

Maternal, Neonatal, Child and Women's Health (MNCWH) Summit

Recommendations from the National Perinatal and Neonatal Morbidity and Mortality Committee (NPNMMC)

Birchwood Hotel, 25th August 2009

Auditing Deaths: Numbers/ Mortality Rates

- Sources
 - District Health Information System (DHIS)
 - Facility based, not including community deaths
 - Department of Home Affairs/ StatsSA
 - Demographic Health Survey
 - Research Centers
 - Vermont Oxford Network

Pathological & Health Systems Causes

- Sources
 - Perinatal Problem Identification Program (PPIP)
 - Deaths in facilities-maternity, quality of care
 - Child Healthcare Identification Program (ChildPIP)
 - Deaths in facilities- general wards, quality of care
 - Home affairs/ Stats SA
 - Demographic Health Survey
 - Research Centers

Monitoring Clinical Audit: Provincial Level

- Committee Composed of:
 - **NPNMMC Committee member** from that province
 - Provincial representative from **DHIS**
 - Co-ordinator/ appropriate person from provincial **MNCWH**
 - Provincial **PPIP** co-ordinator/ representative
 - Provincial **Child PIP** co-ordinator/ representative
 - Provincial representative from **Dept. of Home Affairs**

Provincial Facilitators from NPNMMC

- Limpopo: Dr. Shipalana
- Mpumalanga: Ms. Khoza/ Prof. Pattinson
- Gauteng: Prof. Cooper
- North West: Dr. Tshenkeng
- Northern Cape: Dr. Jansen
- Free State: Ms. Thabane/ Prof. Steinberg
- Western Cape: Dr. Stewart/ Dr. Rhoda
- Eastern Cape: Prof. Nazo/ Ms. Mtyenge
- KwaZulu Natal: Prof. Adhikari

DHIS vs. Home Affairs (Stats SA)

	SA DHIS 2005	Stats SA 2005	SA DHIS 2006	Stats SA 2006	SA DHIS 2007	Stats SA 2007
T. Births	887 146	-	921 880	-	919 897	-
L. Births	877 715	998 257	903 514	999 874	897 449	911 494
S. Births	21 479	13 721	22 082	14 194	21 710	-
EN.Deaths	8 893		8 922		8 134	
N. Deaths	10 108	12 807	11 920	13415	9 084	-
SBR	24.2	-	23.9		23.7	
NMR	11.5	12.8	12.9	13.4	10.12	
PMR	34.2	-	33.6		32.44	
Worse ND	14 440	-	17 028		12 977	
Worse	14.5	-	17.03		14.2	

NMR

PPIP Data 2006-7: Healthcare Facilities

Sites	South Africa	PIPP Sites	PIPP as % of SA
Community Health Centers	327	51	17%
District Hospitals	257	137	53%
Regional Hospitals	65	46	71%
Provincial Tertiary	6	5	83%
National Central	9	5	56%
All	664	244	37%

Births 2006-7: SA (DHIS) vs. PIPP

Sites	South Africa	PIPP Sites	PIPP as % of SA
Community Health Centers	262 570	73 546	28%
District Hospitals	719 508	288 549	40%
Regional Hospitals	494 614	235 999	48%
Provincial Tertiary	32 000	93 401	34%
National Central	101 298	29 715	29%
All	1671 391	659 809	40%

Neonatal Deaths: PIPP (2006-7)

Sites	Early N. Deaths	Late N. Deaths	All N. Deaths (%)
Community Health Centers	219	23	242 (2.6)
District Hospitals	3533	601	4134 (44.1)
Regional Hospitals	2962	835	3797 (40.5)
Provincial Tertiary	475	128	603 (6.4)
National Central	500	91	591 (6.3)
All	7689	1678	9367

