

**Saving Mothers 2020 -2022
Triennial Report on
Confidential Enquiries into
Maternal Deaths in South
Africa**

Acknowledgements

1. Prof Pattinson, Cathy Bezuidenhout, Bontle Mamabolo from MRC unit, UP
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3. NCCEMD members
4. NCCEMD provincial assessors
5. MCWH provincial coordinators
6. DOH MCWH cluster
7. Previous NCCEMD chairperson, Prof Moodley, and committees

Accuracy of data

- MAMMAs programme (NCCEMD) vs DHIS data; corrections needed in each year, 2020, 2021 and 2022, due to suspected under-reporting in some provinces where NCCEMD/MAMMAs numbers are less than DHIS numbers.
- MAMMAs programme collects DDPCP (Deaths during Pregnancy, Childbirth and the Puerperium) and Maternal deaths (DDPCP minus coincidental causes = MDs)

2022 Births, DHIS, and MAMMAS DDPCP, Maternal deaths per province:

Example of suspected under –reporting and corrections

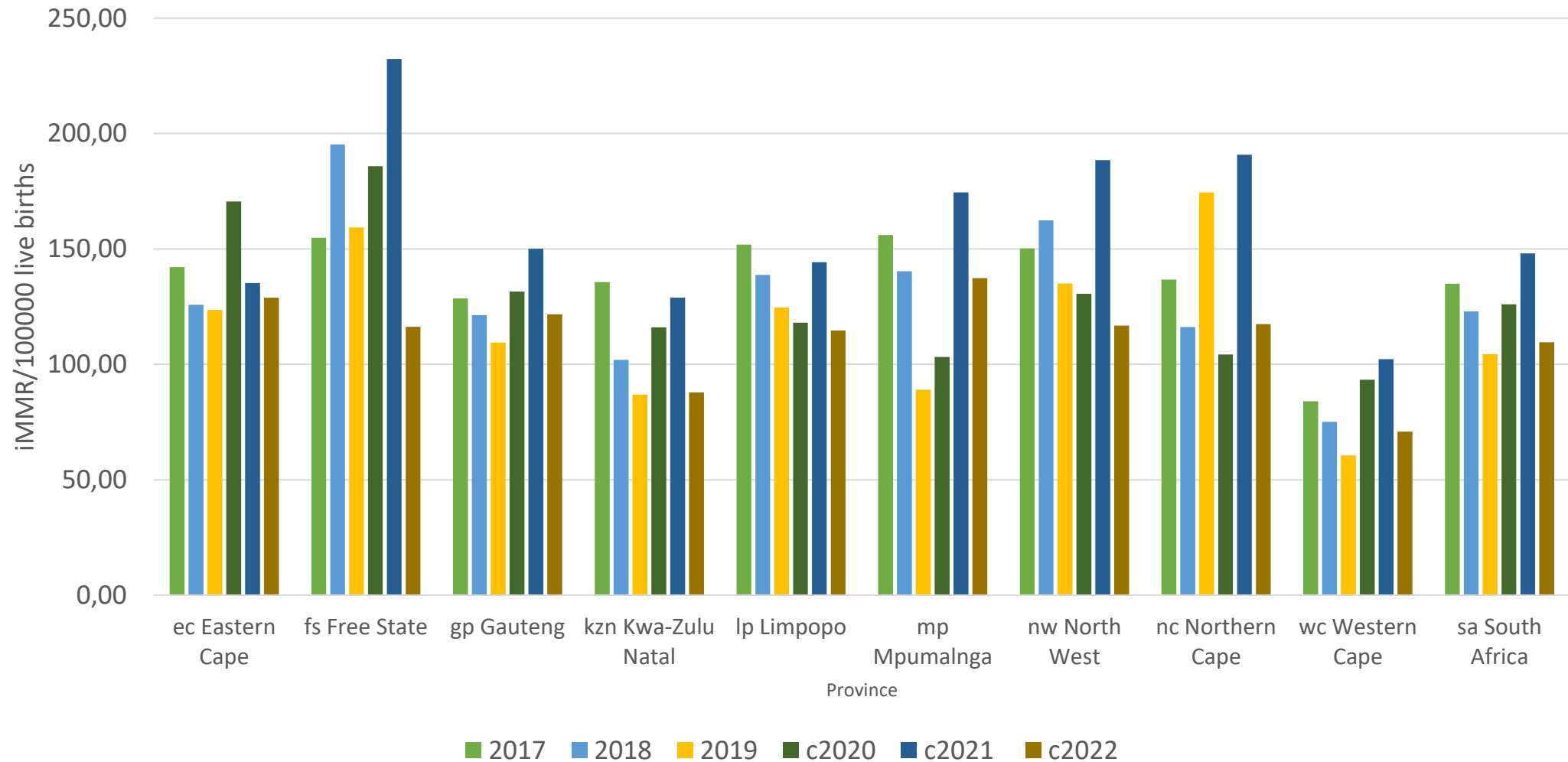
2022	DHIS MD	MaMMAS DDPCP	Coincidental deaths	MaMMAS MDs	Corrected MDs
Eastern Cape Province	132	134	1	133	
Free State Province	50	59	4	55	
Gauteng Province	266	216	5	211	266
KwaZulu-Natal Province	189	181	5	176	189
Limpopo Province	143	119	1	118	143
Mpumalanga Province	105	113	0	113	
Northern Cape Province	22	26	0	26	
North West Province	65	72	2	70	
Western Cape Province	63	73	6	67	
South Africa	1035	993	24	969	1062

