

# **Perinatal Mortality at the Port Moresby General Hospital**

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Paediatric Society Mid-year Meeting

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# Perinatal Mortality

- Perinatal deaths<sup>1</sup> include:
  - Stillbirths
    - Early fetal death (500g; or >22/40 or crown-heel length  $\geq$  25cm)
    - Late fetal death (1000g; or >28/40 or crown-heel length  $\geq$  35cm)
    - Macerated ( $\geq$ 12 hours fetal death)
    - Fresh (<12 hours fetal death)
  - Early neonatal deaths (0 – 7 days of life)
- PNG: perinatal mortality rates calculated from 500g birthweight; or >20/40

1. ICD-10

# Interventions to improve perinatal mortality

- Reducing macerated stillbirths:
  - Improving antenatal care
- Reducing fresh stillbirths and early neonatal deaths:
  - Improving intrapartum care

# Stillbirths

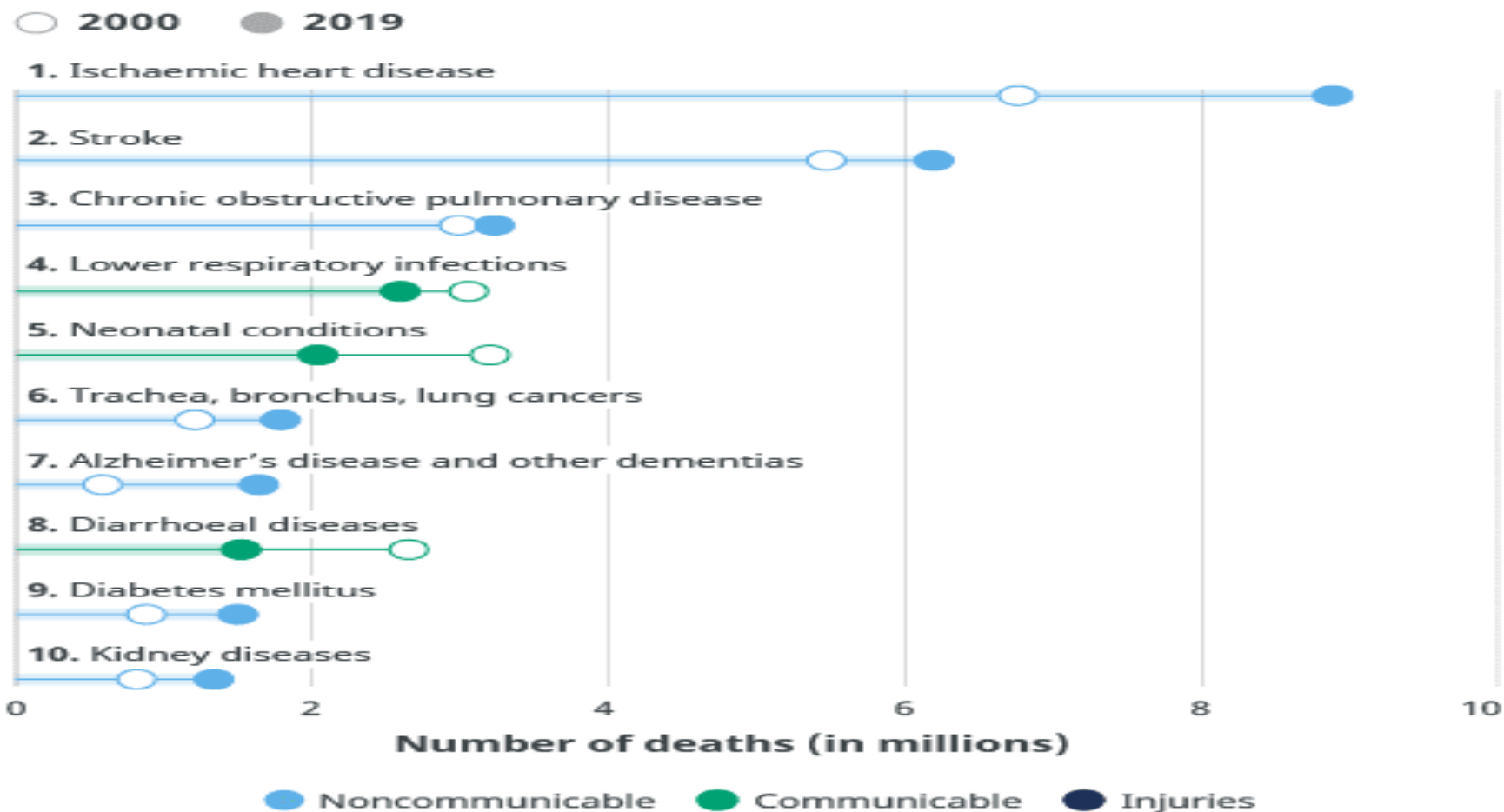
- 98% of stillbirths occur in LMICs
- Accurate classification challenged by
  - Unsure dates
  - Infrequent fetal monitoring antenatally and intrapartum (electronically)
    - Some livebirths misclassified as stillbirths
    - Some stillbirths misclassified as miscarriages and vice versa
- Interventions to reducing stillbirths > redirect attention to accurate classification and cause of stillbirths

