Saving Mothers 2014-2016

Seventh triennial report on confidential enquiries into maternal deaths in South Africa:

National Committee for Confidential Enquiries into Maternal deaths

Outline

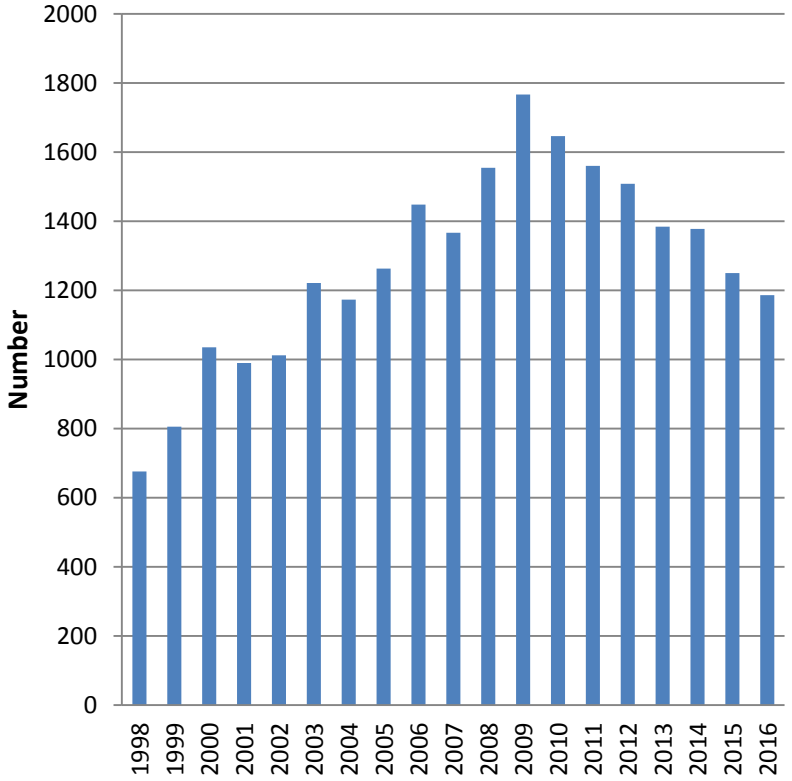
- Key findings
- Progress on 3Hs, 5Cs and 3 key building blocks
- Recommendations
- Conclusion

Key findings

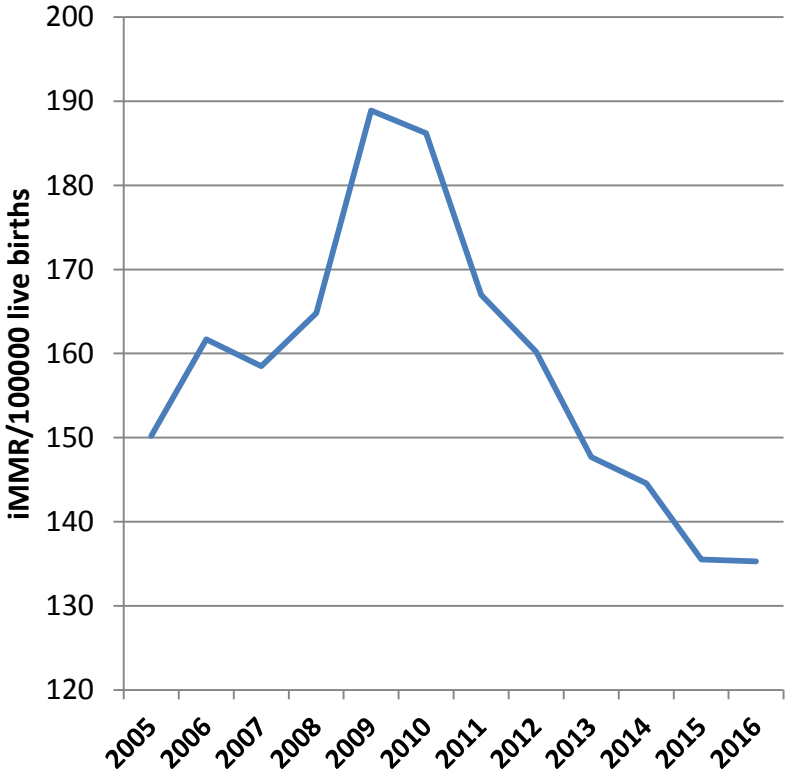
Reduction in mortality

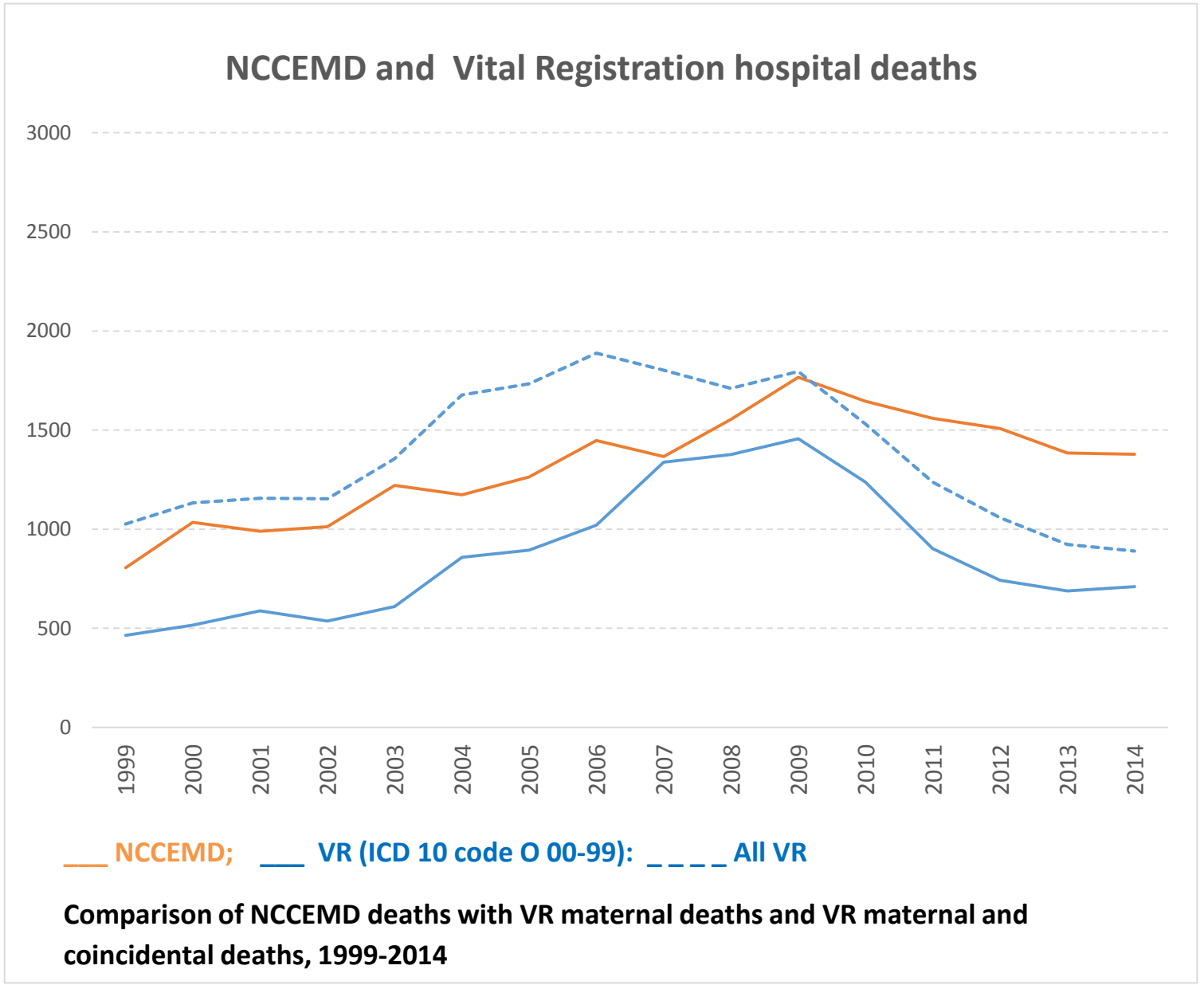
(580 fewer maternal deaths in 2016 than peak in 2009)