Number Maternal Deaths per province 2017-2022 (with corrections)

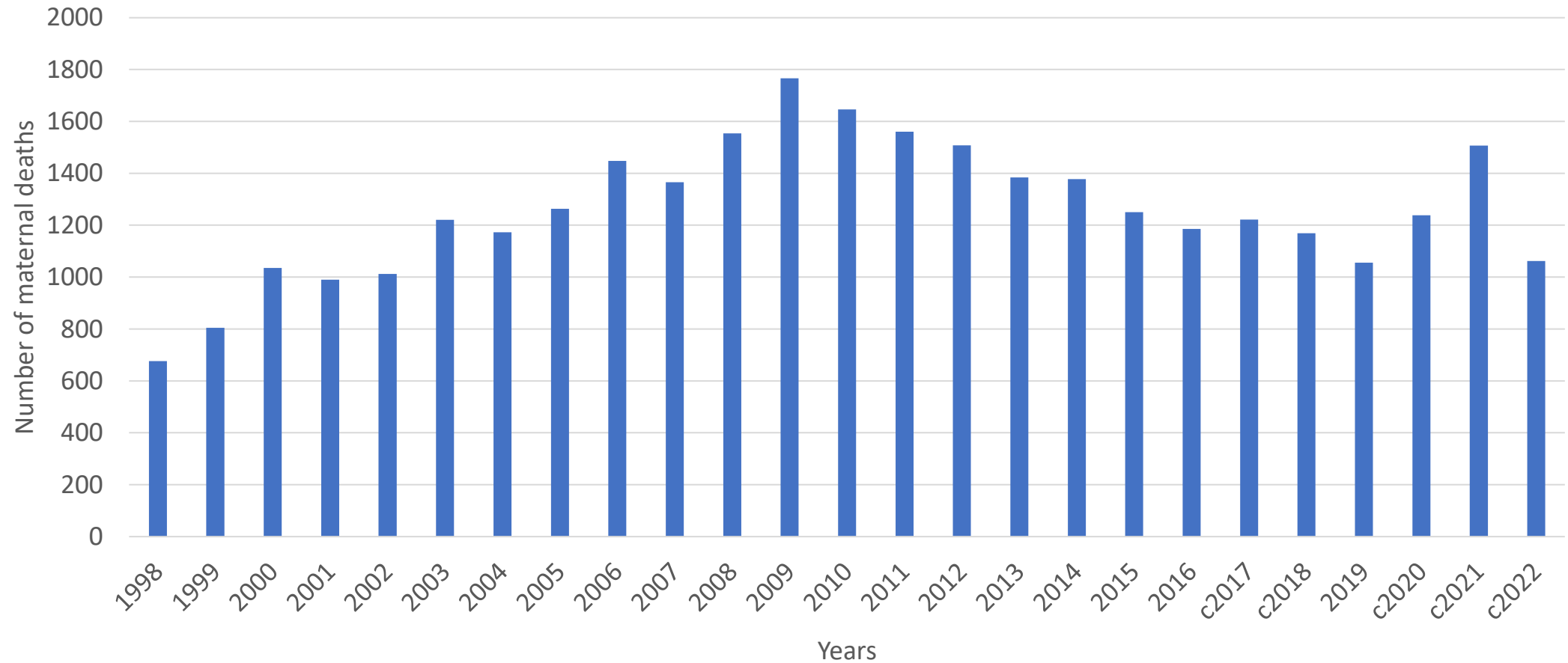
	c2017	c2018	c2019	c2020	c2021	c2022
Eastern Cape	138	131	118	c160	153	133
Free State	67	92	77	89	114	55
Gauteng	257	267	249	c271	c341	c266
Kwa-Zulu Natal	239	202	179	250	276	c189
Limpopo	174	152	166	166	196	c143
Mpumalanga	117	112	70	95	167	113
North West	82	95	78	81	116	70
Northern Cape	28	25	32	23	43	26
Western Cape	73	74	56	99	101	67
South Africa	1175	1150	1022	1234	1507	1062