# Early neonatal deaths

- Neonatal deaths account for half of all <5 child mortality
- Early neonatal deaths account for 75% of neonatal deaths

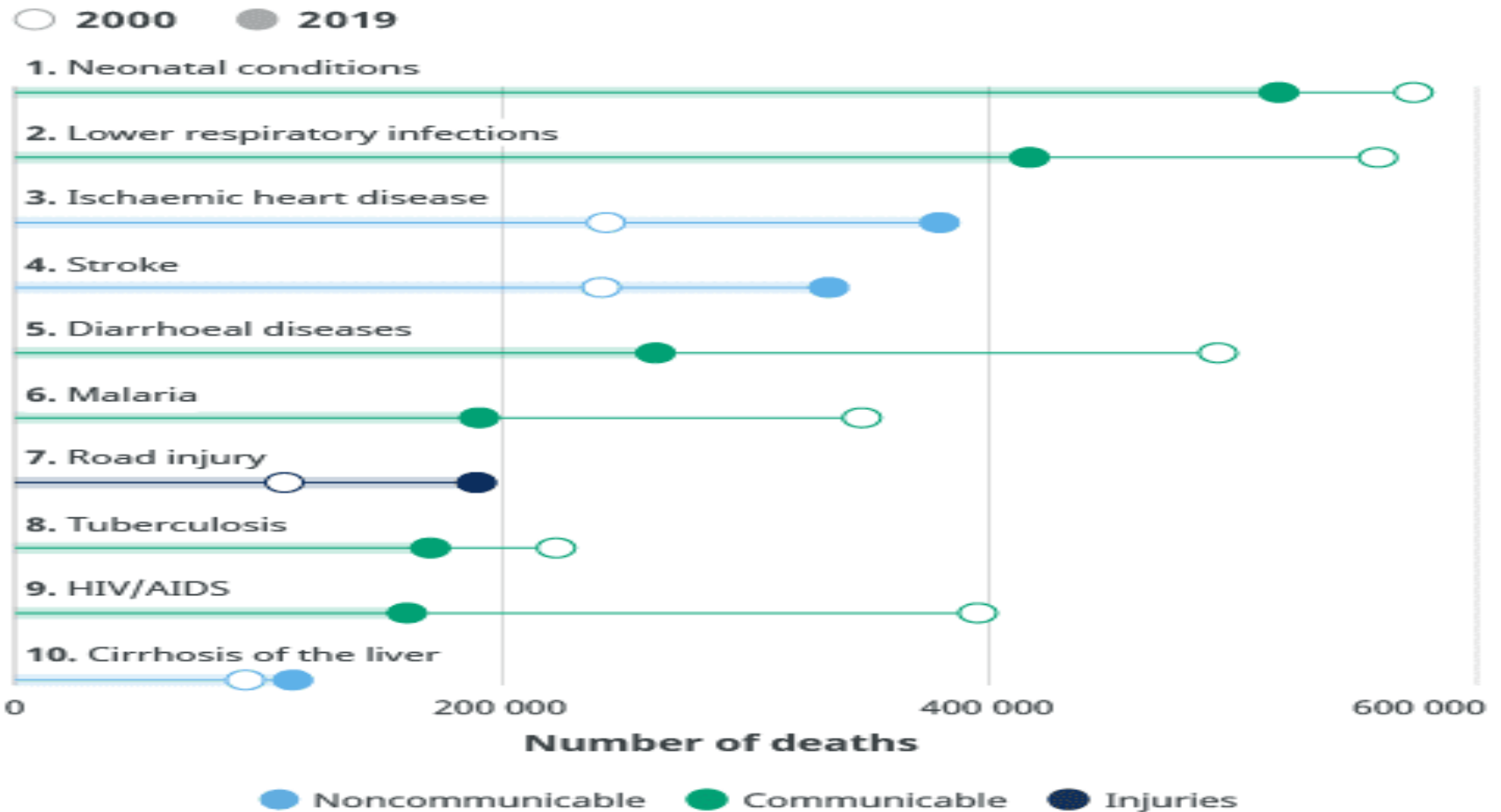
# Neonatal deaths globally

## Leading