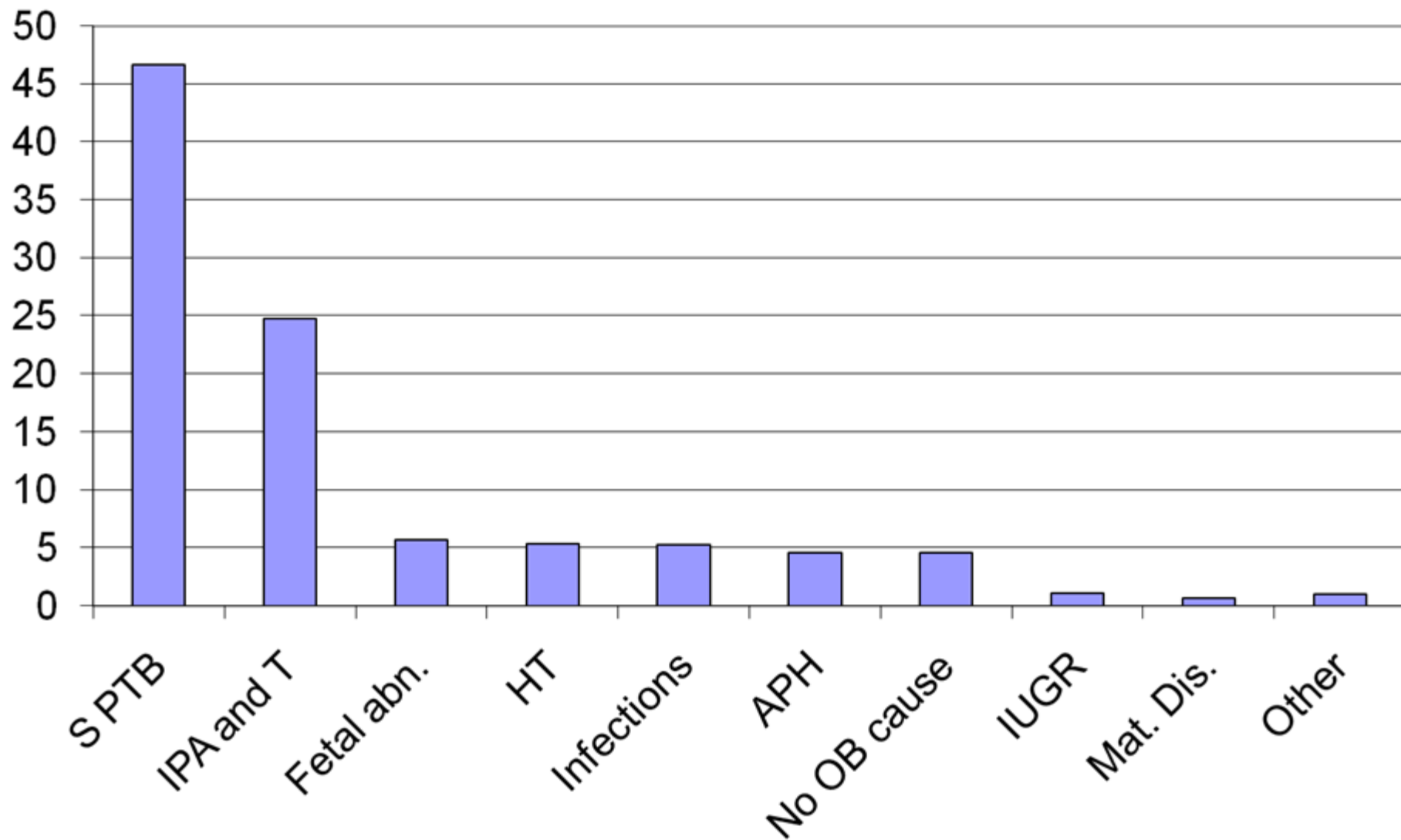
Early Neonatal Mortality Rates

	CHC	DH	RH	PT	NC
All (≥ 500 g)	3.0	12.5	12.9	15.4	17.8
>1000 grams only	1.9	9.9	8.9	10	9
500-999 grams	443	451	503	490	364
1000-1499 grams	109	243	147	113	61
1500-1999 grams	20	65	38	34	25
2000-2499 grams	4.1	14.1	10.2	9.7	10.8
2500 grams+	0.9	4.9	4.8	4.5	3.8