Total (corrected) MDs for 2020-2022 triennium was 3803; Total LBs-3019165; iMMR = **126**

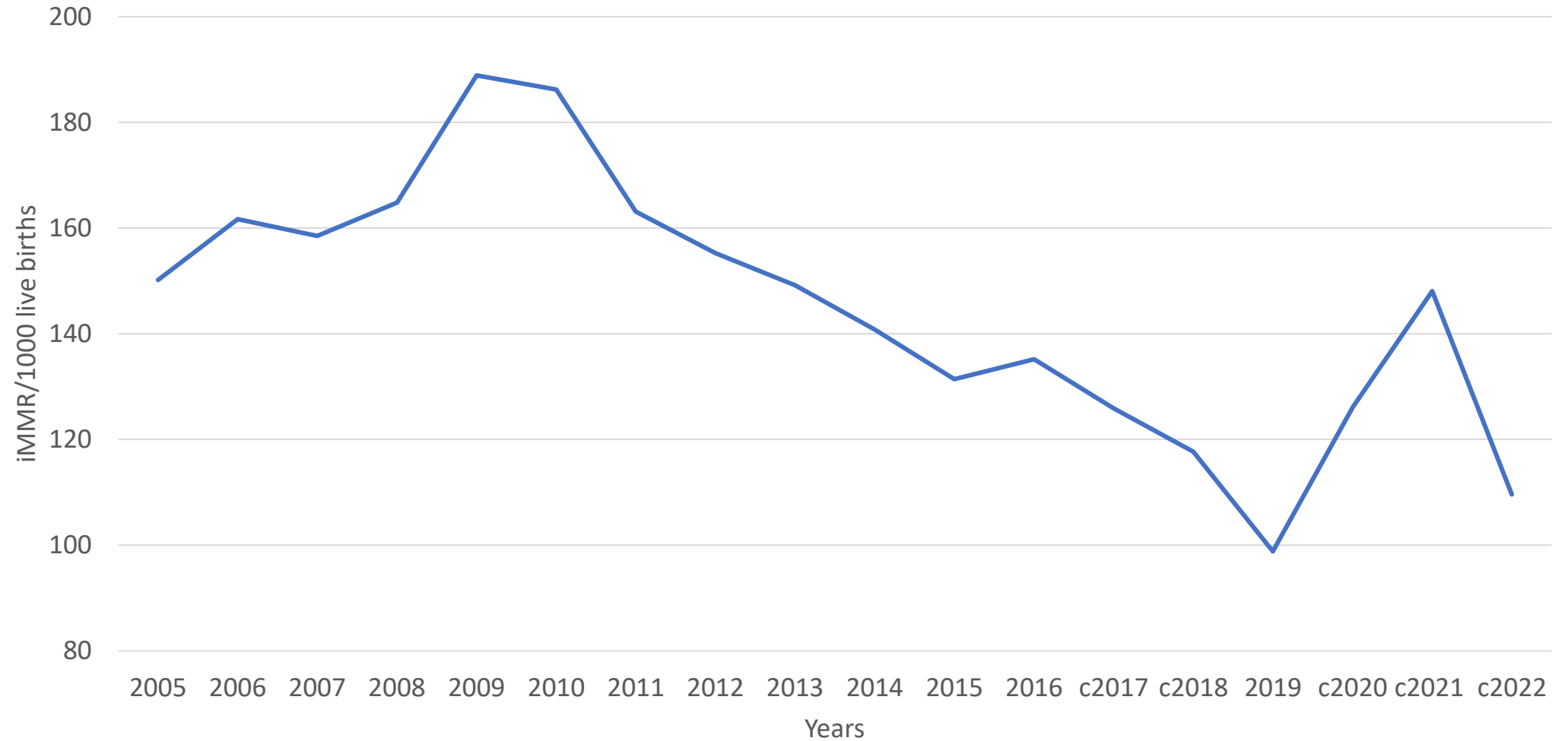
Comparison iMMR per province 2017-2022 (corrected)