causes of death globally



# Neonatal deaths in LICs

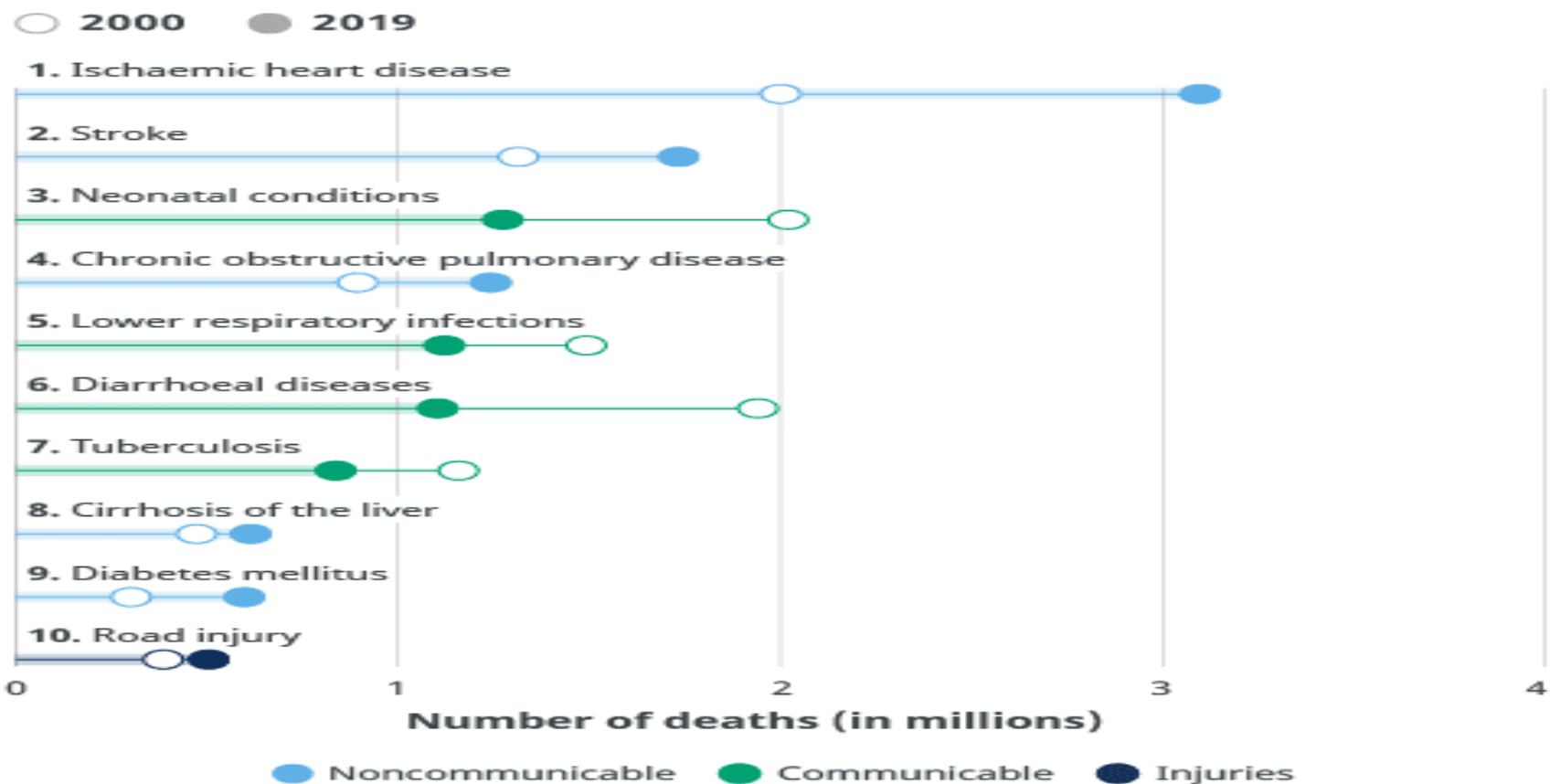
## Leading causes of death in low-income countries



Source: WHO Global Health Estimates. Note: World Bank 2020 income classification.