Primary Obstetric Causes

- Unexplained Stillbirths 24%
- Spontaneous preterm births 23%
- Intrapartum asphyxia and trauma 17%
- Maternal Hypertension 13%
- Antepartum haemorrhage 10%

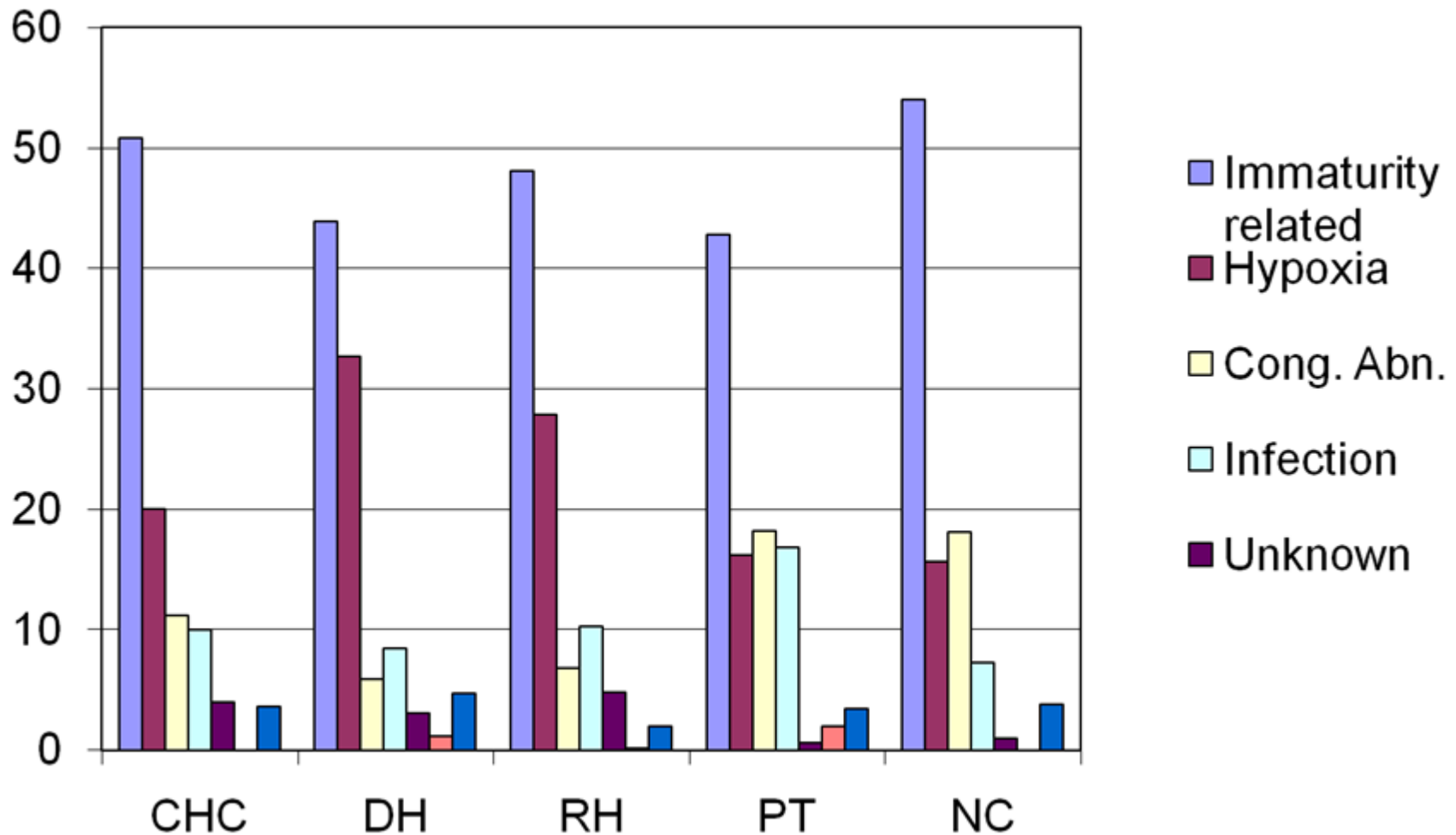
Neonatal Deaths: Primary Obstetric Causes