Trends in numbers of maternal deaths 1998-2022 (corrected)



Trends in iMMR in SA 2005 to 2022 (corrected)



Triennial iMMR 1999-2022 (corrected)



iMMR per province for 4 triennia 2011-2022 (corrected)



Causes of Maternal deaths for 2020, 2021 and 2022, and triennium

Primary obstetric problem	Number MDs (%) 2020 N= 1197	Number MDs (%) (2021) N=1489	Number MDs (%) (2022) N=969	Number MDs (%) (2020-2022) N=3655
Medical and surgical disorders	183 (15.3)	190 (12.8)	140 (14.4)	513 (14.0)
Non-pregnancy-related infections*	322** (27)	561 (37.7)***	180 (18.6)****	1063 (29.1)
Ectopic pregnancy	36 (3)	33 (2.2)	34 (3.5)	103 (2.8)
Miscarriage	49 (4.1)	54 (3.6)	63 (6.5)	166 (4.5)
Pregnancy-related sepsis	63 (5.3)	68 (4.6)	56 (5.8)	187 (5.1)
Obstetric haemorrhage	200 (16.7)	237 (15.9)	162 (16.7)	599 (16.4)
Hypertensive disorders of pregnancy	185 (15.5)	188 (12.6)	166 (17.1)	539 (14.7)
Anaesthetic complications	21 (1.8)	17 (1.1)	39 (4.0)	77 (2.1)
Adverse drug reactions	13 (1.1)	6 (0.4)	7 (0.7)	26 (0.7)
Embolism	33 (2.8)	43 (2.9)	40 (4.1)	116 (3.1)
Acute collapse - cause unknown	15 (1.3)	36 (2.4)	21 (2.2)	72 (2)
Miscellaneous	4 (0.3)	3 (0.2)	8 (0.8)	15 (0.4)
Unknown	73 (6.1)	53 (3.6)	53 (5.5)	179 (4.9)