# Neonatal deaths in LMICs

## Leading causes of death in lower-middle-income countries



Source: WHO Global Health Estimates. Note: World Bank 2020 income classification.



- Child Morbidity and Mortality 12<sup>th</sup> Annual Report, 2021:
  - 41% admissions in the neonatal period
  - 46% of all childhood deaths
    - Infections
    - Birth asphyxia

# PMGH Obstetric Statistics 2021

- Pregnant women 13,944
  - Booked 12,220 (88%)
  - Unbooked 1,112 (8%)
  - Referred 612 (4%)
- Babies delivered 14,141

# PMGH Obstetric Statistics 2021

## Infants

	A Total	B Live Births	C Total Stillbirths	MSB	FSB	D $\frac{\text{SBR} \times 1000}{A}$	E No. NND 1 <sup>st</sup> Wk	F $\frac{\text{NNDR} \times 1000}{B}$	G PND C+E	H $\frac{\text{PNDR} \times 1000}{A}$
Booked	12,408	12,210	198	136	62	16.0	104	8.5	302	24.3
Unbooked	1,112	1,063	49	23	26	46.1	33	31.0	82	73.7
Referred	621	571	50	36	14	80.5	9	15.8	59	95.0
<b>TOTAL (ALL BIRTHS)</b>	<b>14,141</b>	<b>13,844</b>	297	195	102	<b>21.0</b>	146	<b>10.5</b>	443	<b>31.3</b>

# PMGH Obstetric Statistics 2021

Low birth weight

8.4%

	A Total	B Live Births	C Total Stillbirths	MSB	FSB	D SBR $\frac{C \times 1000}{A}$	E No. NND 1 <sup>st</sup> Wk	F NNDR $\frac{E \times 1000}{B}$	G PND C+E	H PNDR $\frac{C+E \times 1000}{A}$
<b>LOW BIRTH WEIGHT</b> 500-999g	94	38	56	38	18	595.7	36	947.4	92	978.7
1000- 1499 g	130	76	54	43	11	415.4	18	236.8	72	553.8
1500-2499 g	962	888	74	46	28	76.9	45	50.7	119	123.7
<b>TOTAL LBW</b>	1186	1002	184	127	57	155.1	99	98.8	283	238.6

# PMGH Obstetric Statistics 2021

- Method of delivery:
  - Spontaneous vertex 88.3%
  - Breech 0.8%
  - Vacuum extraction 5.3%
  - Caesarean sections 5.1%
    - Emergencies 90.6%
      - Fetal compromise 33.8%
      - CPD/failure to progress 18.1%
      - Malpresentation 15.8%
- Induction of labour 6.5%
  - Postmaturity
  - Hypertensive disorders