Maternal deaths reported to the NCCEMD between 1998-2016



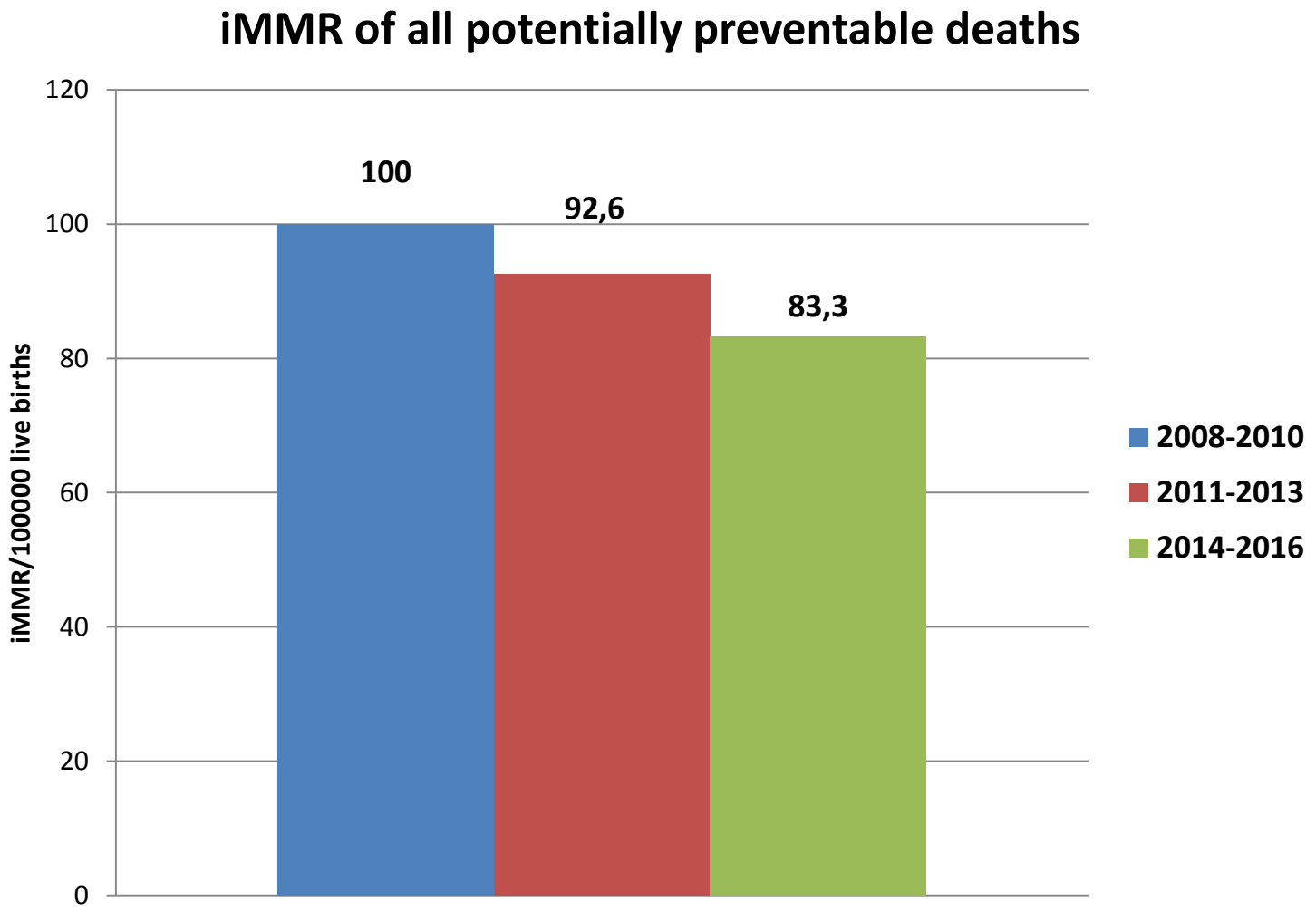
iMMR per year for South Africa 2005-2016





Comparison of NCCEMD deaths with VR maternal deaths and VR maternal and coincidental deaths, 1999-2014