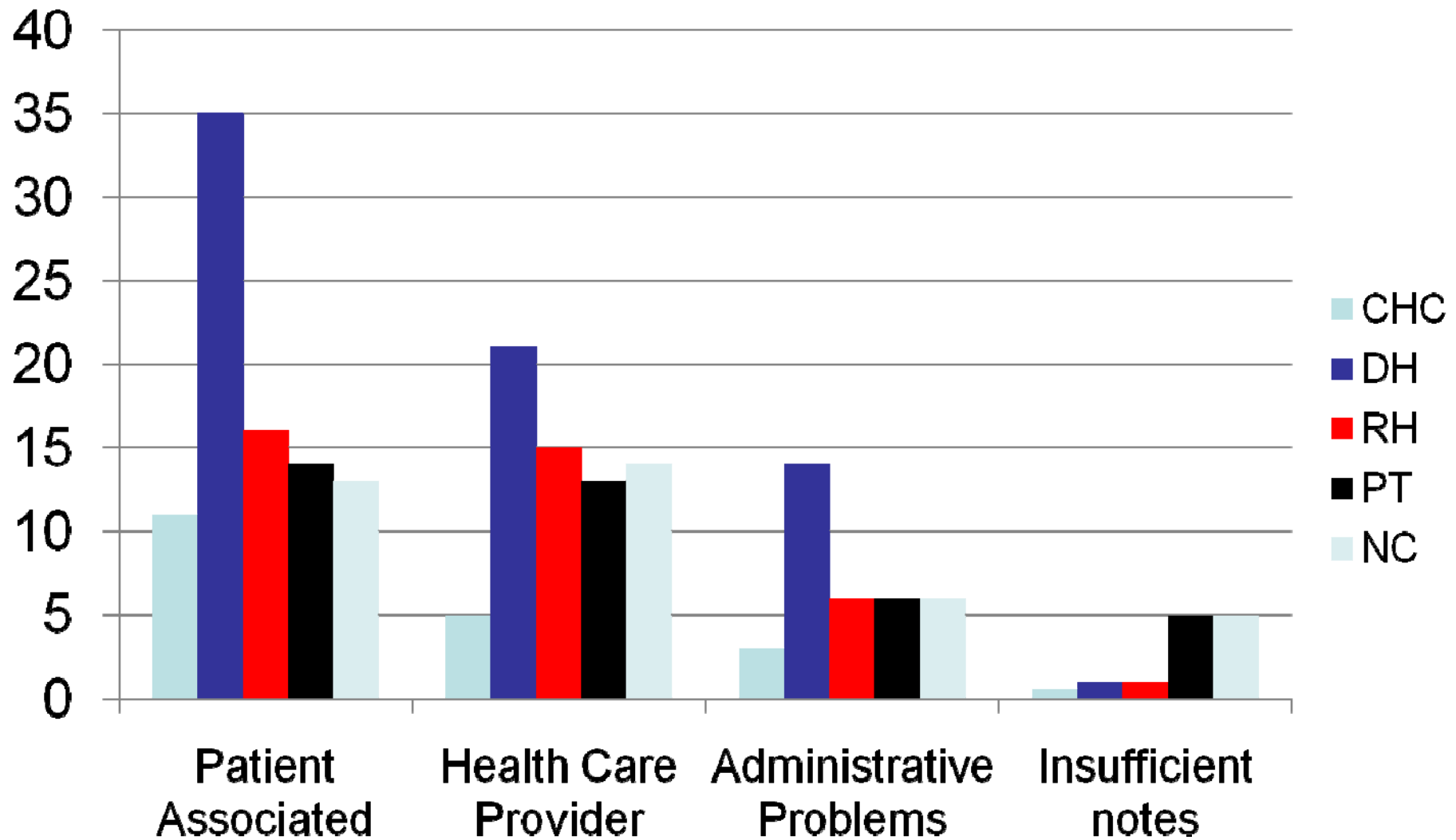
Neonatal Deaths: Final Diagnosis

- Immaturity-related (Prematurity) 46%
- Asphyxia-hypoxia 29%
- Infection 10%
- Congenital abnormalities 8%

