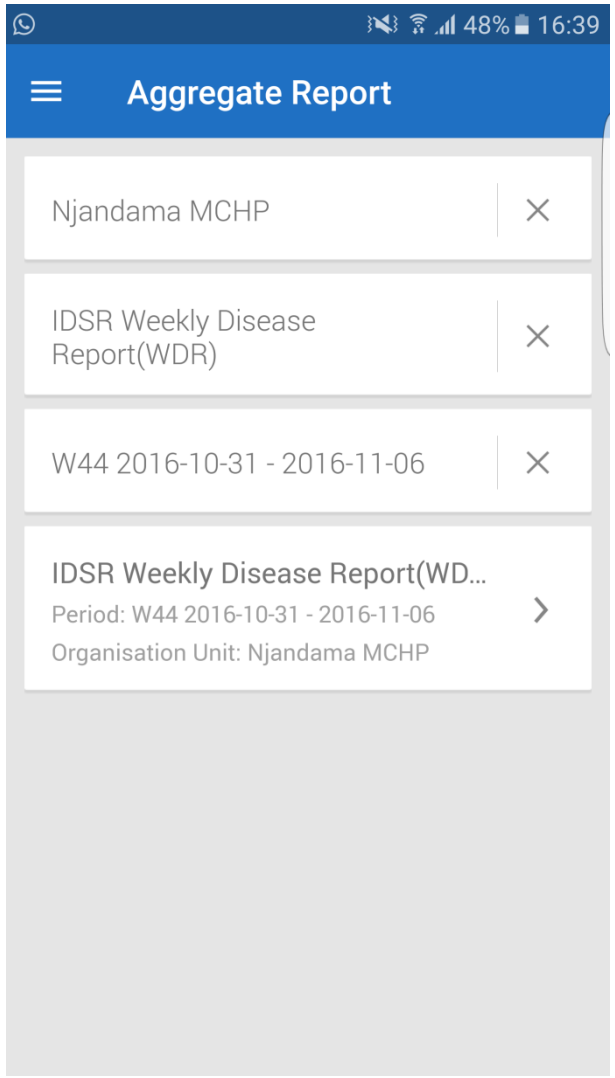
Maternal cases and death in facility	**Cases**	**Death**			
Complications	**All ages**	**10-14 yrs**	**15-19 yrs**	**20-24 yrs**	**25+ yrs**
Obstetric - pregnancy abortive					
Obstetric - pregnancy induced hypertension					
Obstetric - Haemorrhage					
Obstetric - Pregnancy related infection					
Obstetric -Ruptured uterus					
Obstetric - ectopic pregnancy					
Obstetric - obstructed labor					
Indirect - Malaria					
Indirect - Anaemea					
Indirect - other obstetric complications					
Obstetric - Other complications					
Unknown or undetermined					

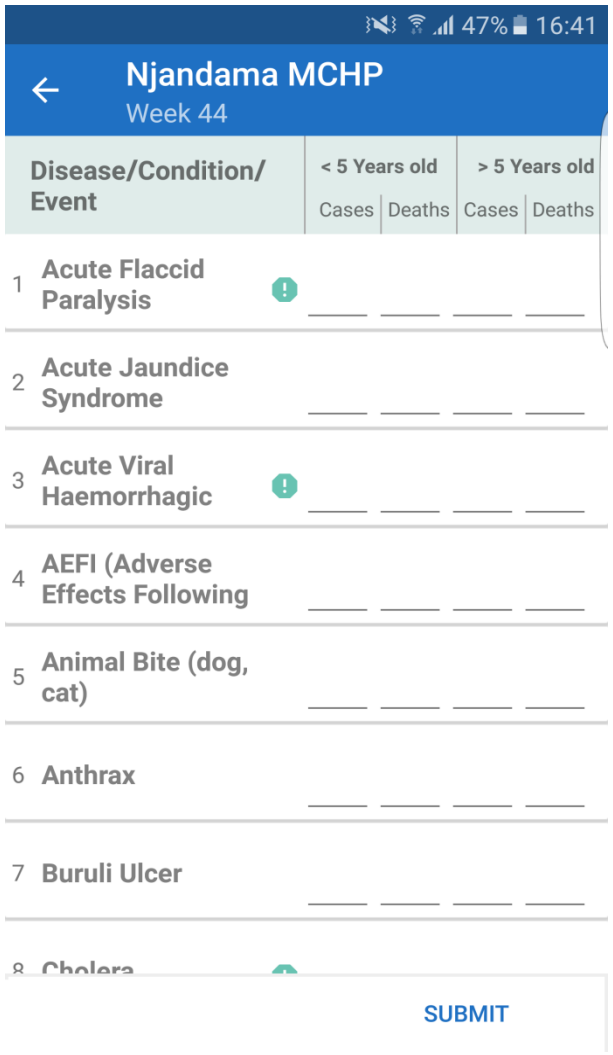
NOTE: Any maternal death in community must reported on form HF4 and NOT here

Misoprostol ONLY
Combined (Misopros
Manual Vacuum Aspi
Surgical (Dilatation an
Postpar
Postpartum woman p
Postpartum woman p

Electronic Data Entry for IDSR

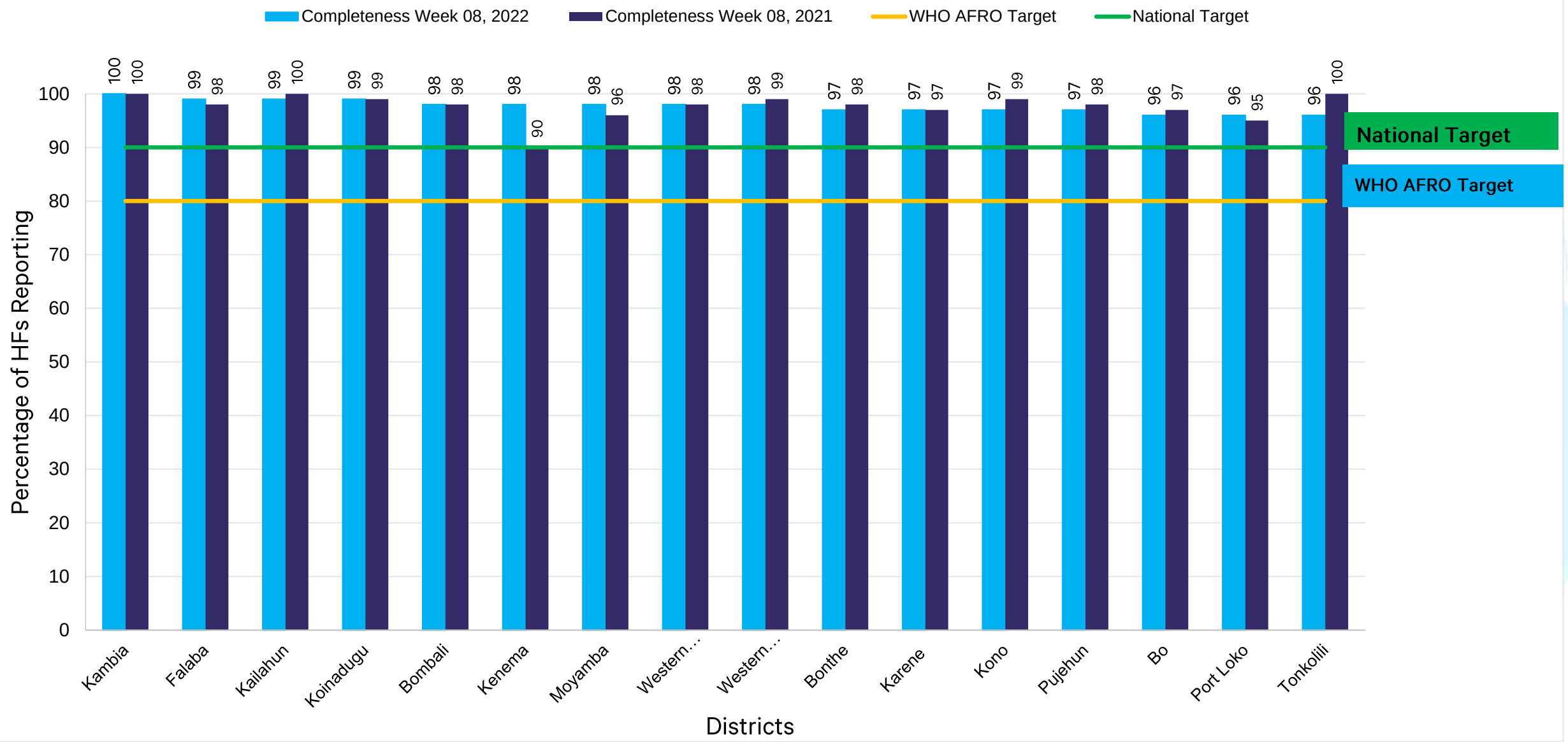
Easier, Faster… Hence more compliance to reporting weekly data





A frontline health worker spends few minutes on Monday morning to transmit weekly surveillance data

Health Facility Weekly IDSR Reporting Rate



Notification and Surveillance for Maternal Death

MMR *(2019 DHS)*: **717** *(CI:615 - 1,099)*
Estimated Number of Maternal Deaths
2,081 (CI:1,785 – 3,190)