Moderate improvement in quality of care of 18%



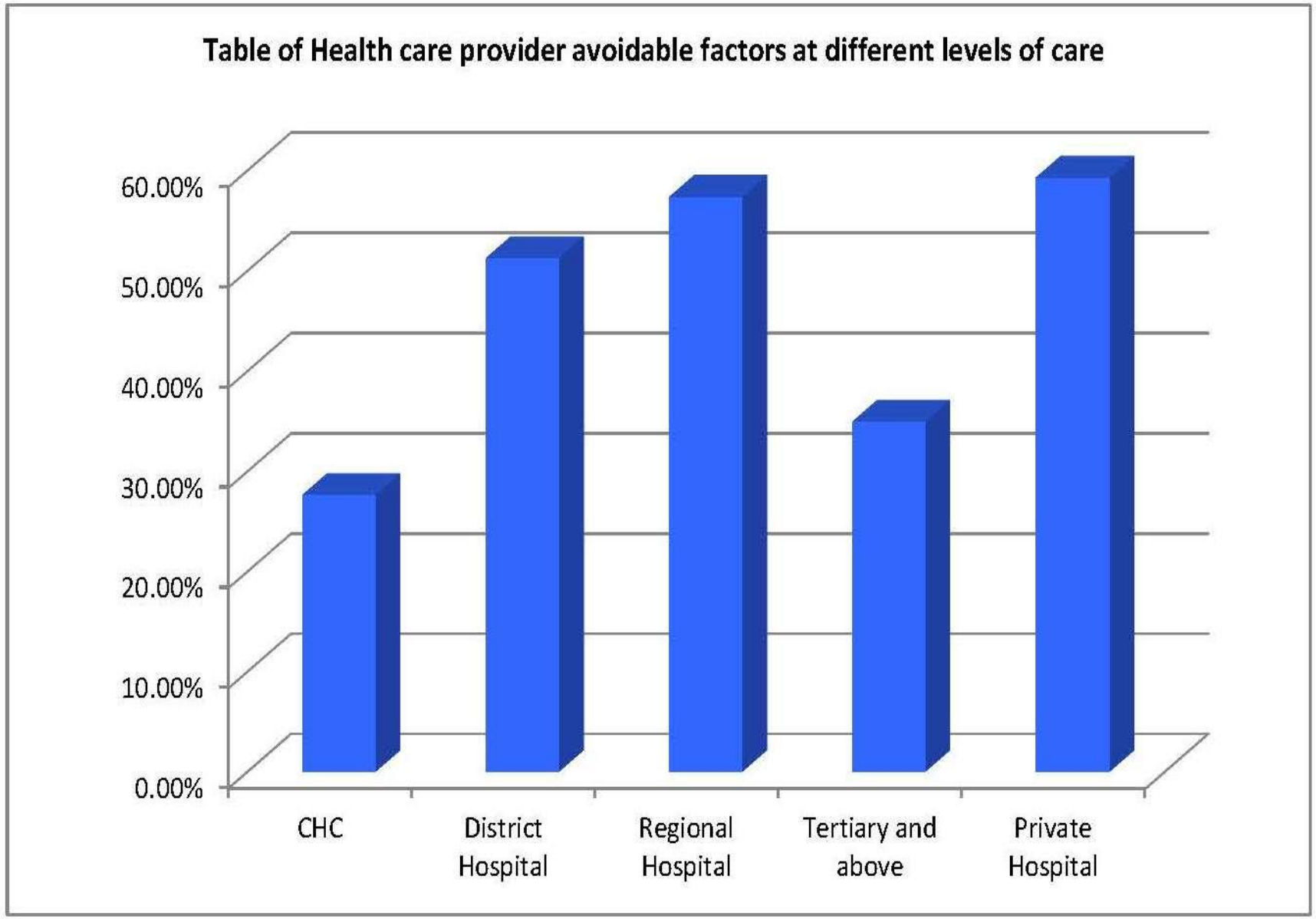
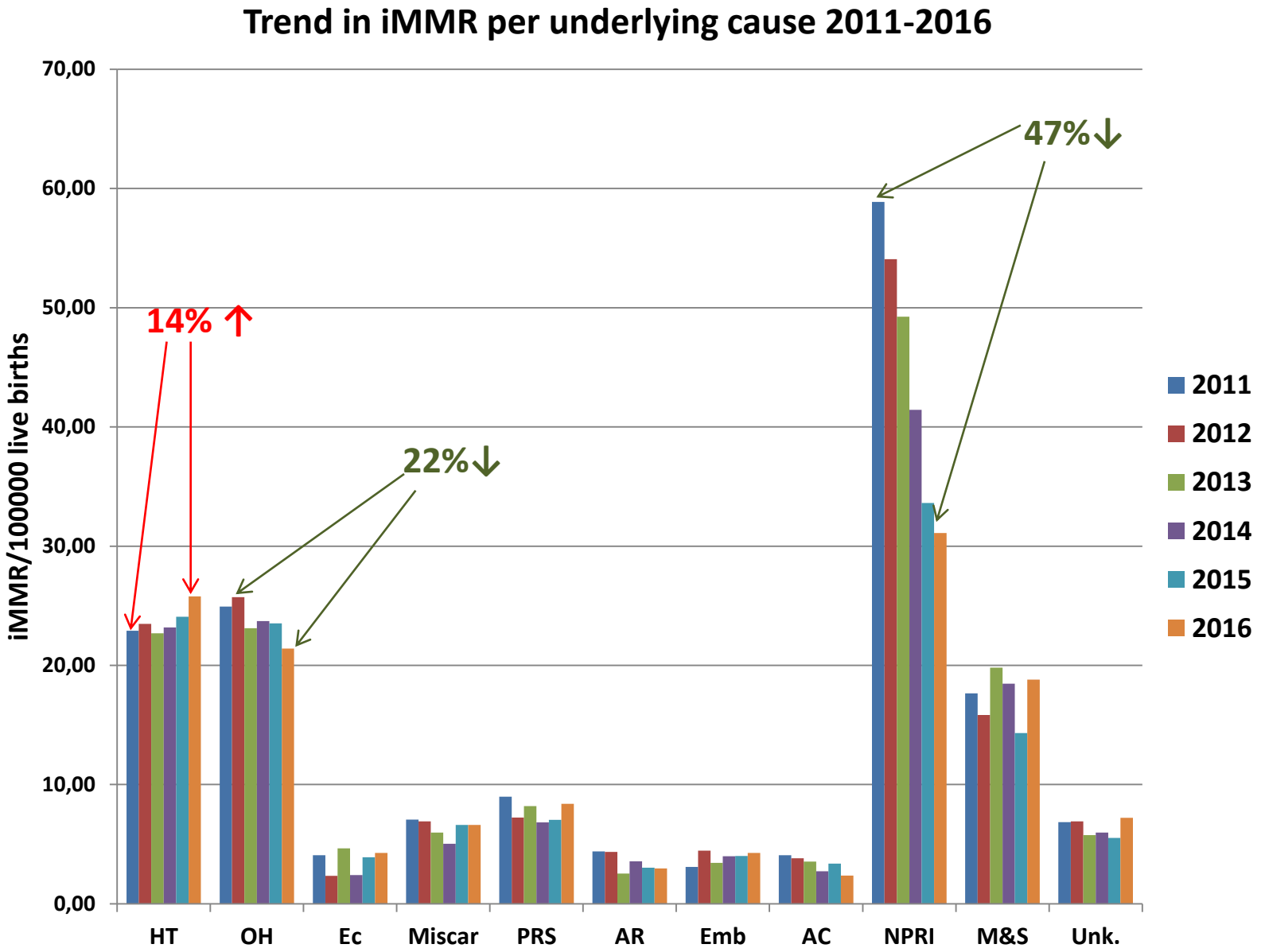
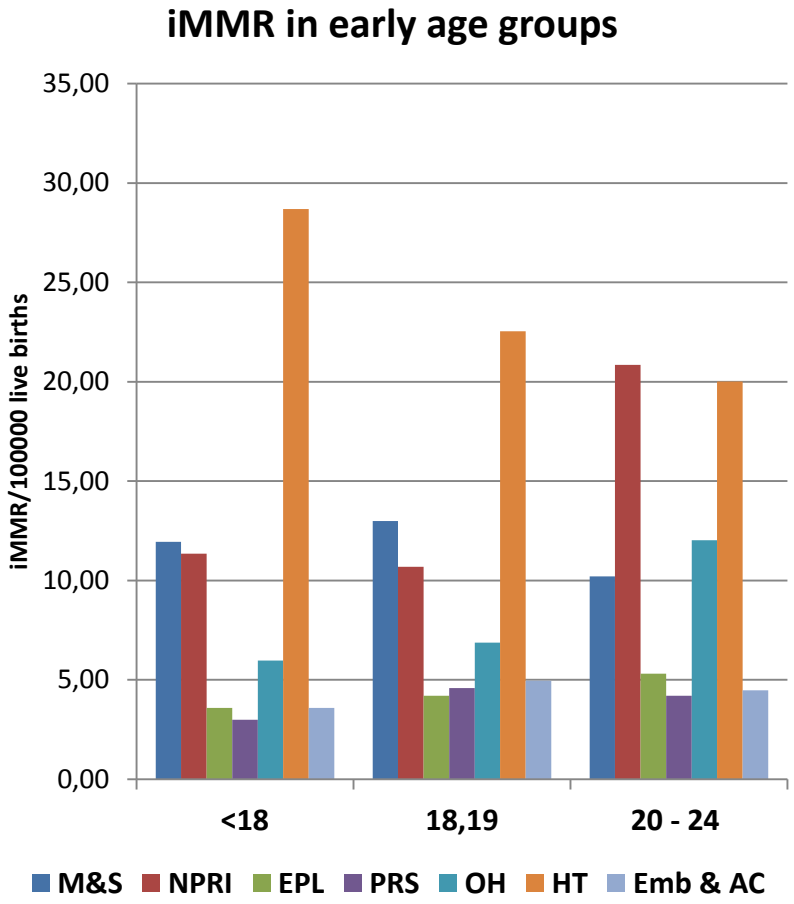
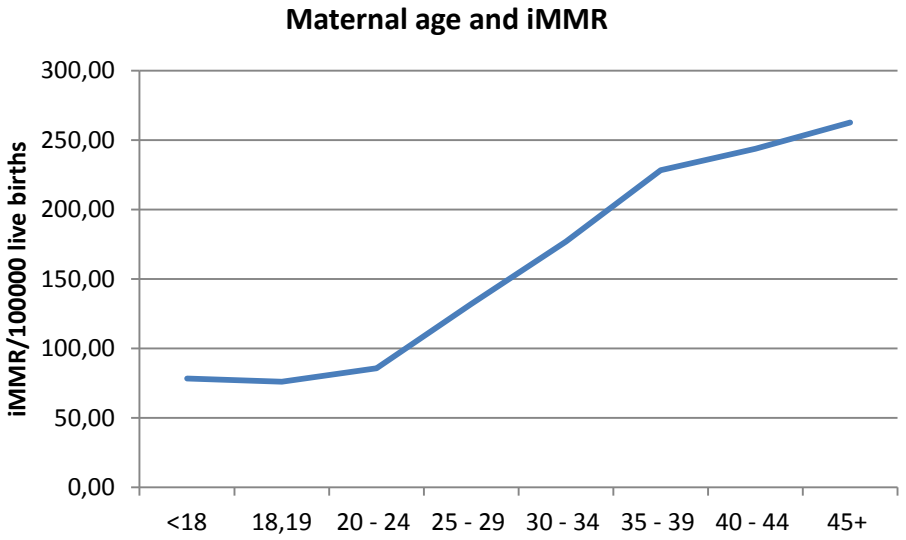


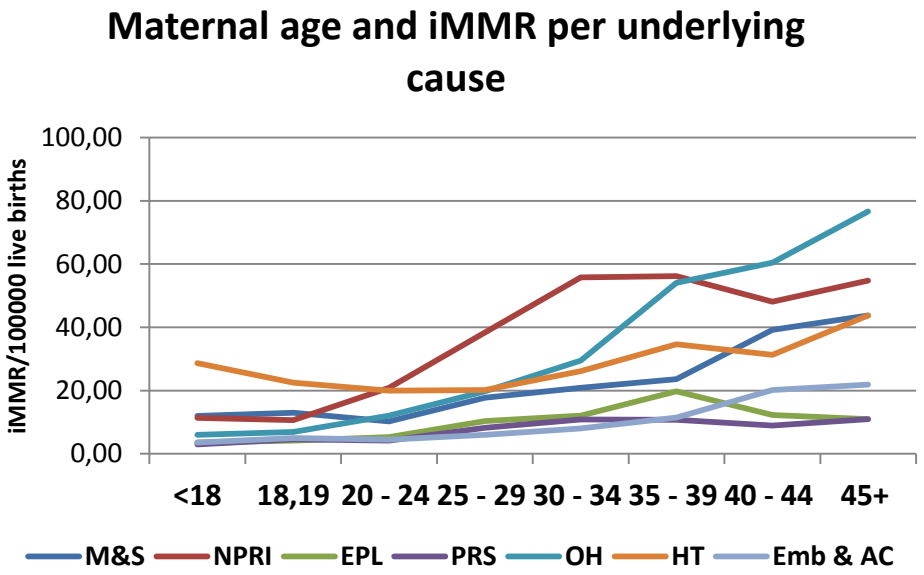
Table of Health care provider avoidable factors at different levels of care
60.00%
50.00%
40.00%
30.00%
20.00%
10.00%
0.00%
CHC
District Hospital
Regional Hospital
Tertiary and above
Private Hospital