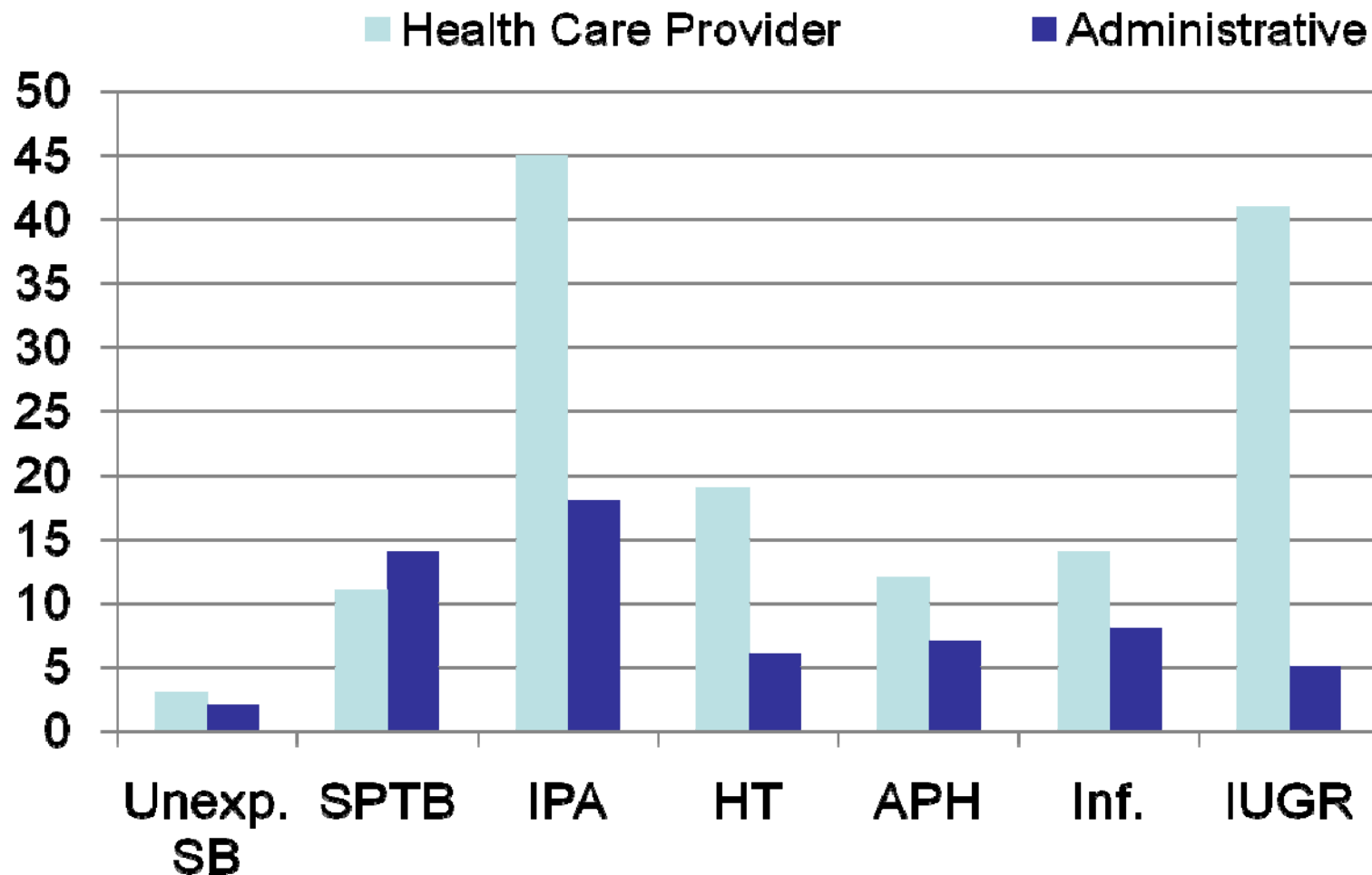
Causes of Neonatal Deaths: Sites