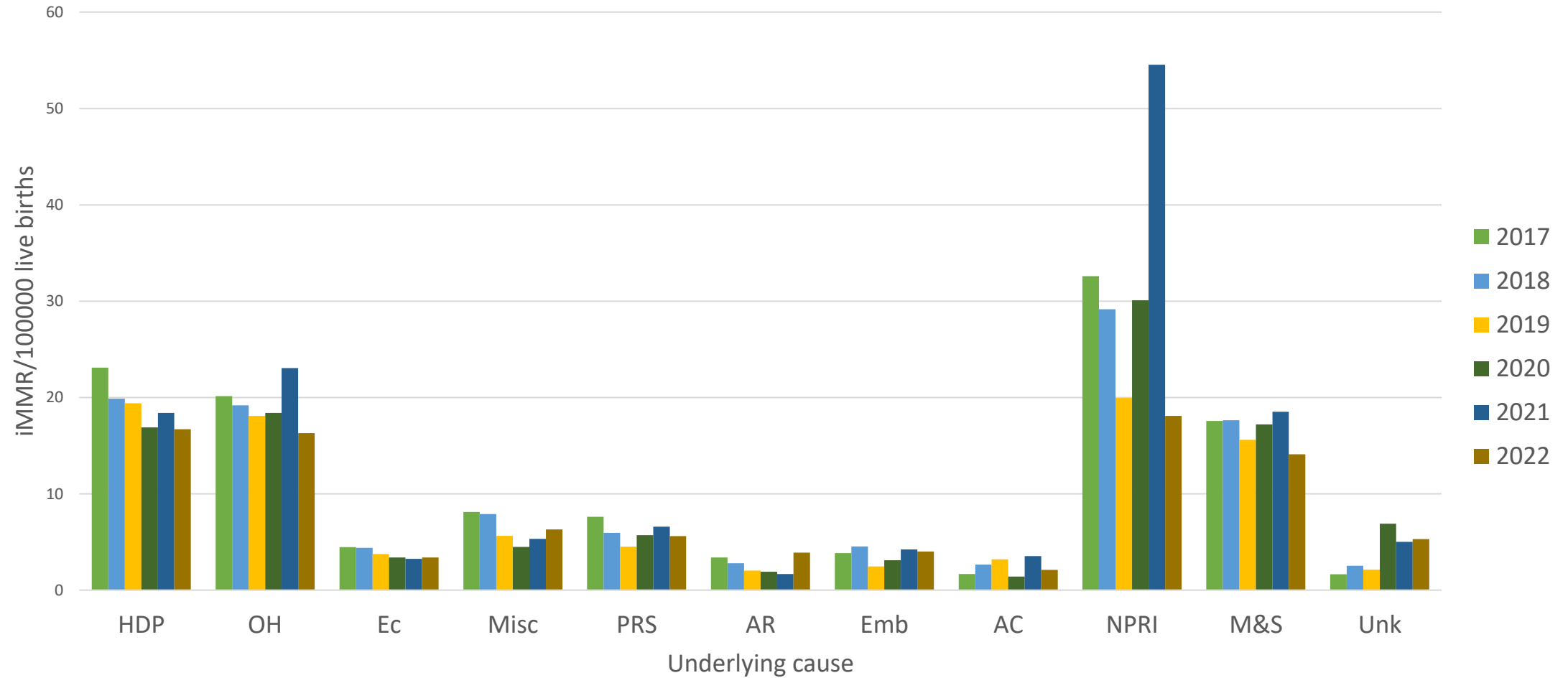
• Includes Covid 19 deaths

**Includes 124 Covid deaths in 2020

** *Includes 369 Covid deaths in 2021

****12 deaths from Covid in 2022

iMMR for Primary causes of death from 2017-2022

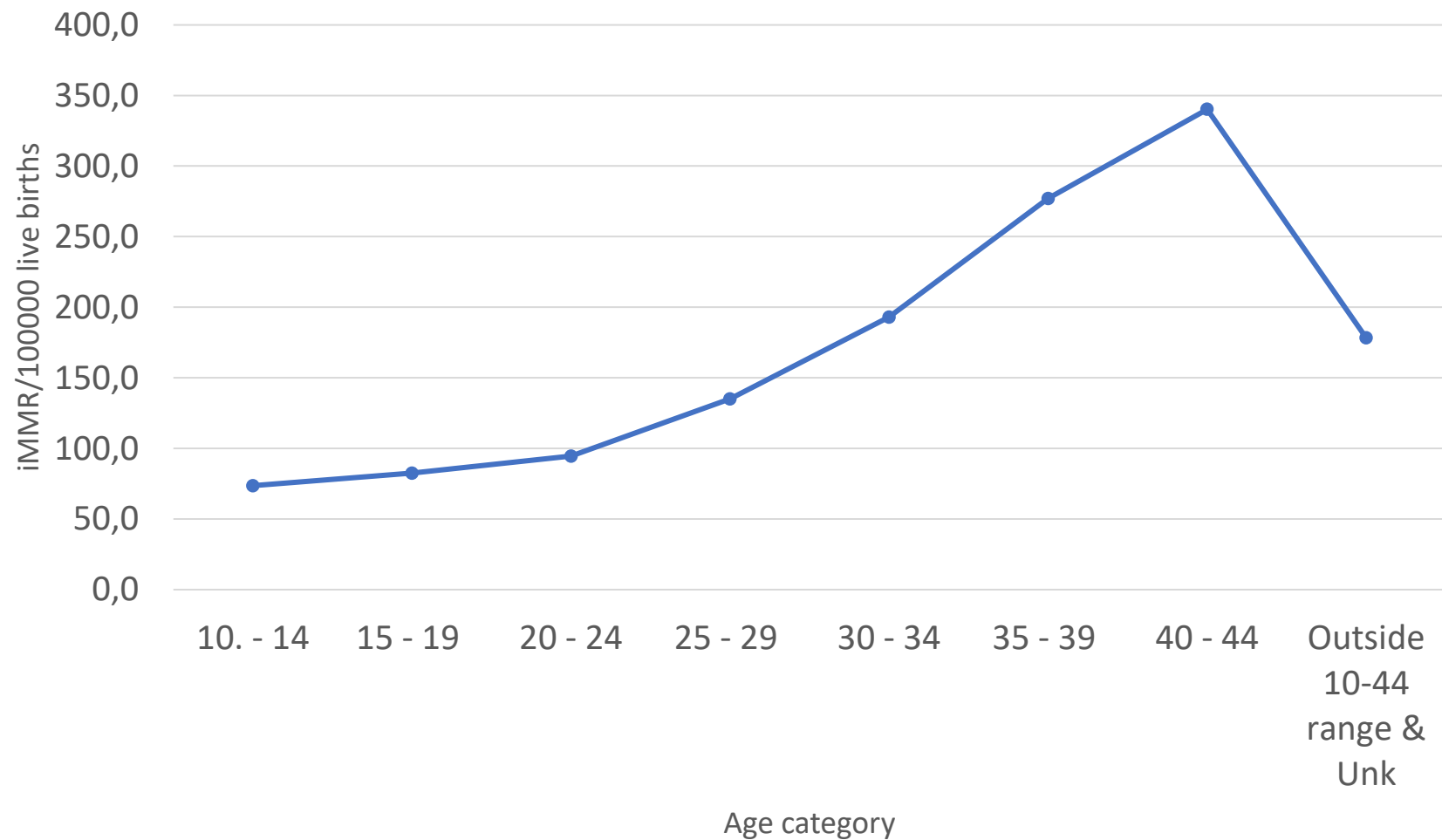


Maternal mortality ratio per underlying cause and province for the 2020-2022 triennium and the ranking of the 4 most common underlying causes (uncorrected).

	EC	FS	GP	KZN	LP	MP	NW	NC	WC	SA
*M&S	17.64	28.30	17.20	17.23	15.71	15.92	19.07	14.99	11.69	16.99
*NPRI	47.97	34.52	27.26	39.89	26.68	35.92	40.33	38.97	36.74	35.21
Ec	2.48	6.21	3.79	3.10	4.49	2.59	3.27	5.99	1.67	3.41
Miscarriage	5.88	2.76	7.14	4.81	5.24	7.04	9.26	4.50	1.00	5.50
PRS	6.50	10.35	5.83	4.81	7.98	8.52	4.90	5.99	4.01	6.19
*OH	17.02	31.06	19.97	14.74	22.69	30.36	28.34	20.98	9.35	19.84
*HDP	20.73	35.90	17.49	9.78	21.69	20.00	25.07	26.98	10.69	17.85