Trend in iMMR per underlying cause 2011-2016
iMMR/100000 live births
70,00
60,00
50,00
40,00
30,00
20,00
10,00
0,00
14% ↑
22%↓
47%↓
HT
OH
Ec
Miscar
PRS
AR
Emb
AC
NPRI
M&S
Unk.
2011
2012
2013
2014
2015
2016

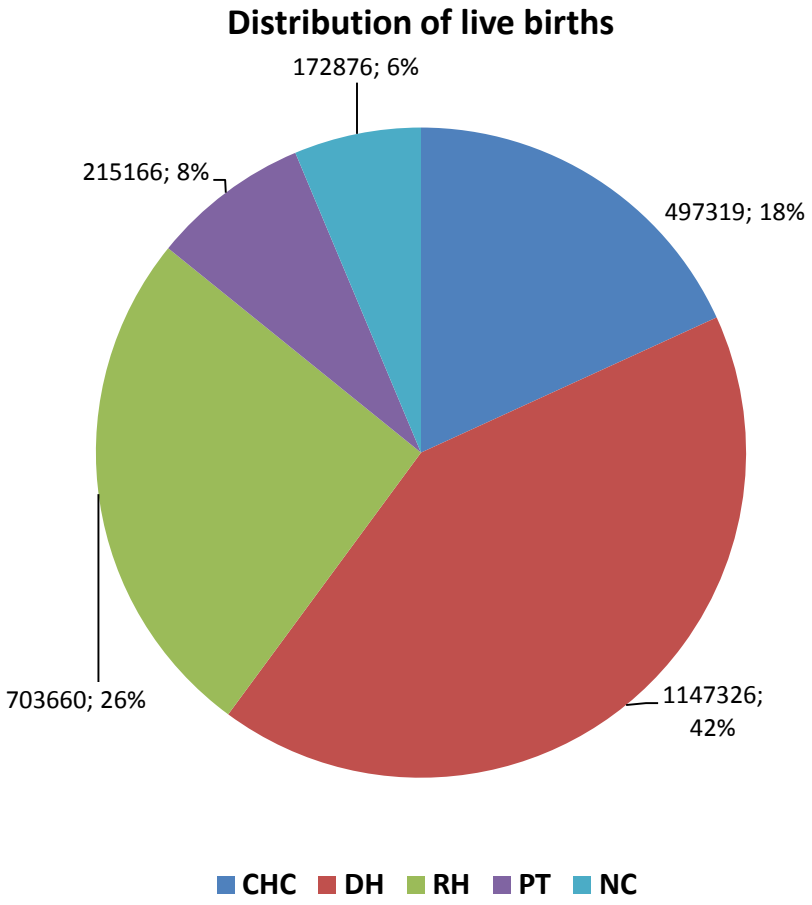
Maternal age and iMMR per underlying cause of maternal death