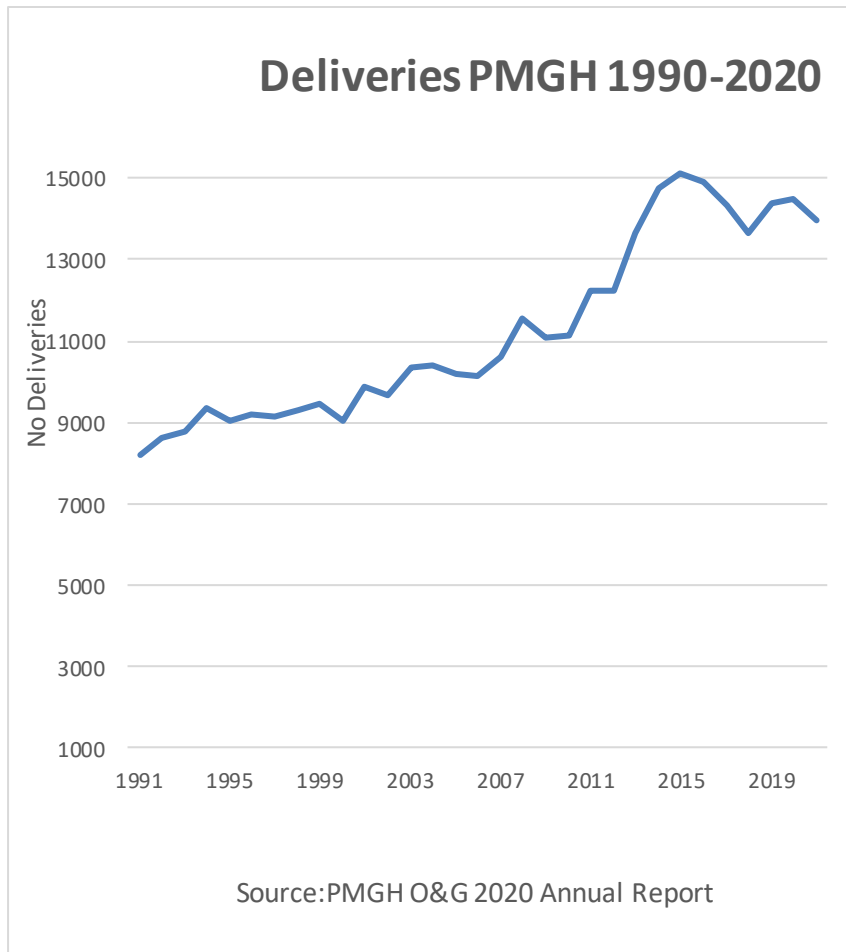
# PMGH Obstetric Statistics 2021

- Antenatal complications:
  - Total anaemia 35.5% (total tests: 8702)
    - Hb 8-9.9g% 25%
    - Hb <8g% 10.5%
  - Hypertensive disorders 7.5%

# PMGH Obstetric Statistics 2021

- Antenatal serology for all women delivering at PMGH:
- HIV (97.2% tested)
  - **Overall HIV positive** **2.7%**
    - ANC 2.8%
    - Labour ward 2.5%
  - **New attendees at ANC** **3.1%**
- Syphilis (92.4% tested)
  - **Overall syphilis positive** **2.0%**
    - ANC 2.0%
    - Labour ward 2.5%
  - **New attendees at ANC** **3.1%**
- Hepatitis B no data yet

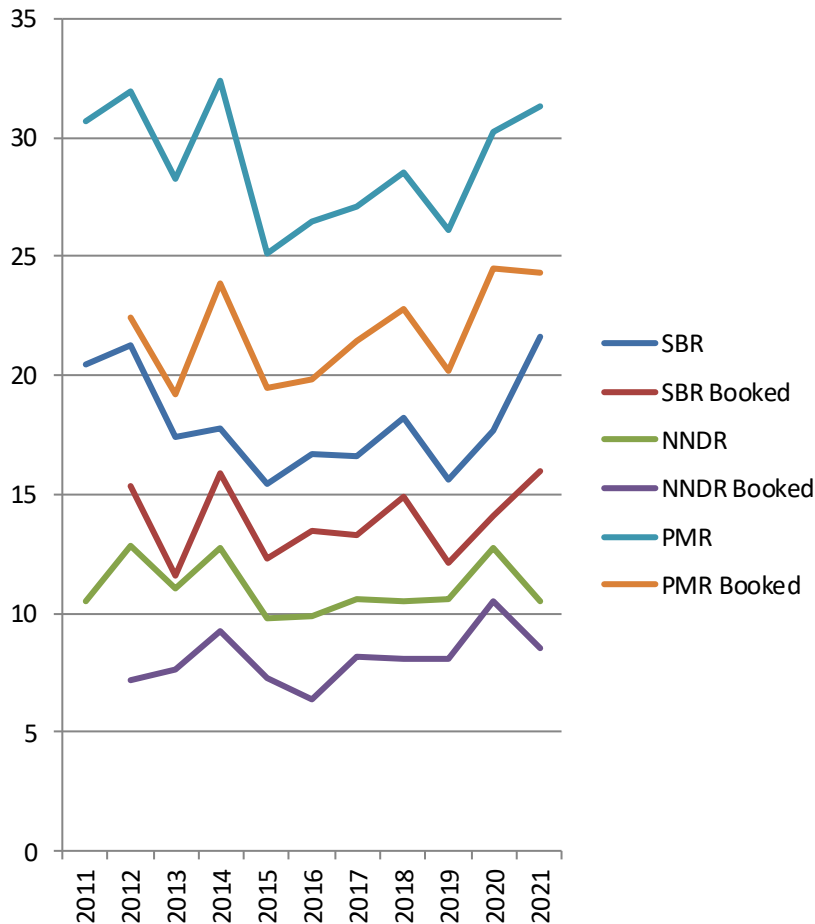
# Summary of statistics of the last decade