2016
706

2017
551

2018
599

2019
581

2020
546

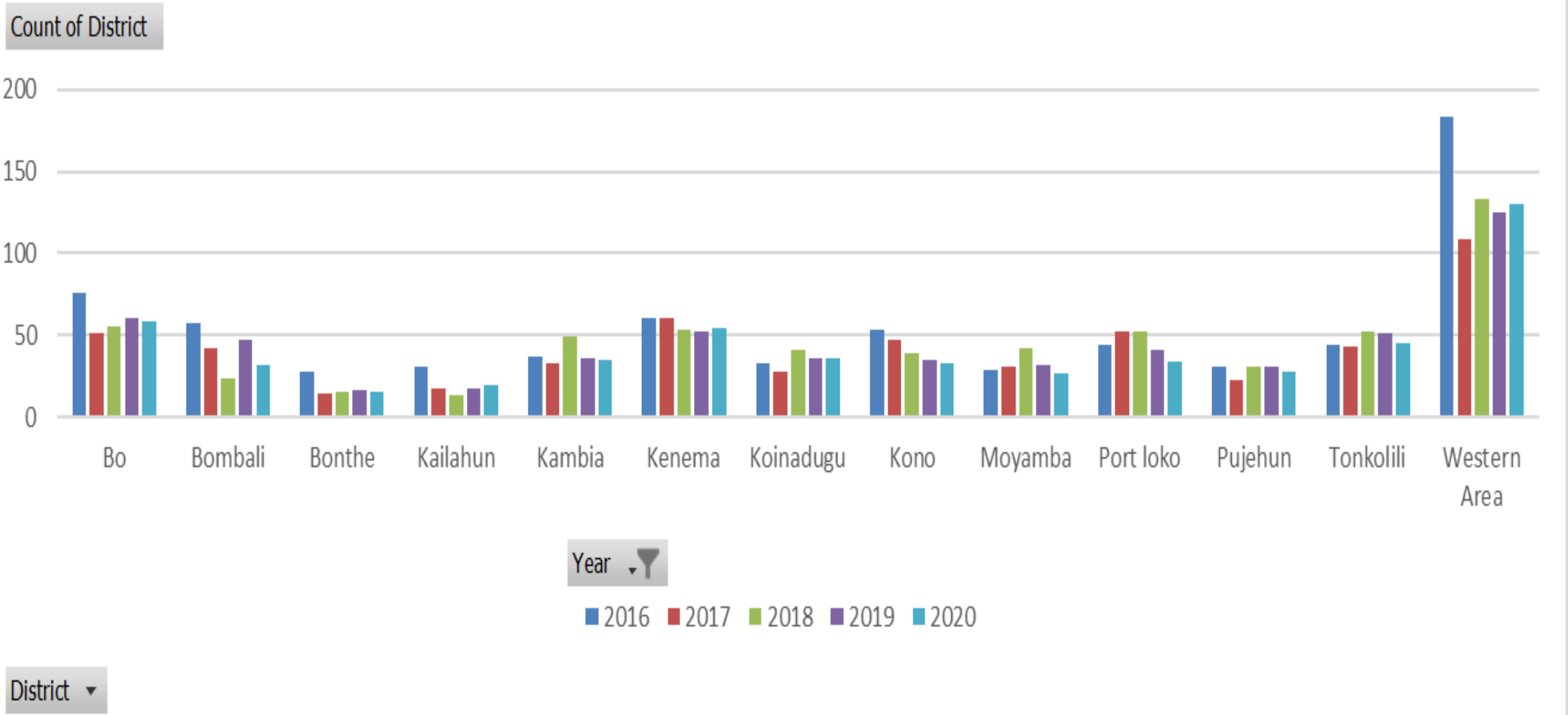
Registered Deliveries on DHIS2 in 2020
221,458

MMR (*Carshon-Marsh et al, 2021*): **510** *(CI:483 -538)*
Estimated Number of Maternal Deaths
1,480 (CI:1,402 – 1,562)

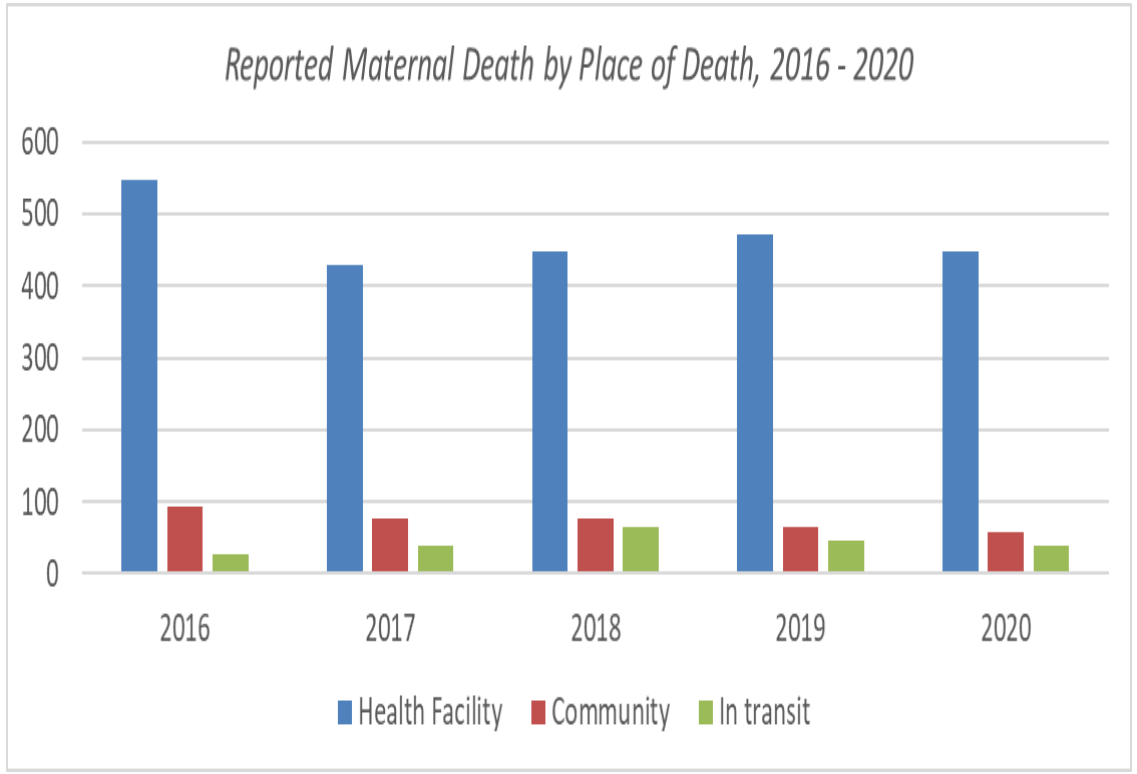
MMR Estimate Carshon-Marsh et al, 2021	Expected Maternal Deaths	Reported Maternal Deathss	% Reported	Unreported (Gap?)
510 *(CI:483 -538)*	*1,480 (CI:1,402 – 1,562)*	546	37% (35% - 39%)	63% (61% - 65%)

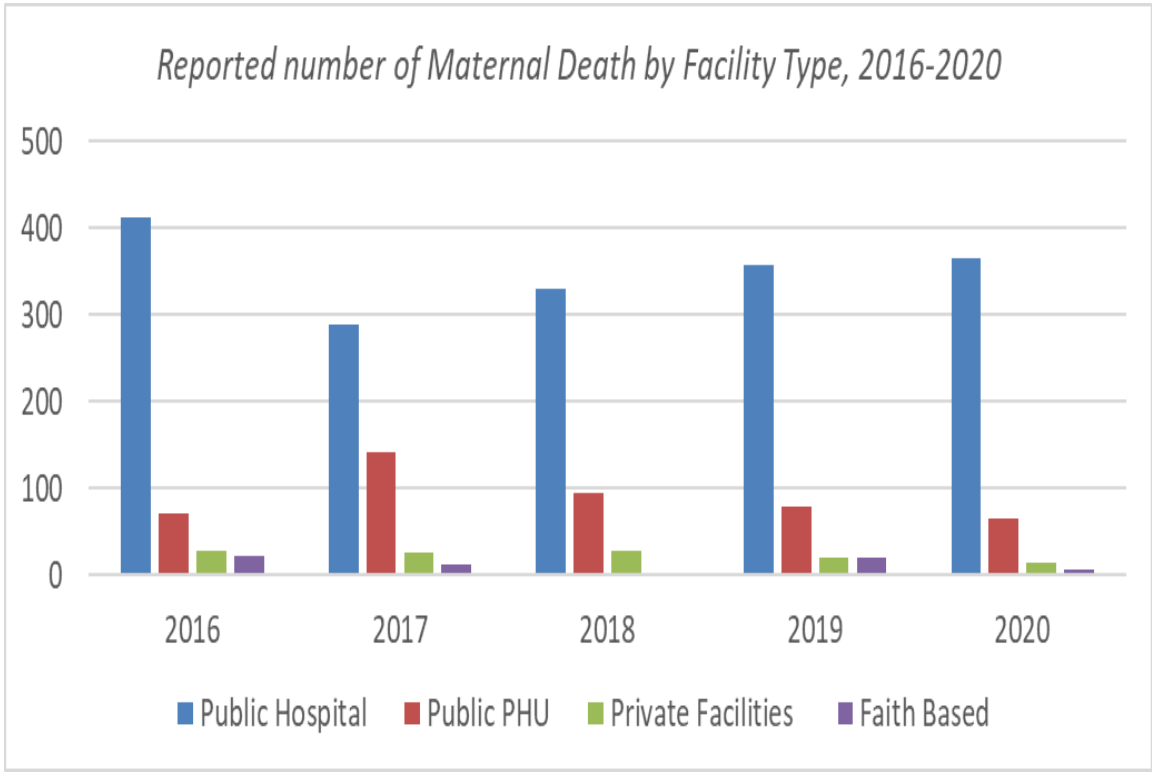
60% of Maternal Deaths unknown

Reported Maternal Death by District (2016-2020)