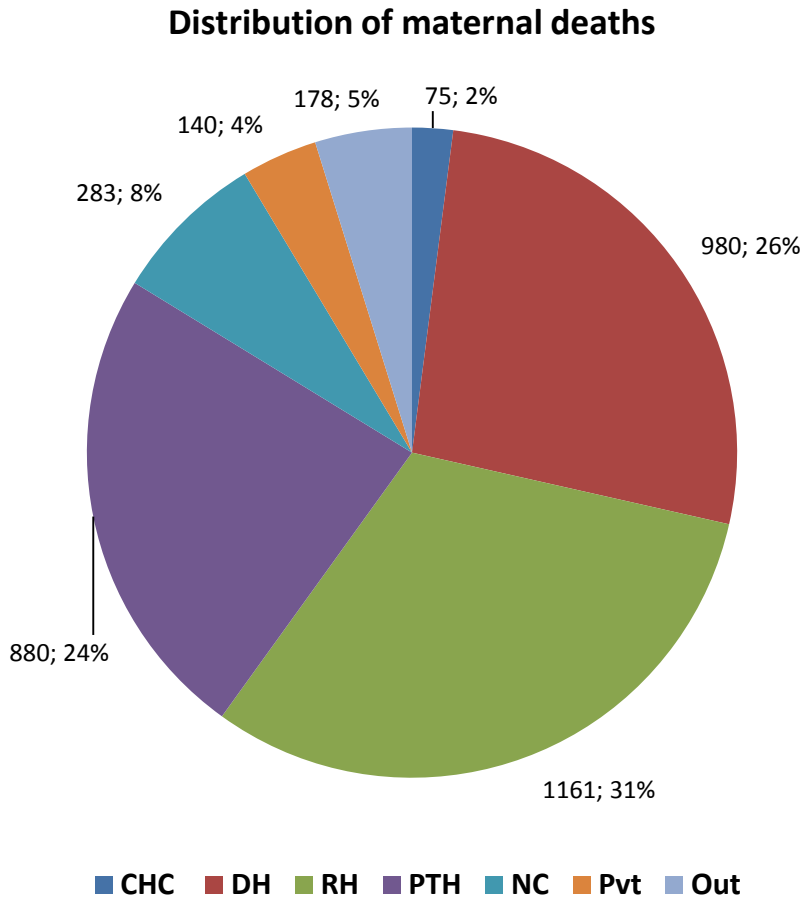




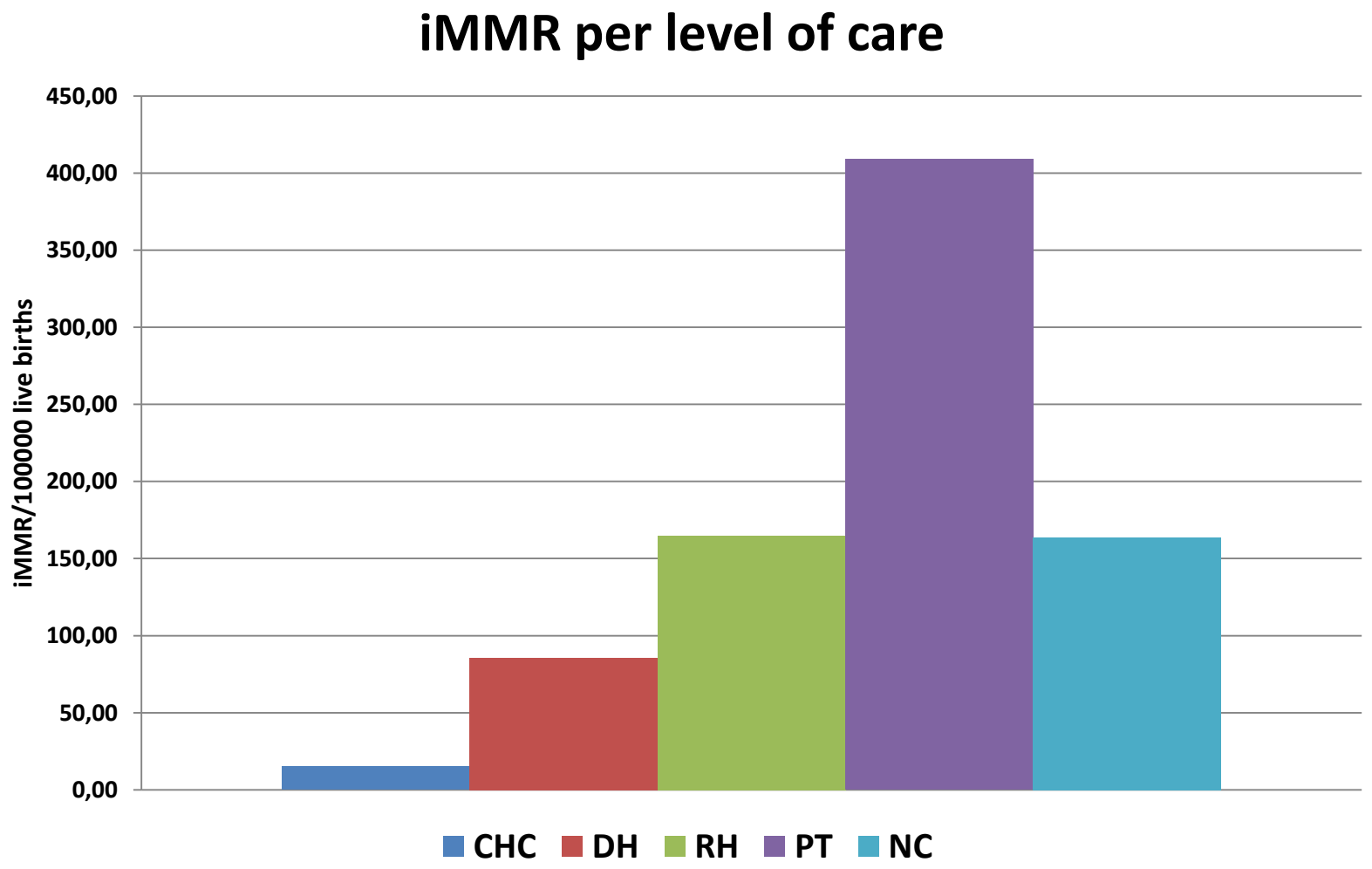


Distribution births and deaths 2014-2016



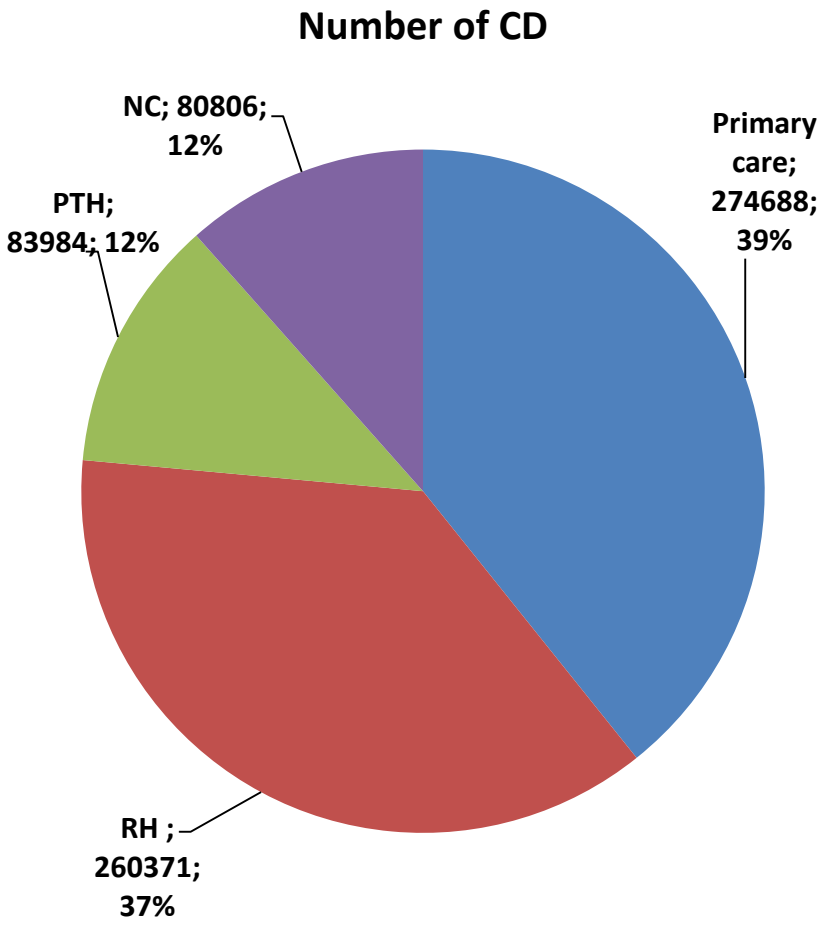


Provincial Tertiary Hospitals have highest iMMR



Safety of Caesarean Deliveries

Caesarean Delivery per level of care 2014-2016



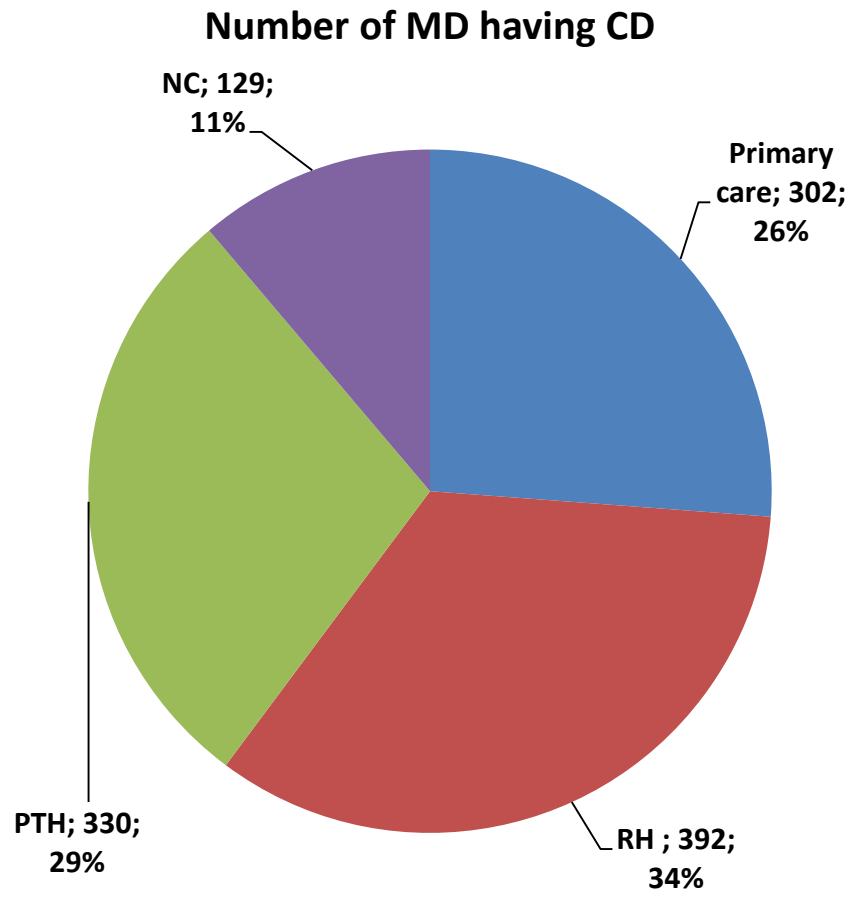
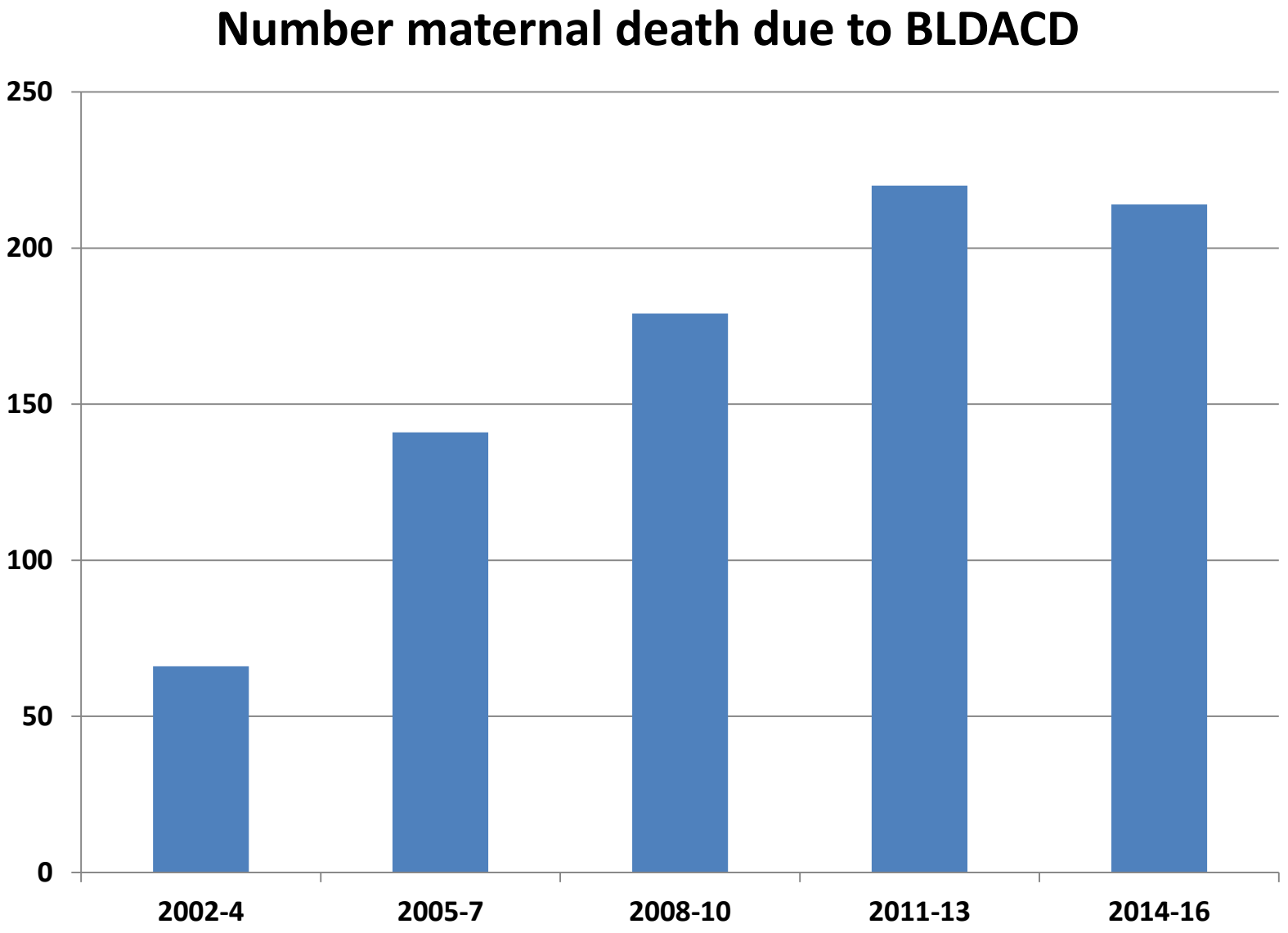