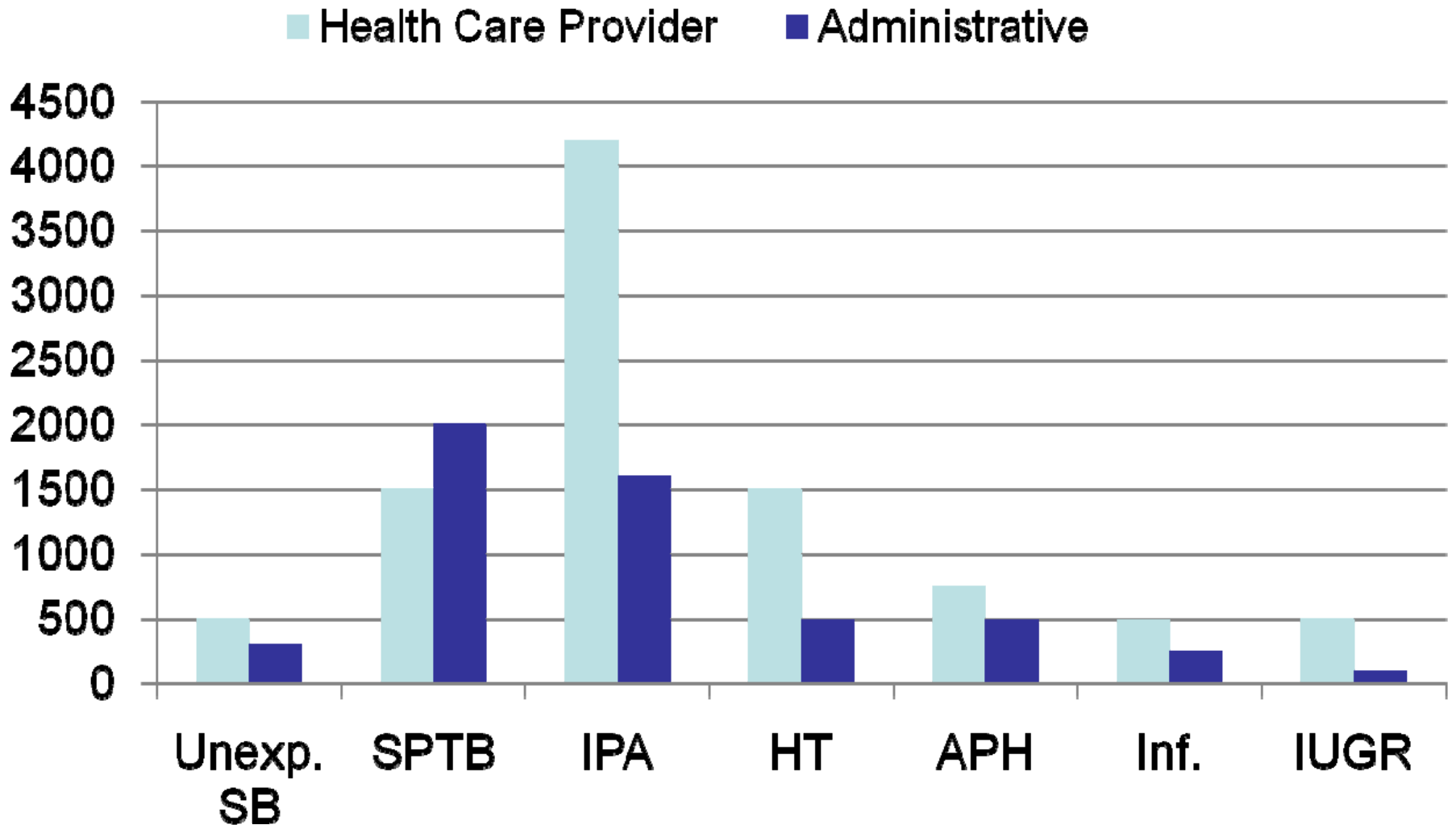
Probably Avoidable Factors per Level of Care (percent)