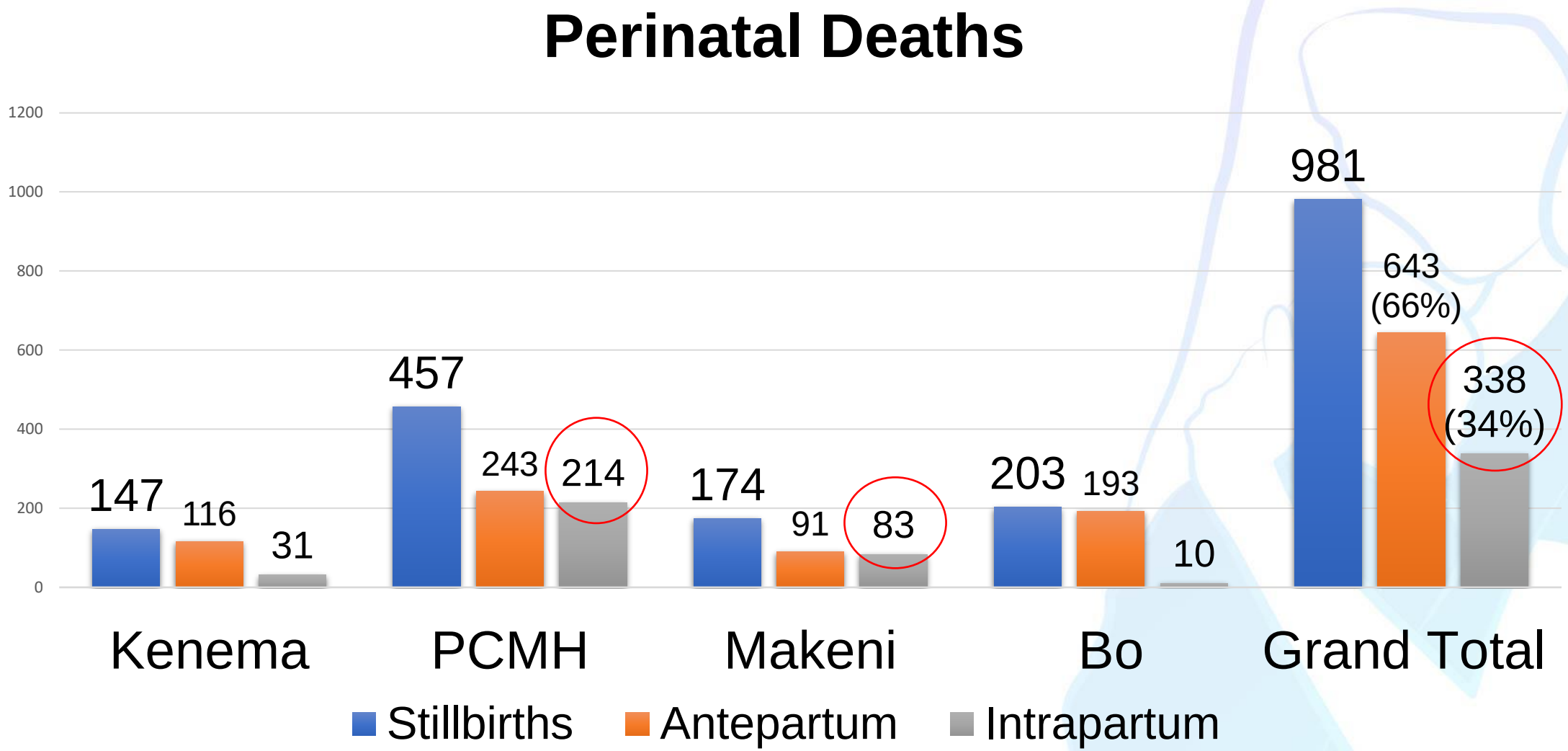


Place of Maternal Death, 2016 - 2020





2021 Data from 4 Hospitals (PCMH, BGH, KenGH, MakGH)



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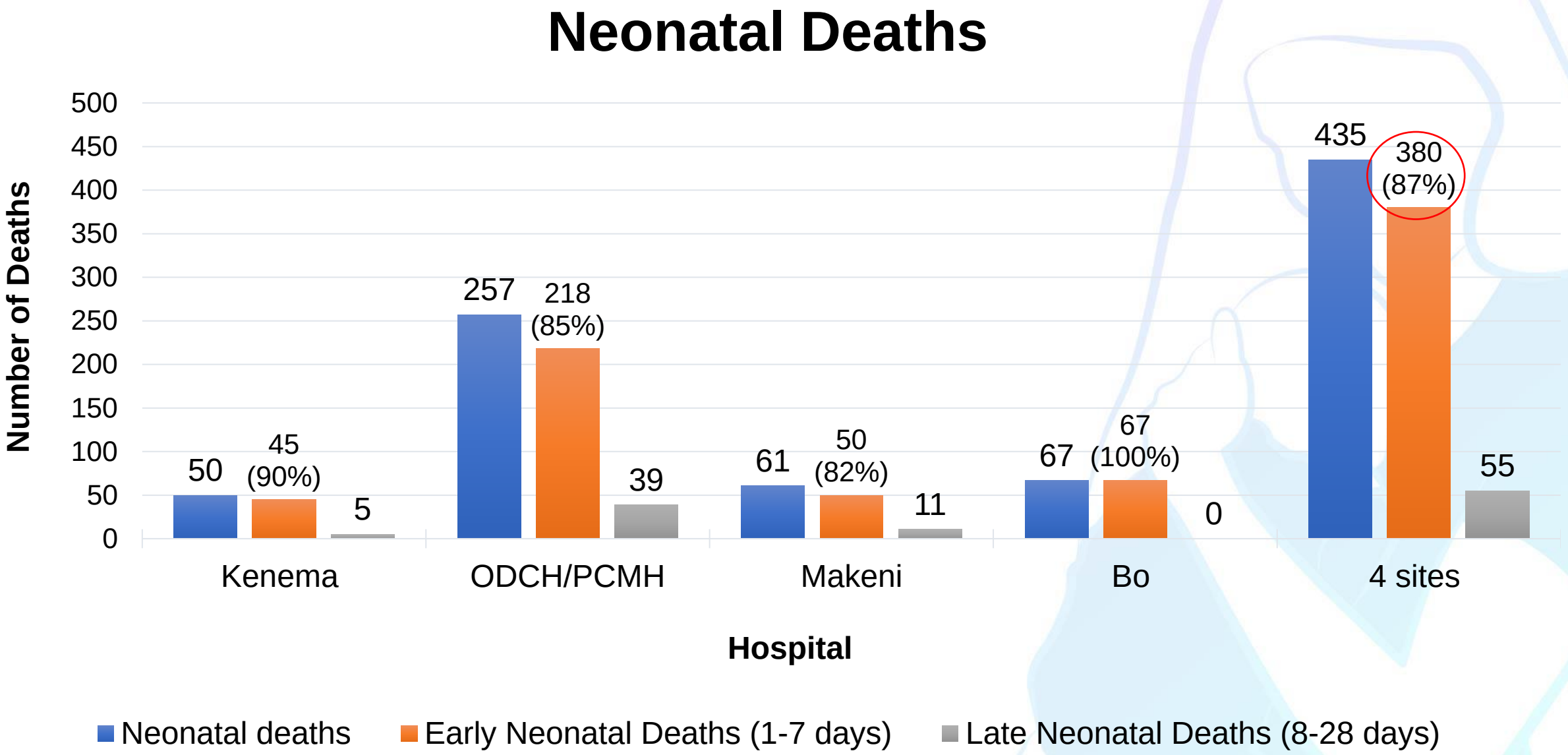

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510 *(CI:483 -538)*	*1,480 (CI:1,402 – 1,562)*	546	37% (35% - 39%)	63% (61% - 65%)

40% of expected Maternal Deaths Reported

What do we do?

Comprehensive Maternal Death Investigation and Review

Who Conducts the Maternal Death Investigations and Reviews?