Table 2.4.4 Comparison case fatality rate (CFR) and number of deaths per province

	CFR/100000 CD		Number MD CD	
Provinces	2014-2016	2011-2013	2014-2016	2011-2013
Limpopo	242.90	319.20	168	188
Mpumalanga	242.42	305.32	102	117
North West	230.21	254.48	84	71
Northern Cape	185.93	165.78	25	20
Gauteng	180.94	163.91	302	253
Free State	170.84	216.95	56	74
South Africa	169.63	190.35	1201	1243
Eastern Cape	168.75	195.21	154	174
KwaZulu-Natal	136.77	164.49	236	273
Western Cape	88.78	101.03	74	73


Number maternal death due to BLDACD
250
200
150
100
50
0
2002-4
2005-7
2008-10
2011-13
2014-16

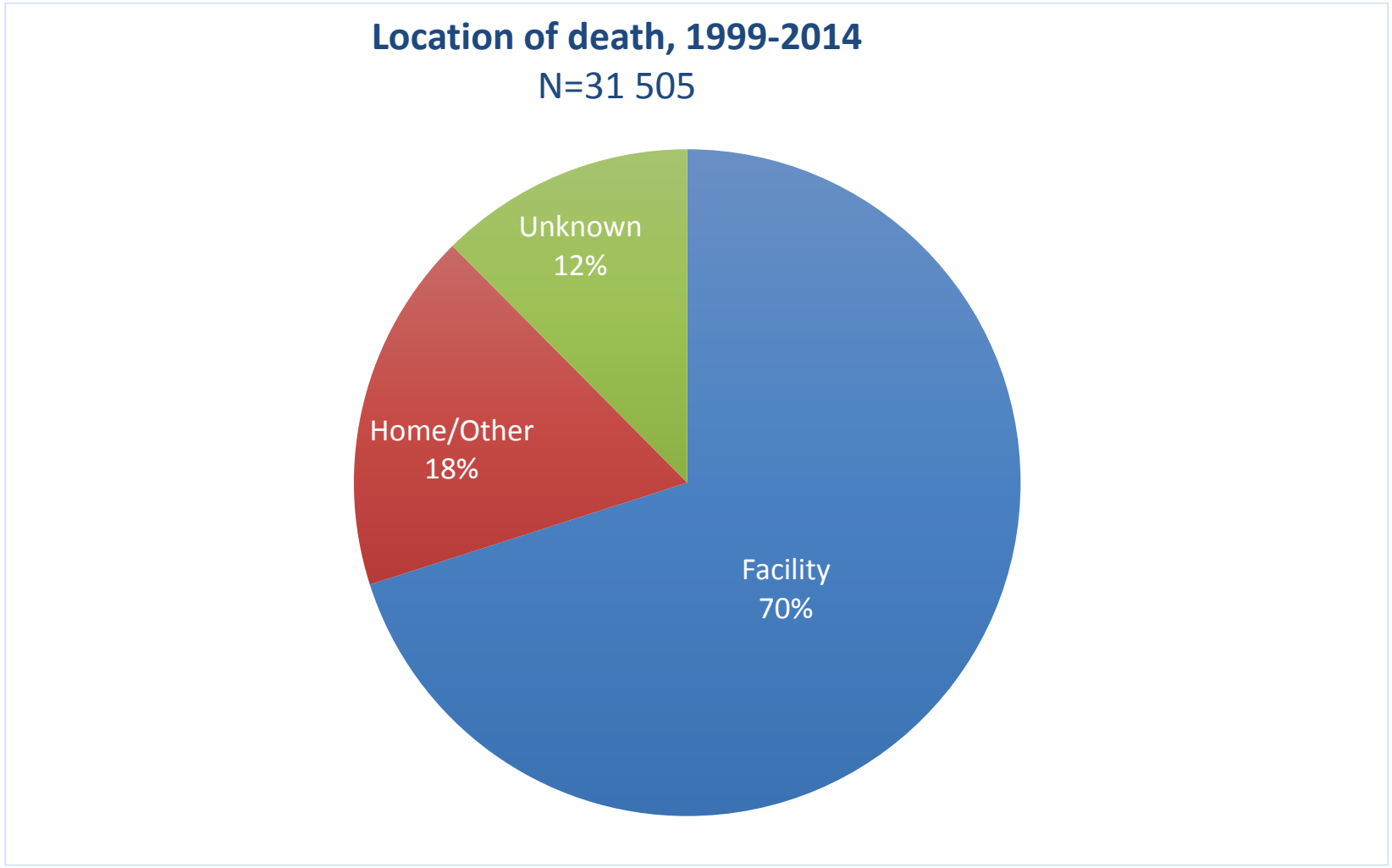
Knowledge and Skills for Caesarean Deliveries

- BLDACD deaths:
  - lack of skilled doctors avoidable factor in 33% cases, and lack of skilled nurses in 20% of cases.
    - 50 maternal deaths occurred after CD in District Hospitals in which 25 cases lacked a skilled doctor;
    - 14 of 43 cases in Regional Hospitals,
    - 21 of 47 cases in Provincial Tertiary Hospitals
- Anaesthetic deaths
  - 56% occurred at DH
  - final cause of death in over half the cases was due to failure to protect the airway during the anaesthesia.

Emergency transport

- Referral problems (delay in decision to refer and inter-facility transport problems)
  - Community Health Centres - 32.5%,
  - District Hospitals - 55.2%
  - Regional hospitals - 79.9%.
- Delay in inter-facility transport was thought to have contributed to the maternal deaths
  - 31% of ectopic pregnancies,
  - 24% of obstetric haemorrhage,
  - 19% of HDP,
  - 20% of anaesthetic related
  - 18% of acute collapse

Deaths outside facility



Deaths outside facility

- SADHS – 96% deliver in health facilities
- Most of the women who died outside of the facilities were either discharged too soon or developed complications later
- “Home visits” to all women postpartum are essential and should be part of the WBOTs job description, and should be additional to the formal facility-based post-natal visits