AR	3.40	3.45	1.02	1.86	4.74	5.18	2.72	1.50	1.00	2.55
ADR	0.62	1.38	1.02	0.78	1.99	0.74	0.00	0.00	0.00	0.86
Emb	6.19	5.52	2.33	2.95	4.24	4.81	2.18	5.99	5.01	3.84
AC	1.86	0.00	3.94	2.02	0.75	1.85	3.81	1.50	3.34	2.38
Miscellaneous	0.31	1.38	0.00	0.47	0.50	0.74	0.00	1.50	1.34	0.50
Unknown	0.93	17.26	8.02	6.52	2.99	5.18	6.54	8.99	3.34	5.93

*	Top 4 most common underlying causes
1	Most common
2	2nd most common
3	3 rd most common
4	4 th most common

iMMR per age category for the 2020-2022 triennium



Location where women died in SA 2020 -2022 (DDPCP)

	Facility*	In transit	Home/Outside	Total
2020	1133 (92.3%)	16 (1.3%)	79 (6.4%)	1228 (100%)
2021	1427(94.3%)	14 (0.9%)	72 (4.8%)	1513 (100%)
2022	932 (93.9%)	11 (1.1%)	50 (5%)	993(100%)
2020-2022	3492 (93.5%)	41 (1.1%)	201 (5.4%)	3734

*FACILITY DEATHS

- CHC - 3.1%
- District Hospital - 21.6%
- RH – 31.7%
- TH/NC - 36.8%
- Private – 6.9%