- **Investigation Team**
  - *District Disease Surveillance Officer*
  - *MDSR Coordinator*
  - *Midwife Investigator*

- **Review Committee**
  - *National Committee – meets quarterly*
  - *District Committee – meets monthly*
  - *Hospital Committee – meets weekly/fortnightly/monthly*

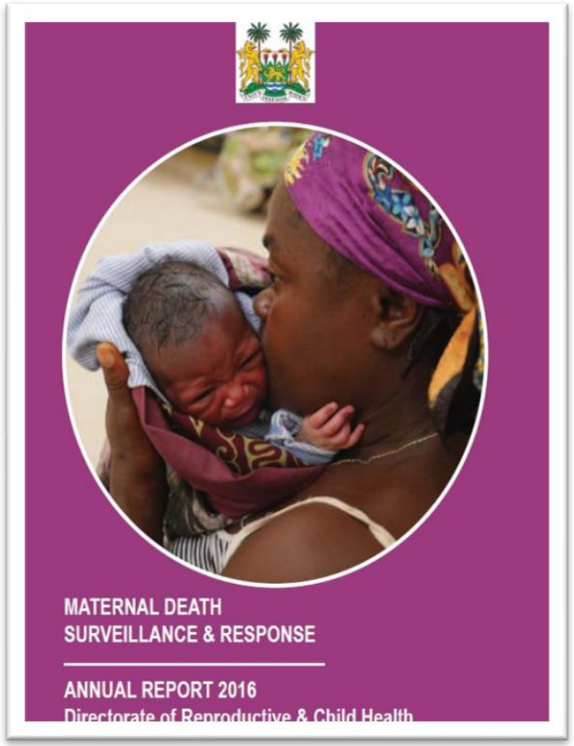
Comprehensive Maternal Death Investigation and Reviews

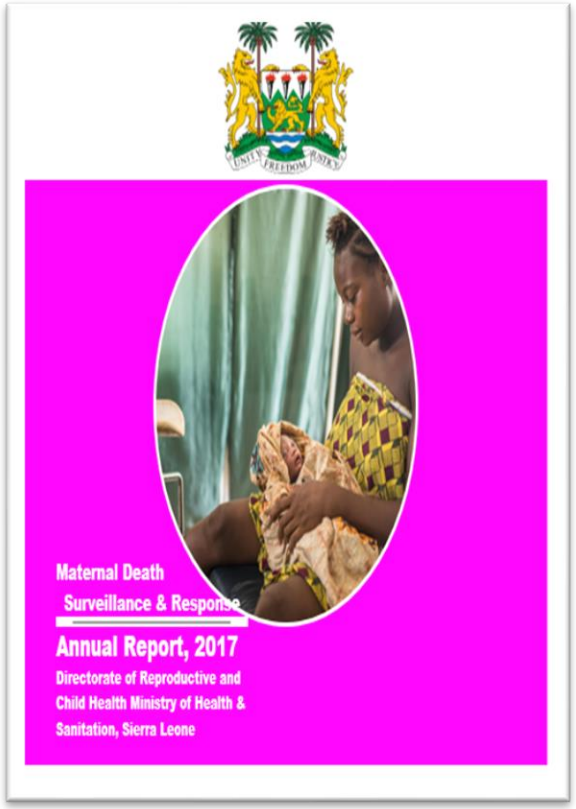
Maternal Death Line List – Online Form Created in DHIS2 (2022)

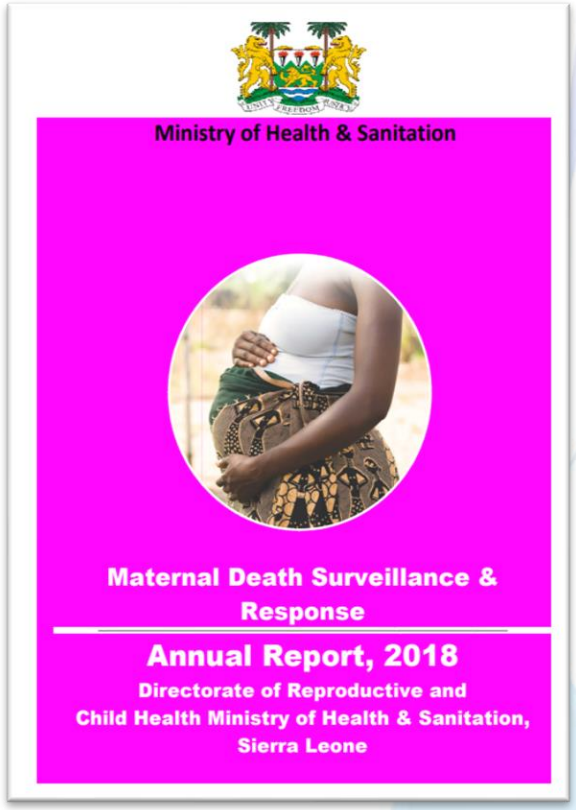
Sno	Date death occurred	Epi_Week_ Death Occurr	Age (Year	District of Death	District of Residen	Chiefdom /Ward N	Place of residence: Town OR Village OR Street Address	(Total No. of Pregnancie s includ	(No. of previous deliverie s liv	No. of ANC Contacts 0 ->	Mode of delivery. Select from me	mother died (During Pregnancy, During	Maternal death (Community, In transit,	deaths select category of facility (Govt.Hospi	For health facility deaths, specify Name of facility	Date of admission (For health facility deaths)(Month / Day / Year)	admission (For health facility deaths) 24 hr System e.g.	Date of death (For health facility deaths)(Month / Day / Year)	(For health facility deaths)24 hr System e.g.	Reason for Admission	Referred From	Cause of Maternal Death (ICD-10 Code)	cause of death not listed in previous
37	17 September 2018	38	35	Bo	Bo	Kakua	konia	11	10	1	Undelivered	After Delivery	In transit									(O72.1)	
38	17 September 2018	28	27	Bo	Bo	Baoma	Yakaji	3	2	3	Undelivered	After Delivery	In transit									(O72.1)	
52		52		Bo	Bo								Health Facility										
53		52		Bo	Bo								Health Facility										
54		52		Bo	Bo								Health Facility										
55		52		Bo	Bo								Health Facility										
81	16 March 2018	11	28	Bonthe	Bonthe	Sogneni	Tihun	6	5	3	Normal SVD	After Delivery	Community									Puerperal Sepsis (O85)	
82	13 May 2018	19	32	Bonthe	Bonthe	Jong	Mosavie	5	4	3	Undelivered	During Labour	In transit									Placenta (O45.9)	
83	26 May 2018	21	20	Bonthe	Bonthe	Kwame Bai Krim	Fulawahun	2	1	3	Normal SVD	After Delivery	In transit									(O72.1)	
84	4 July 2018	27	26	Bonthe	Bonthe	Dema	Moigbo	6	5	2	Undelivered	During Labour	In transit									APH (O46)	
103	14 October 2018	41	28	Kailahun	Kailahun	Luawa	Sandia	5	4	0	Miscarriage/Abortion	During Pregnancy	In transit		In transit						No	Pregnancy or Abortion (O08.1)	
105	01 November 2018	44	19	Kailahun	Kailahun	Jawei	Folu	1	1	1	Normal SVD	After Delivery	Community									(O72.1)	
160		52	27	Tonkolili	Tonkolili	Yoni	Mile 91	3	2	>4	Normal SVD	After Delivery	In transit		In transit					PPH	In transit	(O72.1)	
270		52	25	Moyamba	Moyamba	Kaiyamba	No. 10 Cole street, Salina	4	3	0	Miscarriage/Abortion	During Pregnancy	Community									Malaria (O98.6)	
333	28 January 2018	4	34	Western Urban	Western Urban		MAWEL STREET WELLINGTON		1			After Delivery	In transit									Rupture of Uterus (O71.0)	
351	25 April 2018	17	42	Western Urban	Western Urban		ALLEN TOWN	4	4		Normal SVD	After Delivery	In transit							PPH	ALLEN TOWN MCHP	(O72.1)	
413	27 January 2018	4	26	Kambia	Kambia	Samu	Camp D	7	6	>4	Normal SVD	After Delivery	In transit		Transit					Transit	Kassoria CHC	(O72.1)	
430	5 June 2018	23		Kambia	Kambia	Mambolo	Matatie						Community		Community					Community	Community		
433	6 November 2018	45		Kambia	Kambia	Magbema	Bamoi Luma		1		Undelivered	During Pregnancy	Health facility	Govt. Hospital	Kambia Govt Hospital	06/03/18							
500		52		Port loko	Port loko	Bakeh Loko							Health Facility	Govt. Hospital	Port Loko Govt Hospit	08/12/18	16:45:00						
512		52	18	Port loko	Port loko	Kaffu Bullom		1	0			After Delivery	Health Facility	Govt. Hospital	Lungi Govt Hospital	07/01/18							
584		52		Western Urban	Western Urban								Health Facility	Private Facility	Aberdeen Women Centre								
585		52		Western Urban	Western Urban								Health Facility	Private Facility	Aberdeen Women Centre								
586		52		Western Urban	Western Urban								Health Facility	Private Facility	Aberdeen Women Centre								
587		52		Western Urban	Western Urban								Health Facility	Private Facility	Aberdeen Women Centre								
588	2 May 2018	18		Western Urban	Western Urban								Health Facility	Govt. Hospital	Military 34							(O72.1)	