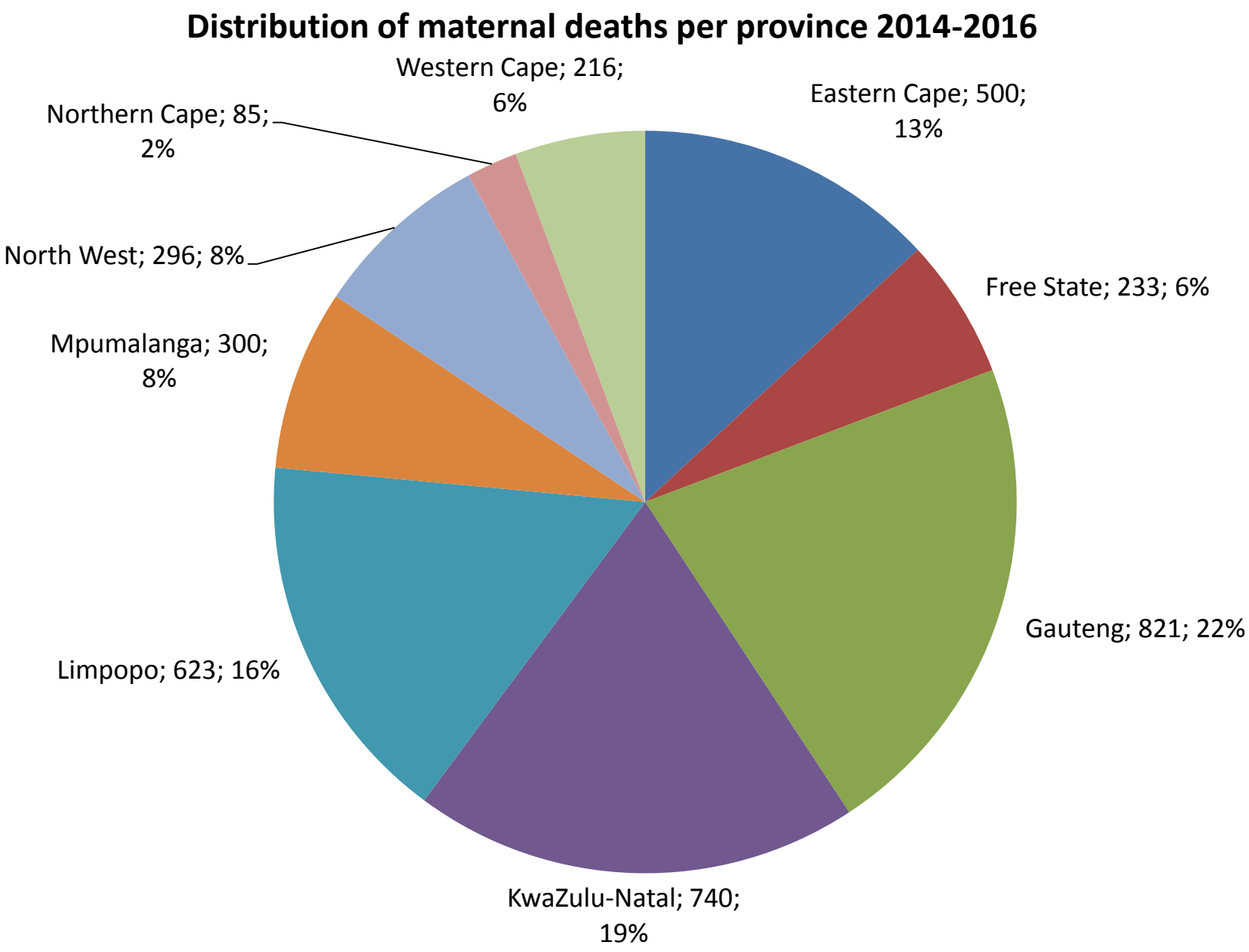
Knowledge and skills

- **Lack of skilled doctors** recorded in:
  - 51% of ectopic pregnancy deaths,
  - 33% miscarriage,
  - 46% pregnancy related sepsis,
  - 48% of OH,
  - 34% of HDP,
  - 71% anaesthetic related, and
  - **overall 39%**

This mostly reflects inadequate skills but in some cases was due to a numerical lack of staff (especially in more disadvantaged provinces) and lack of professionalism amongst doctors

- **Lack of skilled nurses/midwives recorded in 25% of maternal deaths**

Provincial distribution


Distribution of maternal deaths per province 2014-2016
Western Cape; 216; 6%
Eastern Cape; 500; 13%
Northern Cape; 85; 2%
North West; 296; 8%
Free State; 233; 6%
Mpumalanga; 300; 8%
Gauteng; 821; 22%
Limpopo; 623; 16%
KwaZulu-Natal; 740; 19%

Provincial iMMRs and targets

Comparison between national average and provinces

	EC	FS	Gau	KZN	Lim	Mpu	NW	NC	WC
M&S	21.77	21.64	14.63	18.36	18.77	9.86	17.63	10.89	15.76
NPRI	42.94	47.91	28.45	39.20	36.73	33.16	53.47	32.68	16.11
Ec	1.81	3.86	3.90	3.53	4.63	4.03	4.70	0.00	2.10
Misca	3.93	6.95	8.62	4.77	9.25	4.93	7.64	1.56	1.40
PRS	7.56	10.05	8.78	6.36	10.07	4.48	7.05	1.56	4.55
OH	25.40	27.82	21.95	15.19	33.47	32.26	28.79	28.01	7.36
HT	28.42	31.68	26.18	18.54	27.75	28.23	30.56	26.45	9.11
AR	3.93	2.32	1.63	3.35	6.53	3.14	4.11	0.00	1.40
Emb	5.14	4.64	5.04	2.12	4.90	2.24	2.94	6.22	4.55
AC	1.51	6.18	3.74	3.00	1.90	2.24	2.94	4.67	1.40
iMMR	148.47	174.63	128.78	127.14	165.16	132.19	172.17	121.37	68.30

Highest

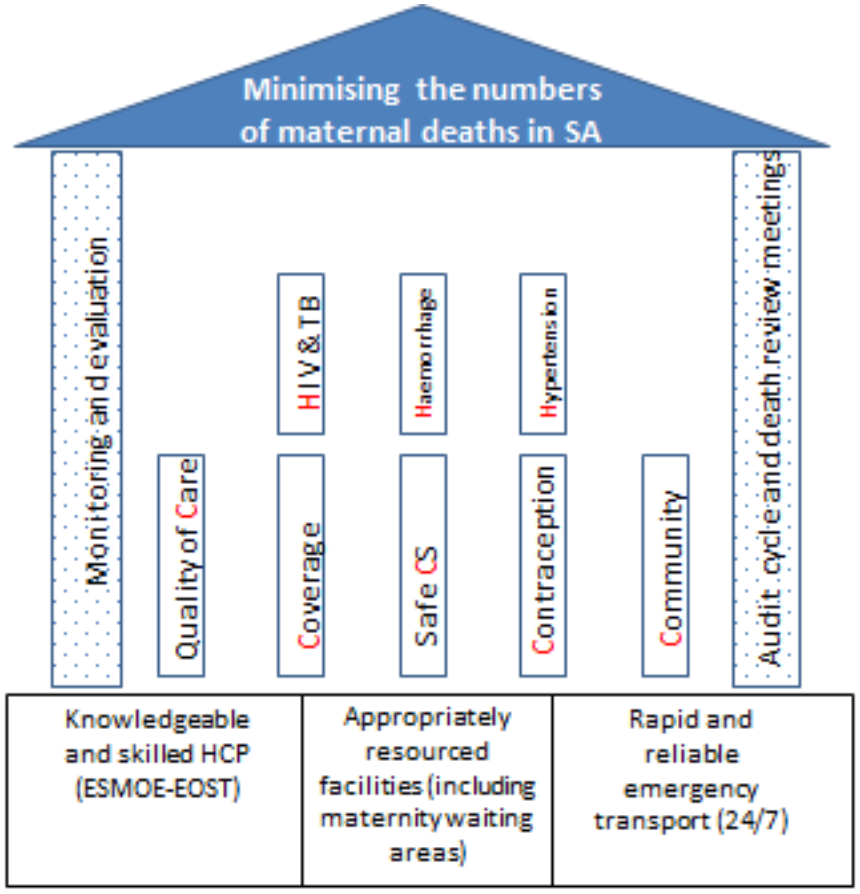
>15%

Between 15% above and below

<15%

Lowest

Progress on 3Hs, 5Cs and 3BBs



The 3 key building blocks

3Hs
HIV, Haemorrhage and Hypertension

- HIV
  - Change in drug regimes
    - Reduction in deaths due to adverse drug reactions
      - 27 MD in 2014-2016 vs 130 MD 2011-2013
  - Emphasis on TB screening
- Haemorrhage
  - New PPH protocol
    - Includes Tranexamic acid
    - Promotes Non-pneumatic Antishock Garment
    - Safe CD
- Hypertension
  - BANC Plus
    - Increased screening in third trimester

5Cs

- Safe CD
  - Safe CD package
  - ESMOE Refresher course
  - Health Systems workshops
- Contraception
  - Training in postpartum contraception
    - Pilot WC
    - ESMOE Refresher course

5Cs (cont.)