SUPOPTIMAL CARE IN HEALTH SYSTEM 2020 and 2021

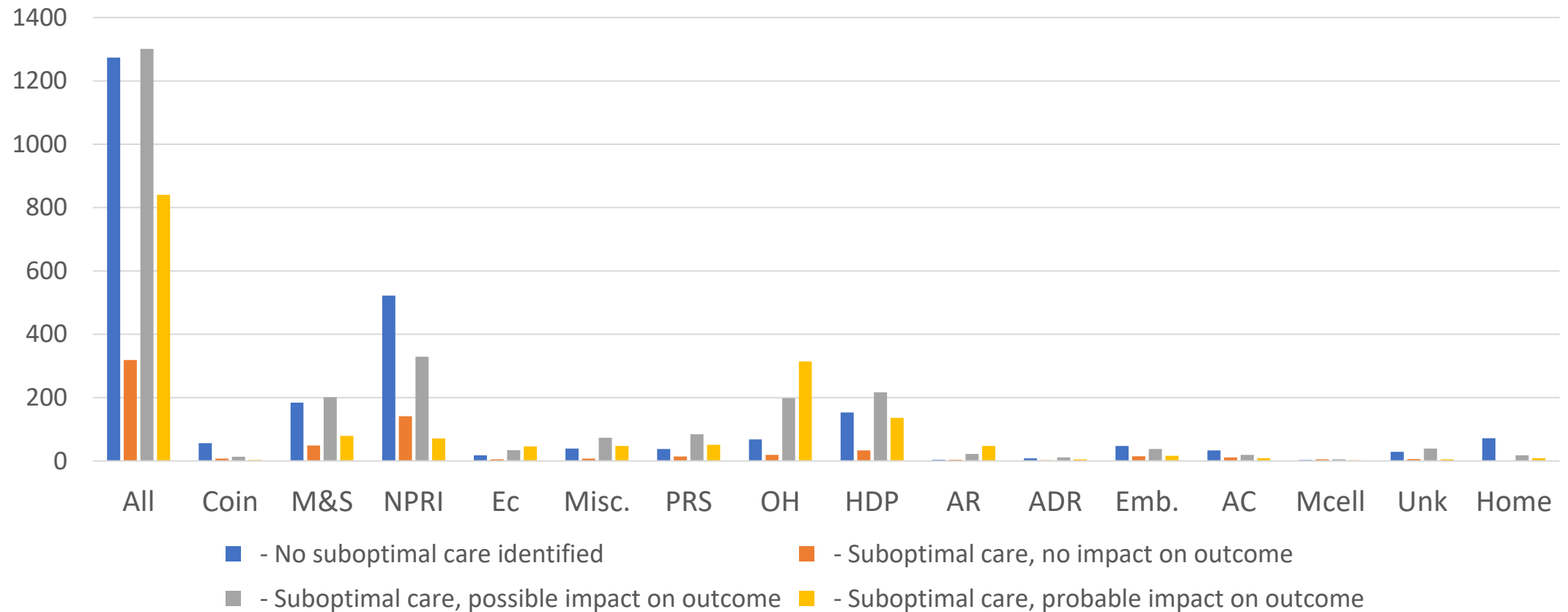
Impact of suboptimal care for DDPCP	2020 (n=1228)	2021 (n=1513)	2022 (n=993)	2020-22 (n=3734)	2017-19 (n=3289)
- <u>No</u> suboptimal care identified	401 (33.9%)	528 (34.9%)	320(32.2%)	1274(34.1%)	924(28.1%)
- Suboptimal care, <u>no impact</u> on outcome	96 (8.1%)	132(8.7%)	87(8.8%)	319(8.5%)	312 (9.5%)
- Suboptimal care, <u>possible</u> impact on outcome	408 (34.5%)	538(35.6%)	333(33.5%)	1301(34.8%)	1021 (31.0%)
- Suboptimal care, <u>probable impact</u> on outcome	278 (23.5%)	299(19.8%)	253(25.5%)	840(22.5%)	1032 (31.4%)

In 2020-2022. 57.3% classified as potentially avoidable, compared to 62,4% in 2017-2019