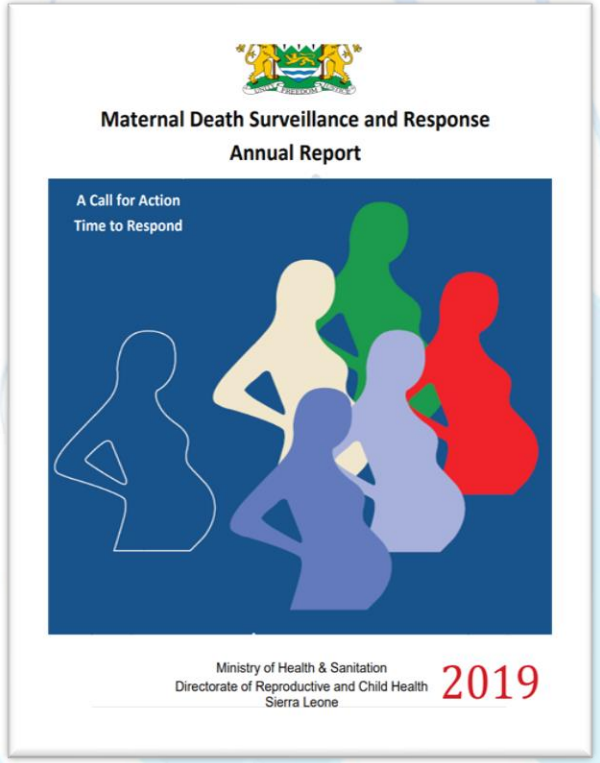
Analysis and Reporting

Documentation – Annual MDSR Report

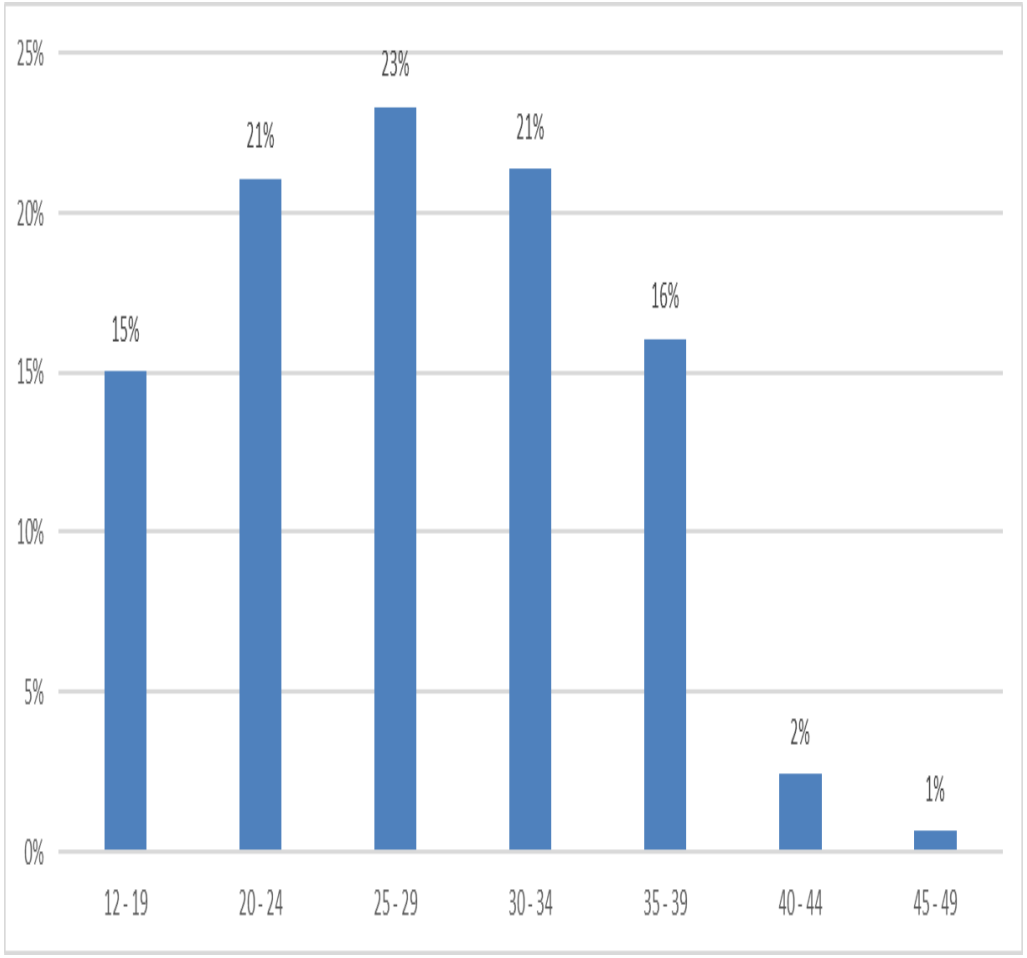


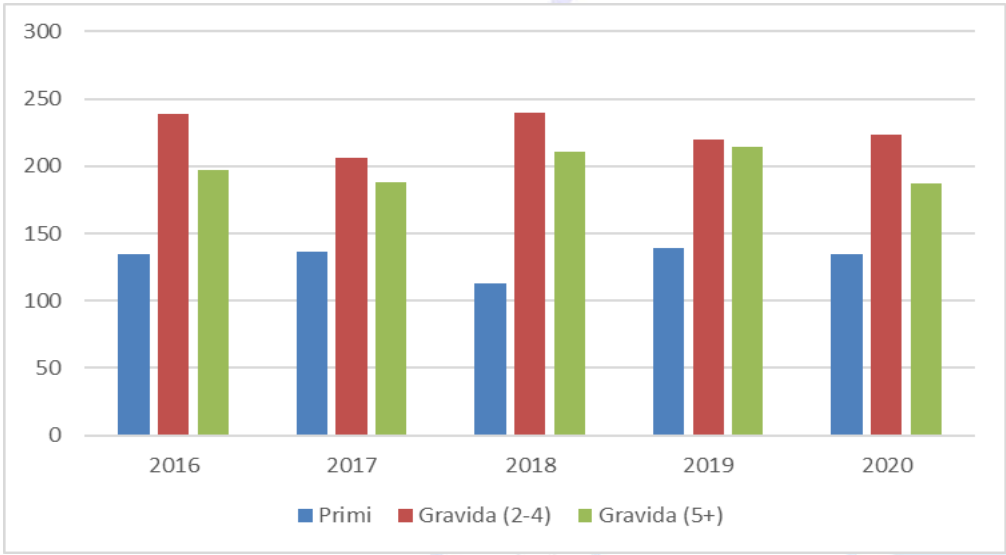


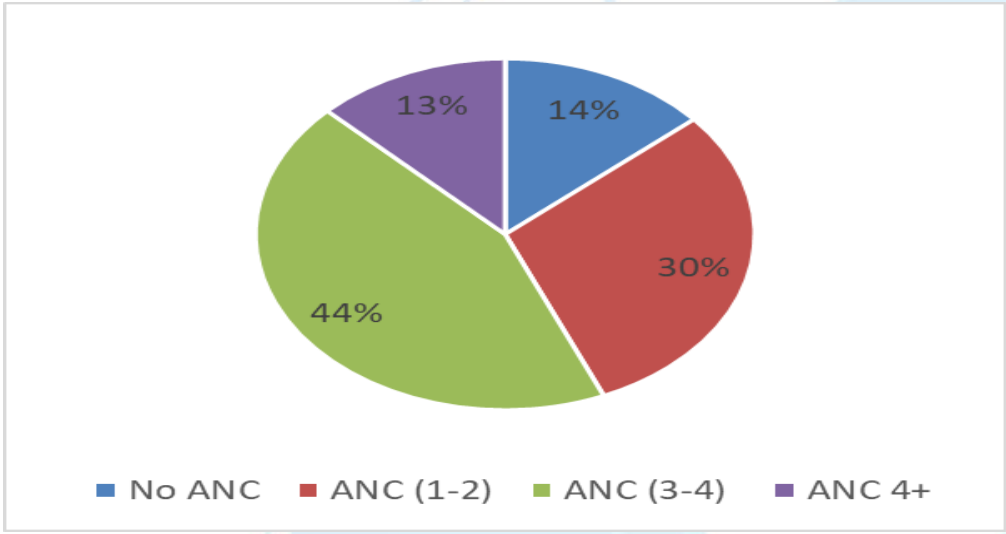




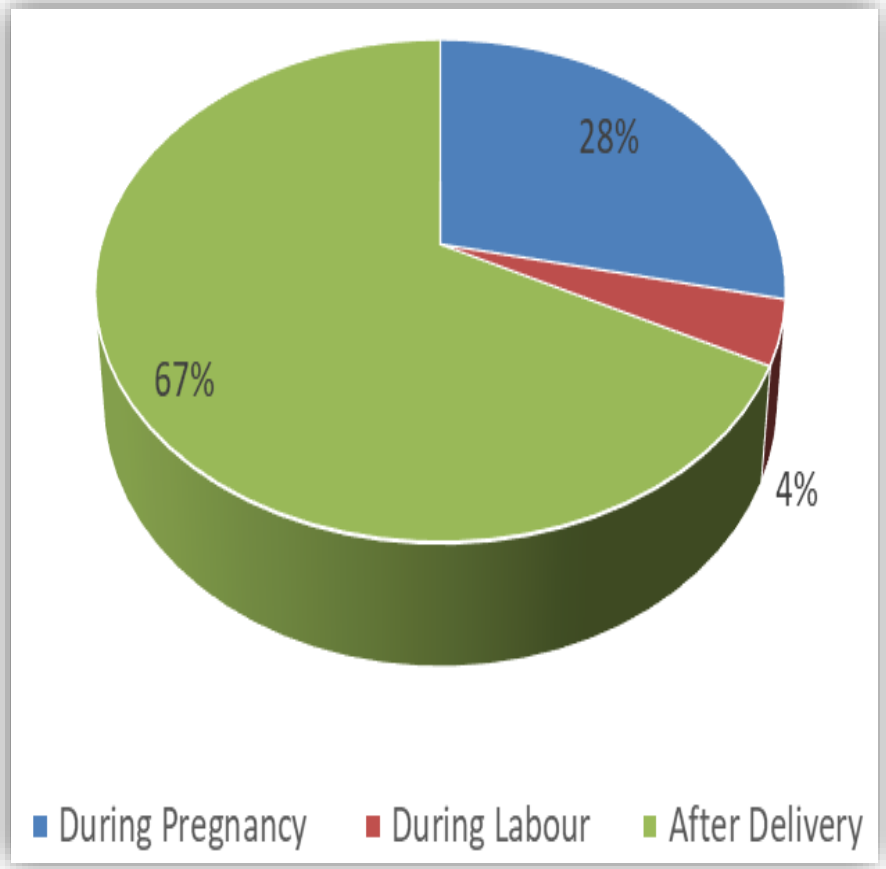
Maternal Death by Age, Gravidity, ANC, 2016-2020