- Commitment to quality Care
  - Respectful care DVD
- Coverage
  - Postnatal care and deaths at home
  - Discharge checklist
- Community
  - Negotiations with WBOTs on primary care key messages
  - MomConnect

3 key Building Blocks

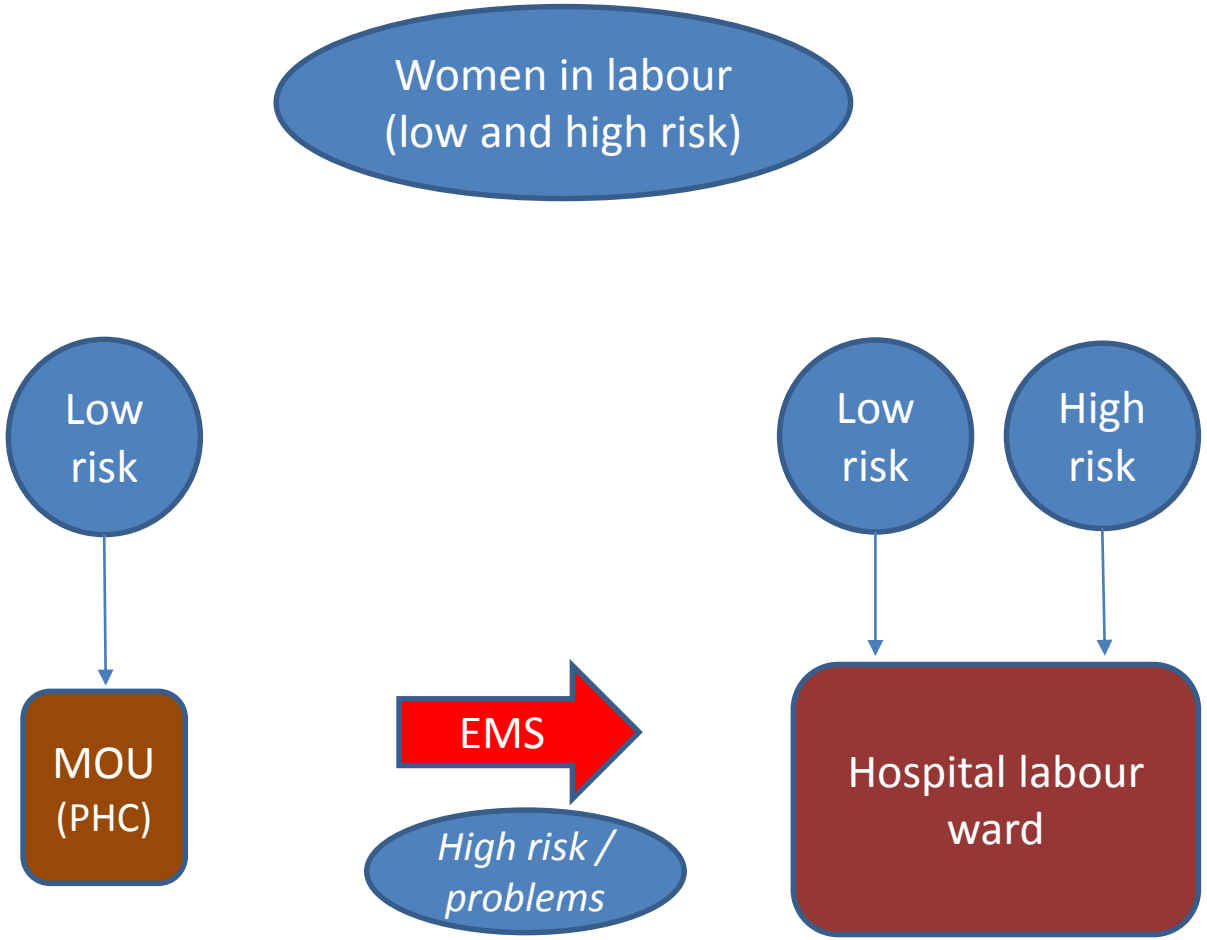
- Knowledgeable and Skilled HCP
  - ESMOE-EOST programme
- Resources
  - Access versus Safety
  - Realignment of services
- Emergency transport
  - Maternity waiting homes
  - On-site Maternity Birthing Units (OMBU)
  - EMS ESMOE

Integrated plan for reduction of maternal and neonatal mortality

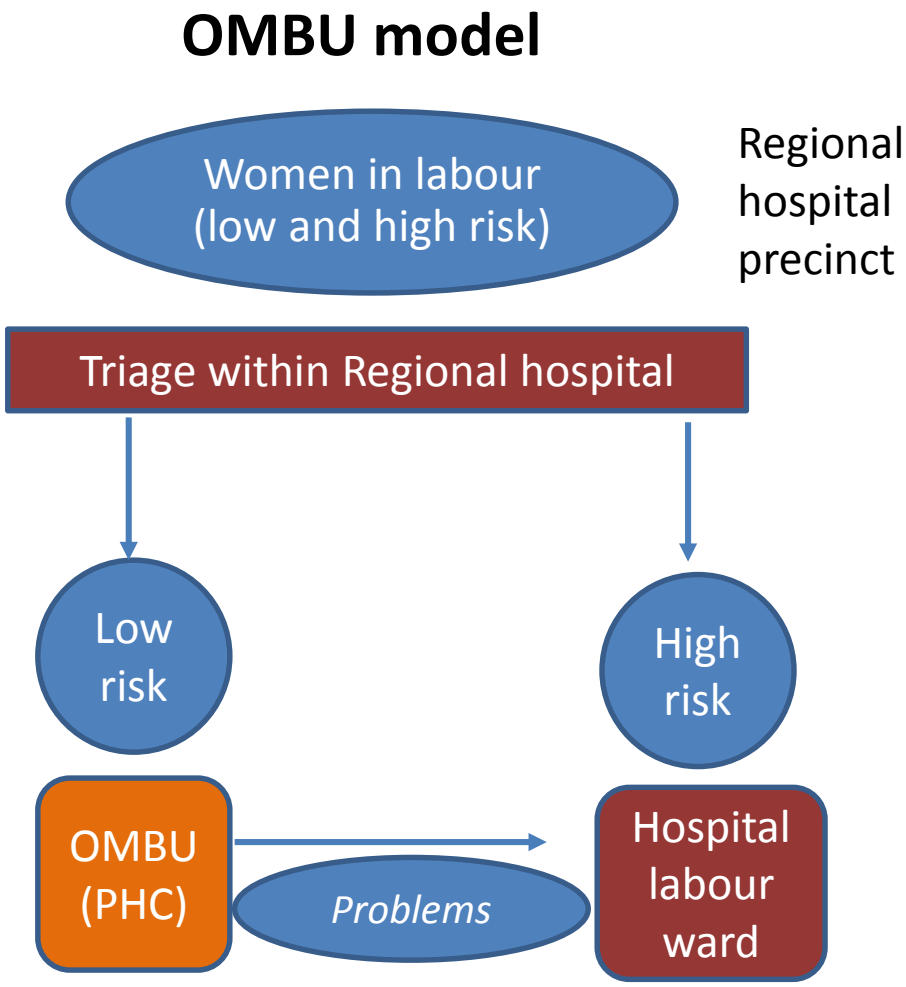
- Health Systems workshops (NDOH)
  - Participants: frontline clinicians and managers
  - Purpose: Implementing Integrated Plan for mothers and newborns
  - Programme: Using facility based-data and 4 case scenarios to catalyse solution finding
    - E.g. OMBU to manage overload at regional/provincial tertiary hospital

On-site Midwife Birthing Unit (OMBU)

Conventional model



On-site Midwife Birthing Unit (OMBU)



On-site Midwife-run Birthing Units

- Potchestroom Hospital
  - Building available
  - Primary health care staff available for transfer
  - Approval?
- Welkom (Bongani Hospital)
  - Building available
  - Primary health care staff available for transfer
  - Approval?
- Rustenburg (JS Tabane Hospital)
  - Building available
  - Primary health care staff?
  - Approval?

Areas for Action

Policy-makers, service planners, Health Professions Council, Nursing Council and Professional Organisations

- Continue focus on HIV:
- Ensure safe caesarean delivery sites:
- Improve intern training:
- Emergency Medical Services must prioritise transfer of maternity emergencies.
- Engage the community/social mobilization.
- Explain to the community the balance between accessible services and safe services.

District Managers/Directors, EMS Managers, Chief Executive Officers (CEOs), Clinical Managers, Heads of Maternity

- 80% ESMOE threshold
- Monthly EOST drills
- Integrated family planning
- priority inter-facility emergency transport
- safe CD service
- maternal and perinatal death review meetings
- High risk antenatal clinics must be established
- Monitor implementation of the signal functions
- Ethical and professional accountability

Doctors, nurses/midwives and allied health workers who work in or cover maternity service

- Abide by the ethical and professional standards expected of health care professionals
- Ensure they have the essential competencies
- Improve and maintain competence by attending ESMOE courses and participating in obstetric, anaesthetic and neonatal emergency drills
- Know and apply the latest HIV screening and treatment protocols
- Discuss planned parenthood with all men and women of reproductive age at all relevant health interactions
- Engage in maternal and perinatal death review processes

Summary

- Continued reduction in maternal deaths
- Quality of care slowly improving
- NPRI and OH deaths decreasing
- Hypertension has become the main problem
- Provincial Tertiary Hospitals need investigating
- Safe CD project must continue
- Emergency transport and referral routes need improving
- Home deaths around 20%, improve postnatal care
- Knowledge and skills sometimes lacking in doctors and nurses
- Great variation in Provincial iMMR

Conclusion

- Continued slow but steady improvement
- More still needs to be done
- Need more intense monitoring of implementation