Probably Avoidable Deaths per Disease Category in Health System (percent)



Number of Deaths due to Probably Avoidable Factors per Disease Category



Recommendations

1. Clinical skills Improvement

- Skills in emergency care (ESMOE- Neonatal Resuscitation)
- HPCSA certification
- In-service training (clinical instructors)

2. Staffing, equipment and facilities

- Norms to be followed
- Systems to attract and retain staff
- Equipment lists adhered to

3. Implementation of National Guidelines

- National guidelines must be available & implemented
- Maternal, Intrapartum, Neonatal and PMTCT guidelines

4. Training and education

- More bedside than classroom teaching
- Guidelines to be part of curricula
- Two year course for staff nurses in obstetrics (midwives)

Recommendations

5. Transport and referral routes
 - Women in labour and sick neonates must be treated as priorities
 - Transport and referral routes to be established
6. Postnatal care
 - Examine within 6h, follow up within 6d, and at six weeks
 - Use Community Health Workers to visit mothers postnatal
 - Observe babies in health facilities for 24 hours (numbers/ space)
7. Regional clinicians
 - Dedicated post for outreach clinicians
8. Auditing and monitoring
 - Morbidity and Mortality meetings- managers to attend, PPIP/ CHIP
 - Standardized birth and death registers
 - Improve data collection- DHIS
9. Normalization of HIV: No coding
10. Constant Health Messages

Interventions: Obstetric Care

- Unexplained intrauterine deaths (24%)
 - Community education (ANC, smoking, alcohol, foetal movements)
 - BANC
 - Healthworker training on foetal assessment algorithms
 - Provision of patient- held antenatal record for all practitioners including private sector
- Hypertension (13%)
 - Availability of sphygmomanometers
 - Protocols for management of hypertension

Interventions: Obstetric Care

- Spontaneous preterm births (23%)
 - Treatment of infections e.g. UTI
 - Fast track HAART for eligible pregnant mothers
 - Cervical cerclage
 - Maternal steroids
- Intrapartum asphyxia (17%)
 - Correct use of partogram
 - Health worker training on intrapartum fetal assessment
 - Caesarean section facilities

Interventions: Neonatal Care

- Prematurity (46%)
 - Maternal steroids
 - Basic care (temperature, glucose, feeds, fluids and KMC)
 - Only breast milk (space for mothers, milk banks)
 - Oxygen therapy with oxygen monitoring
 - Nasal CPAP
 - KMC
 - Infection control
- Asphyxia-Hypoxia (29%)
 - Health worker training on neonatal resuscitation
 - Monitoring post-resuscitation

Interventions: Neonatal Care

- Neonatal beds
 - Level I: 3-4 beds per 1000 live births
 - Level II (High care): 2-3 beds per 1000 live births
 - Level III (NICU): 0.5-1 bed per 1000 live births
- Staffing
 - Level I: Ideal- 1 nurse to 4 patients, Acceptable- 1:6
 - (EN or ENA+PN)
 - Level II: Ideal- 1 nurse to 2 patients, Acceptable- 1:3
 - (EN or ENA+PN)
 - Level III: Ideal- 1 nurse to 1 patient, Acceptable- 1:1
 - (PN, preferably trained in Neonatology)
- Equipment

Strategy to Implement Interventions

- National Department of Health
 - Issue policy statement on core strategies to reduce perinatal deaths
- Provincial Departments
 - Staffing norms
 - Ensure that necessary equipment is available
 - Training of health workers
 - National guidelines (Maternal, Intrapartum and Neonatal) are accessible to all health workers
 - Community information strategies