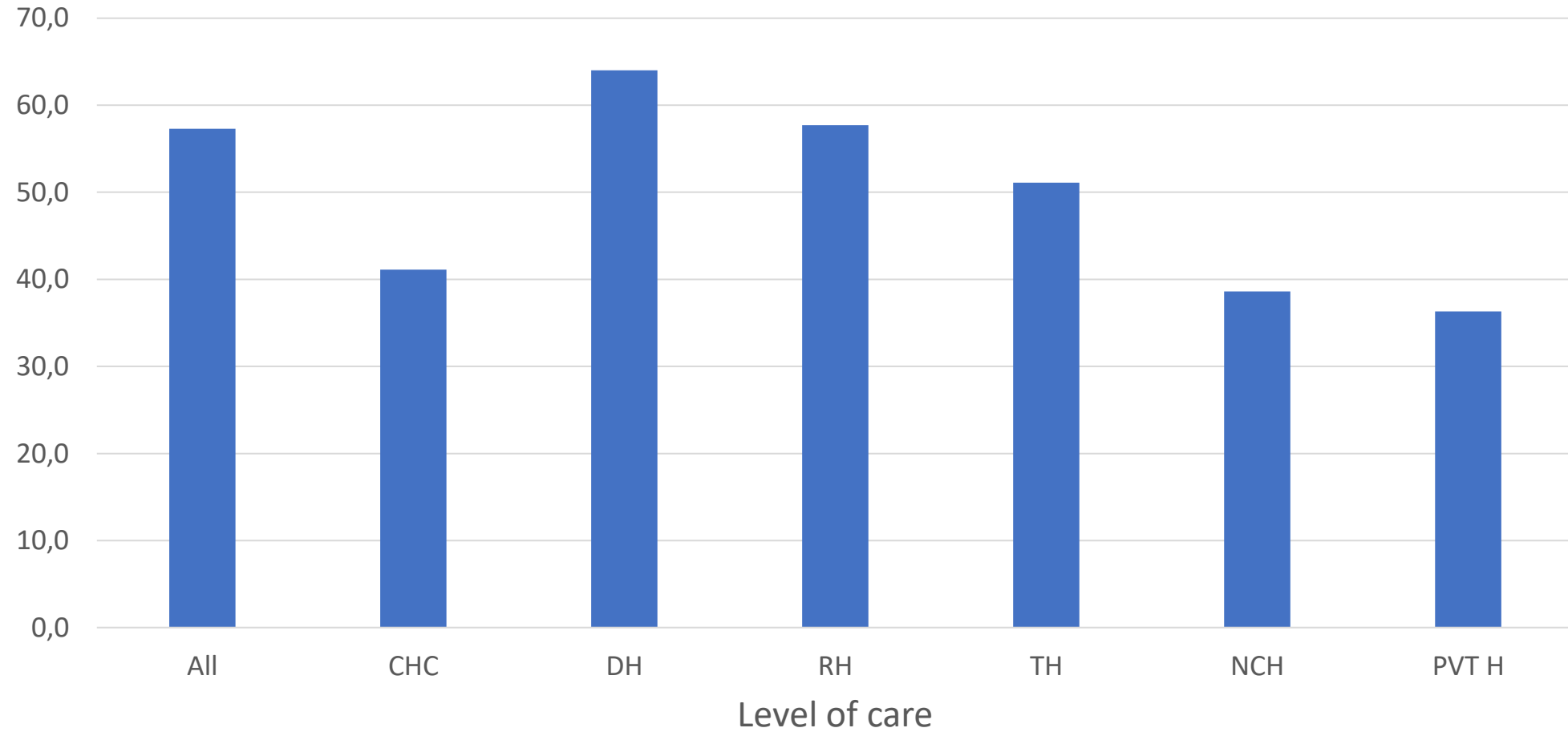
Percentage breakdown avoidable factors

Avoidable factor	2020-2022 (%)	2017-2019 (%)
Patient/Community	48.7	46.8
<i>NB: % Antenatal care attendance greater in 2020-2022</i>		
Administrative	50	48.4
<i>NB: 61.2% 2020; 59.5% 2021; problems with transport, attending to patient and blood</i>		
Health Care Provider		
CHC	42.1	39.3
DH	65.3	69.4
RH	57.3	59
TH/NC	42.5	40
Private	45.9	62.9

Avoidability category per Primary Obstetric Cause



Potentially preventable deaths and level of care



Summary: Findings of Saving Mothers 2020 - 2022 report

- NCCEMD process was impacted by Covid 19 pandemic because increased workload and sickness of HCWs
- **iMMR increased by 30% in 2020 and 47% in 2021, compared to 2019; during the Covid pandemic but decreased to pre-pandemic level in 2022.**
- This trend was seen in all provinces.
- Covid pneumonia /NPRI deaths were the major contributor to the steep increase in 2020 & 2021
- Deaths from Obstetric Haemorrhage increased in 2020 and 2021, reflecting collateral impact of Covid pandemic on functioning of health system.
- Hypertensive deaths and Deaths from Medical and Surgical disorders were third and fourth most common causes, followed by Early Pregnancy complications.
- Administrative avoidable factors increased in 2020 and 2021 but not patient or HCW factors
- **The pandemic set back progress towards achieving SDG goal of MMR 70 by 2030, but now back on track**

Thank you