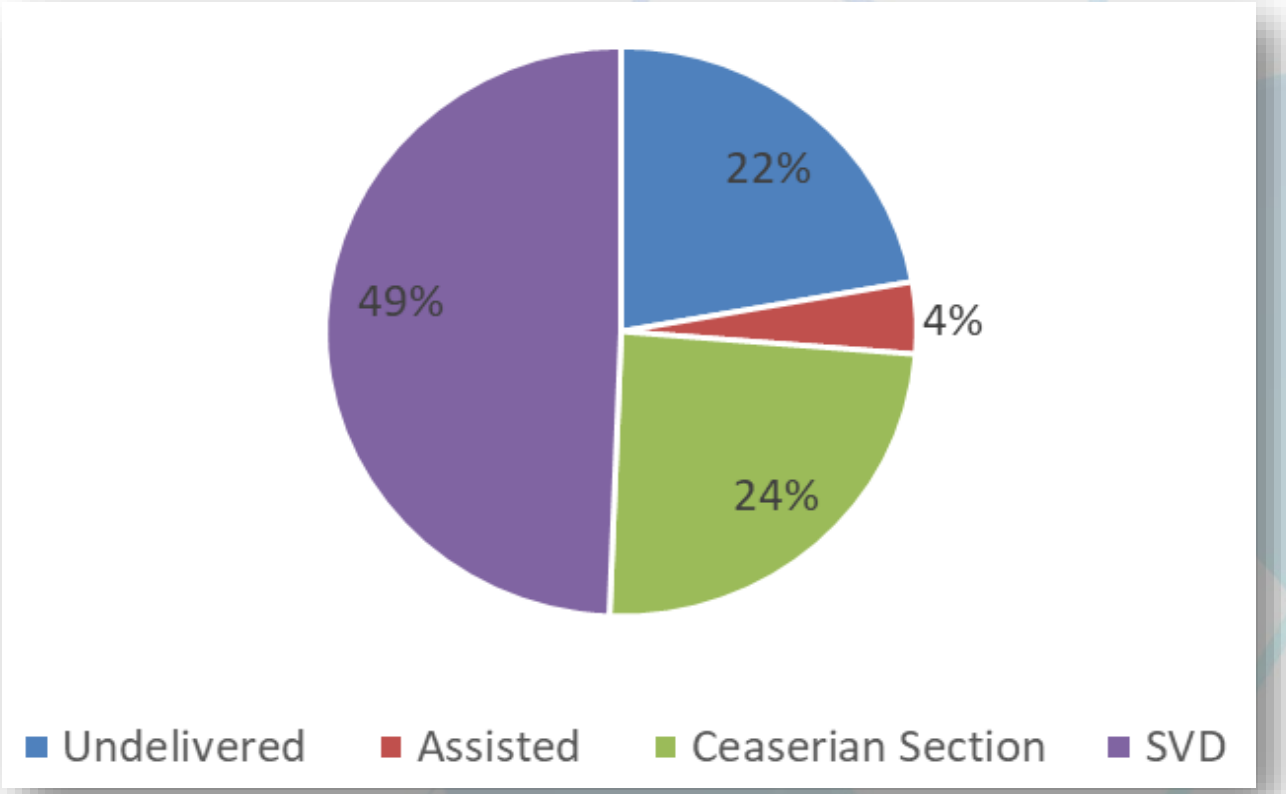




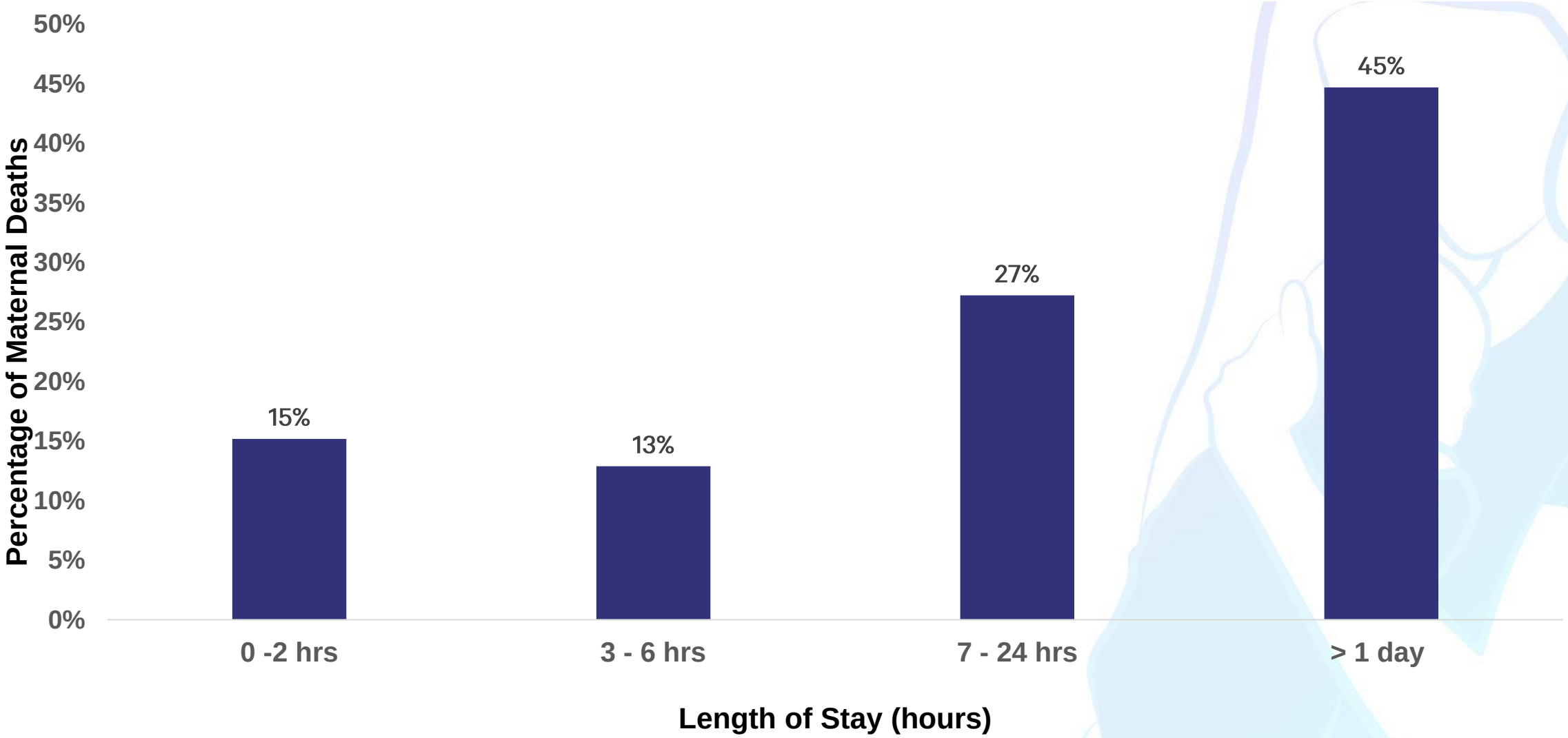
Maternal Death by Stage of Pregnancy and Mode of Delivery, 2016 – 2020



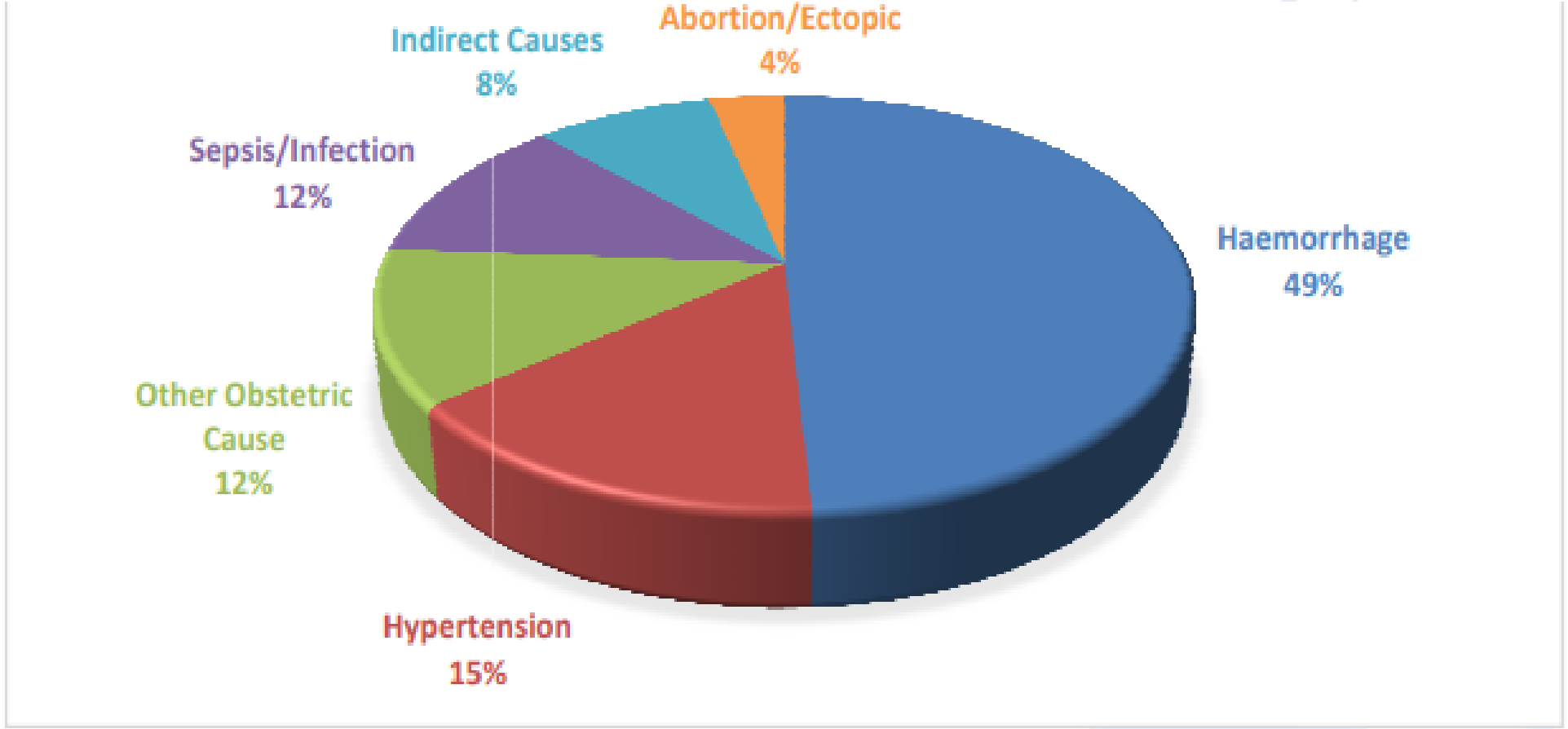
Two-thirds of maternal deaths occurred after delivery