- Marie Stopes - supported Implant program 2015
- In 2021:
  - 5,084 implants inserted (36% of women delivering at PMGH)
  - 1,376 tubal ligations (10% of women delivering at PMGH) performed postpartum or at CS

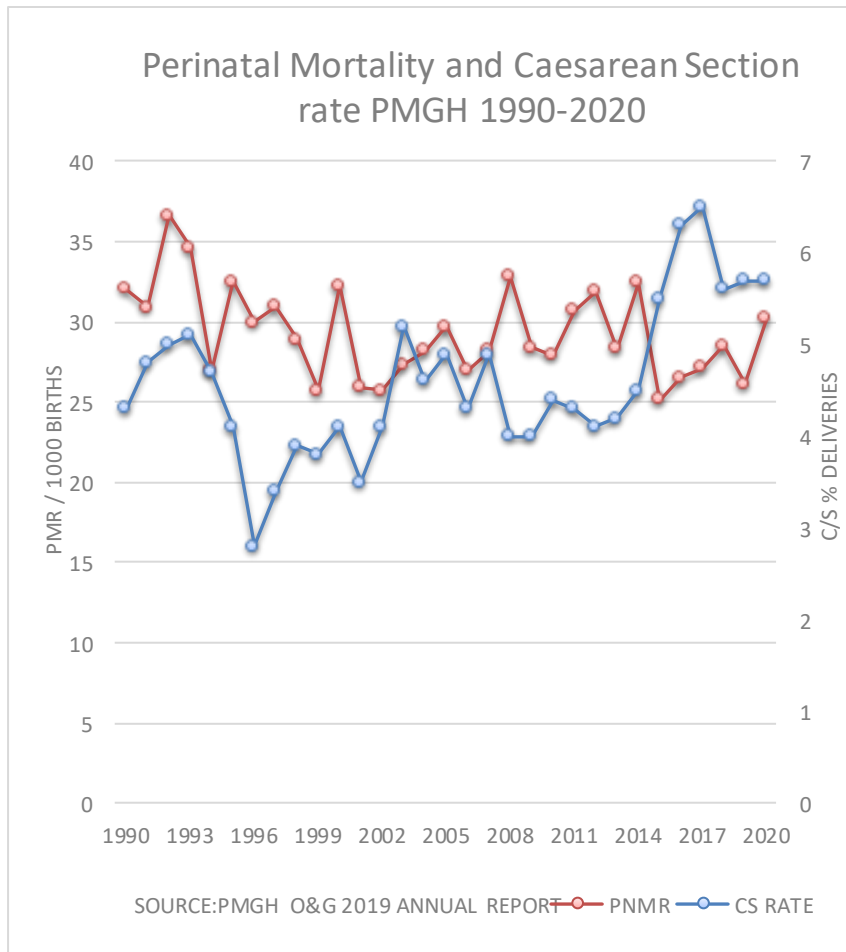


# Summary of statistics of the last decade



- Unbooked – downward trend to 6.6% in 2019; spiked 8% in 2020 & 2021
- KMC, EENC , EmONC introduced ~ 2012-2015

# Summary of statistics of the last decade



- CS rate above 5% tends to coincide with improved perinatal mortality rate

# Summary of statistics of the last decade

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
ANC HIV	1.4	0.77	0.94	1.6	1.0	1.3	1.24	1.84	1.78	1.3	3.1
ANC SYPHILIS	3.7	3.5	1.5	2.4	2.1	2.7	2.8	3.2	2.2	2.6	3.1

Sharp spike in 2021 due to:

?? Less bookings due to COVID-19 scale downs and emphasis on high-risk antenatal care only

# Improving our perinatal mortality

- We need Paediatric assistance:
  - To lobby PHAs and liaise with O&G colleagues to ensure all ANCs are participating in the PPTCT program
  - To remember to include mother when focusing on baby, esp at WBCs (FP, nutrition, breast-feeding, HIV care, etc)
  - To make FP available in WBCs and Paed wards (with O&G/midwifery support)

# Improving our perinatal mortality

- Auditing our practice
  - Factors contributing to perinatal morbidity and mortality (adequate antenatal care, EENC, KMC, EmONC training, use of partograph, looking out for danger signs, etc)
  - Standardising reporting for obstetric data (PHR standard)