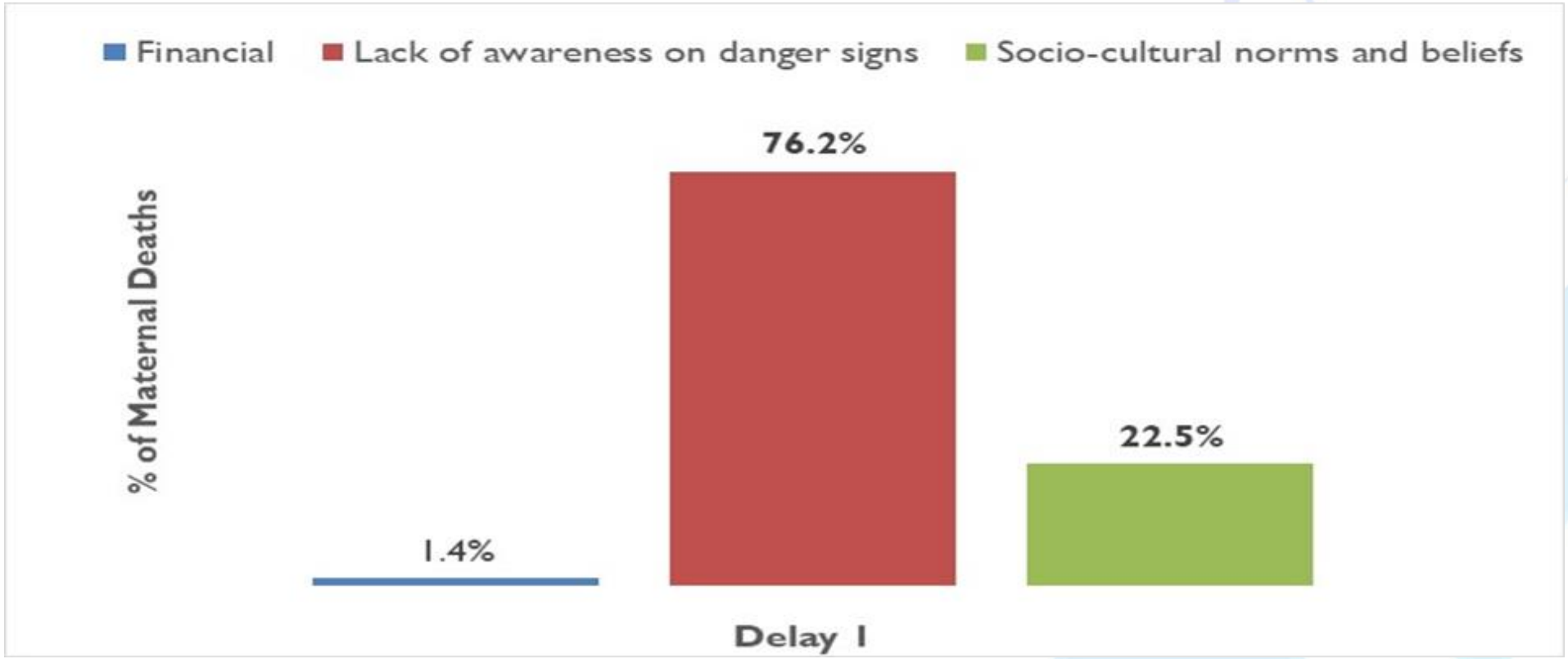
Average Length of Stay in Hospital Before Pronounced Dead, 2016 – 2020



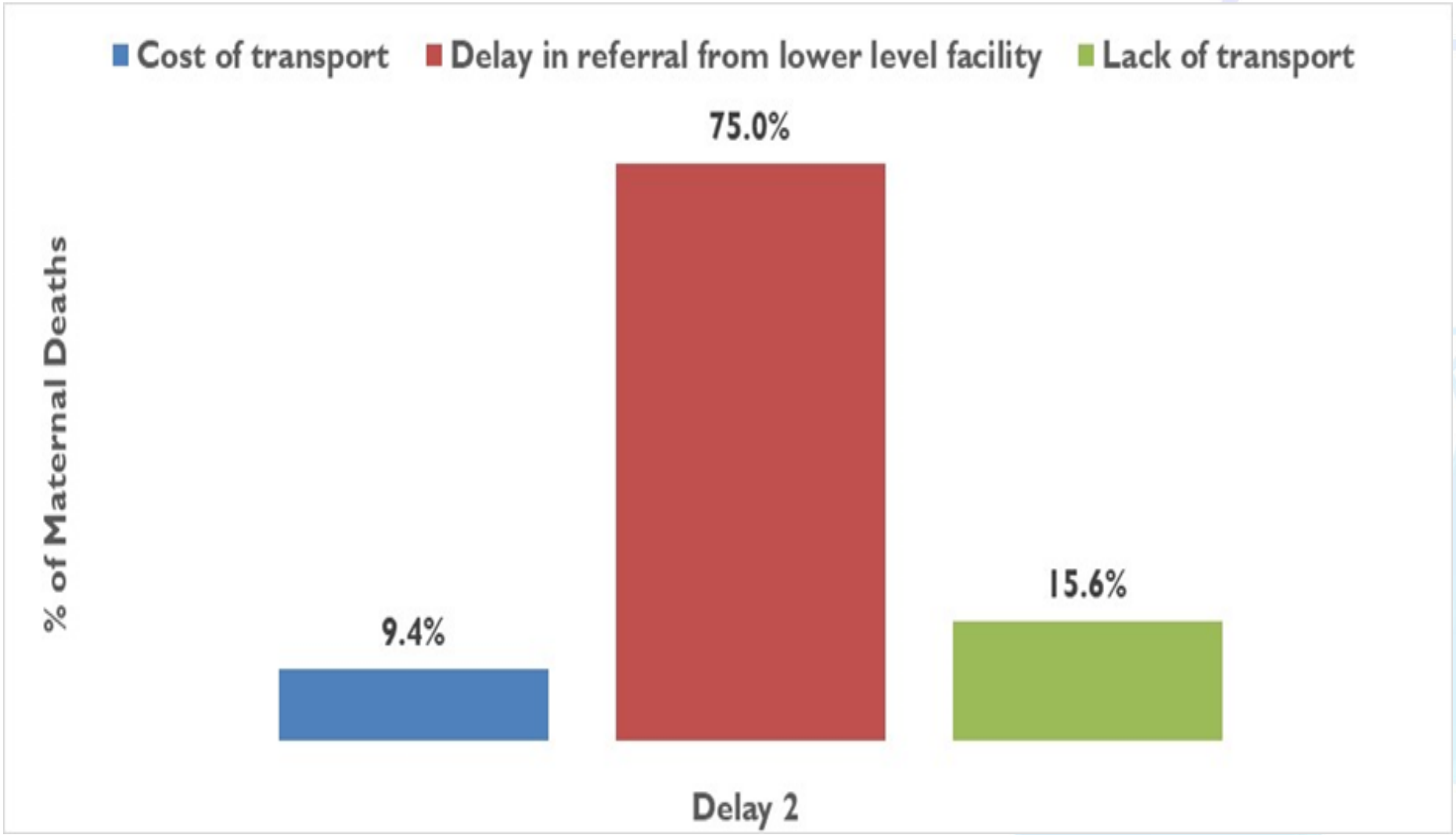
Maternal Death by Cause of Death, 2016 – 2020



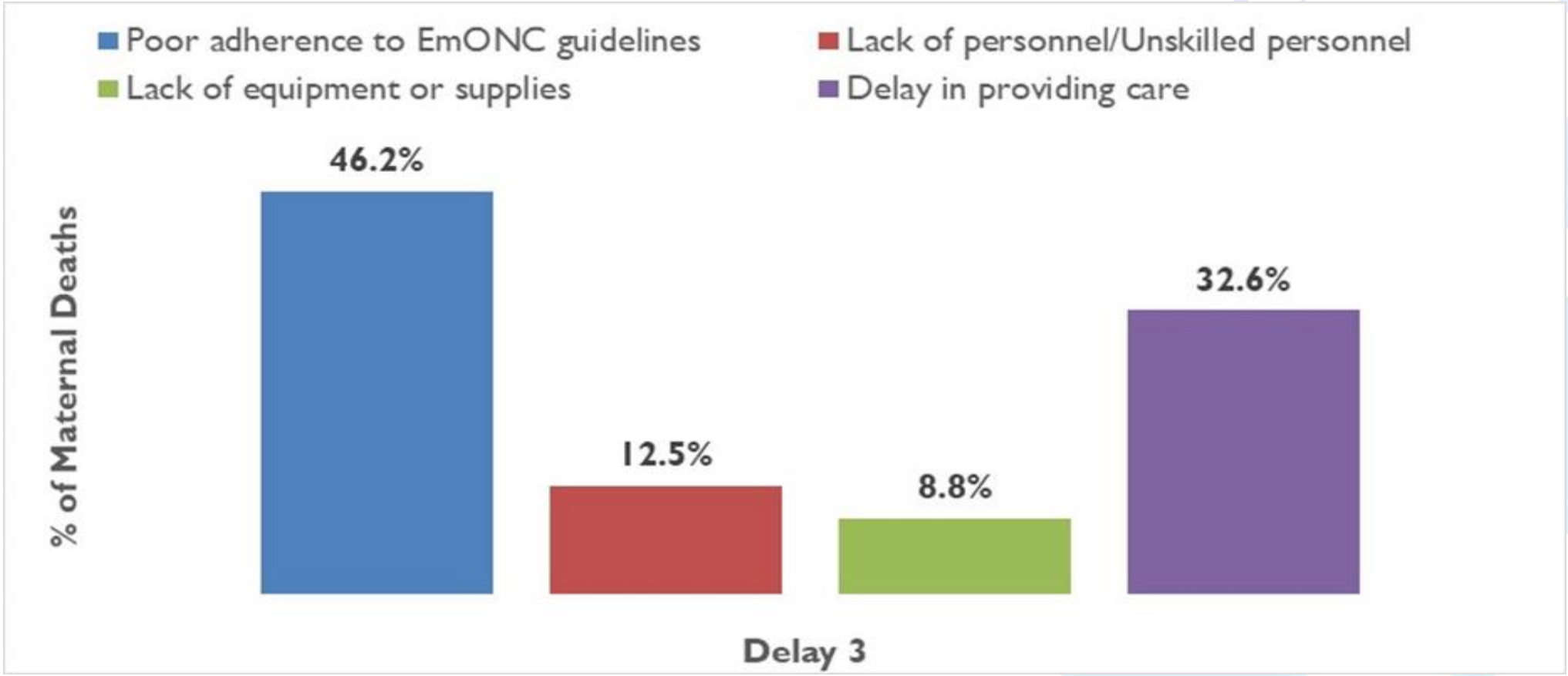
Contributing Factors



Contributing Factors



Contributing Factors



We know now women’s stories

What are we doing?

Response and Best Practices

Health Systems Strengthening

Building Human Resource Capacity

- ✓ Midwifery education
- ✓ Postgraduate training of specialists
- ✓ In-service training
- ✓ Supportive supervision and mentorship

Strengthening referral systems

- ✓ National Ambulance service
- ✓ Strengthening community referral mechanisms

Strengthening response to SGBV

- ✓ New laws against rape and child marriage
- ✓ Community engagement and CSE in schools

Legal and policy environment for SRHR

- ✓ Safe motherhood and reproductive health bill in progress

Quality of Care – Improvement Science at Point of Care

Change packages in hospitals for addressing the causes of

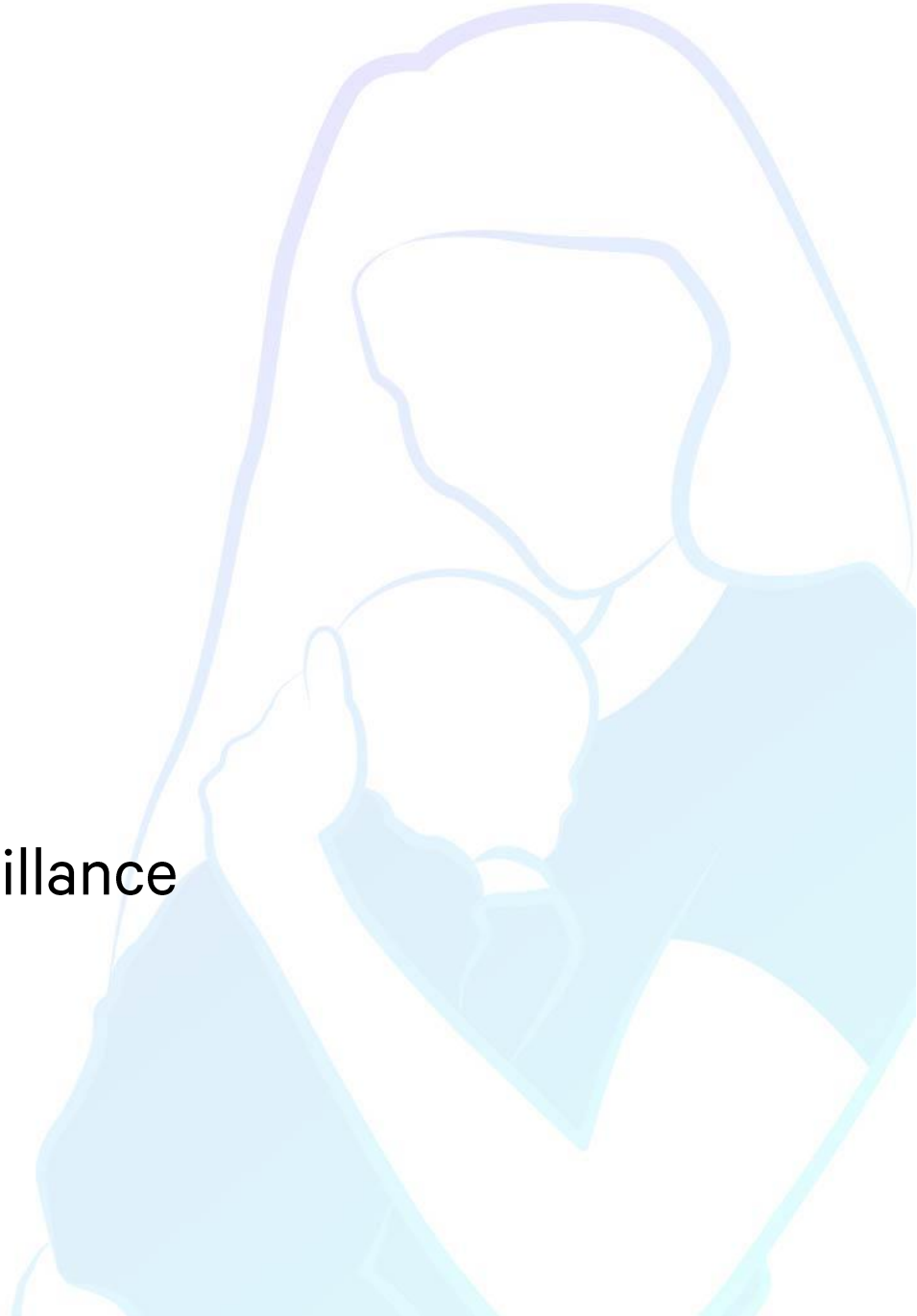
- ✓ Maternal Deaths (Sepsis, hemorrhage, PIH)
- ✓ Perinatal Deaths (Stillbirth, asphyxia, sepsis)

Improving women's experience of care

Piloting in learning facilities for nationwide scale up

Challenges

- Blame culture/punitive measures
- Data discrepancy between various sources
- Quality of Investigation and Reviews
- Issues around documentation
- Legal and policy environment
- Inadequate capacity of community based surveillance



Next Steps

- Create friendly policy and legal environment for MPDSR
- Strengthen Quality Improvement Approaches for MPDSR
- Strengthen capacity of MPDSR investigation teams and review committees
- Strengthen community based surveillance system
- Create an enabling environment for service delivery
- Strengthen leadership and coordination for MPDSR/Quality of Care

Panel Discussion and Q&A

Matron Margaret Mannah,
Programme Manager,
National Quality Management Programme
Ministry of Health and Sanitation,
Sierra Leone

MINISTRY OF HEALTH AND SINITATION
REPUBLIC OF SIERRA LEONE

Dr James Squire,
Programme Manager,
National Disease Surveillance Programme
Ministry of Health and Sanitation, Sierra Leone

What's next?

- We are working with our regions, countries, the MPDSR TWG and partners for an implementation support plan at country level
- WHO website for other materials
- Recording & slides are available at: https://www.qualityofcarenetwork.org/webinars/series-7-webinar-7-maternal-and-perinatal-death-surveillance-and-response-materials
- Please visit Quality of Care Network website.
- If you are interested to implement this in your country and context, please reach out to:

Ms Francesca Palestra,
Technical Officer, MCA WHO Geneva
Email: palestraf@who.int

Quality, Equity, Dignity
A Network for Improving Quality of Care
for Maternal, Newborn and Child Health

Addressing inequalities through the MPDSR system: Lessons learned from Sierra Leone

Tuesday, 8 March 2022
1pm Freetown, 2pm Geneva, 6:30pm New Delhi