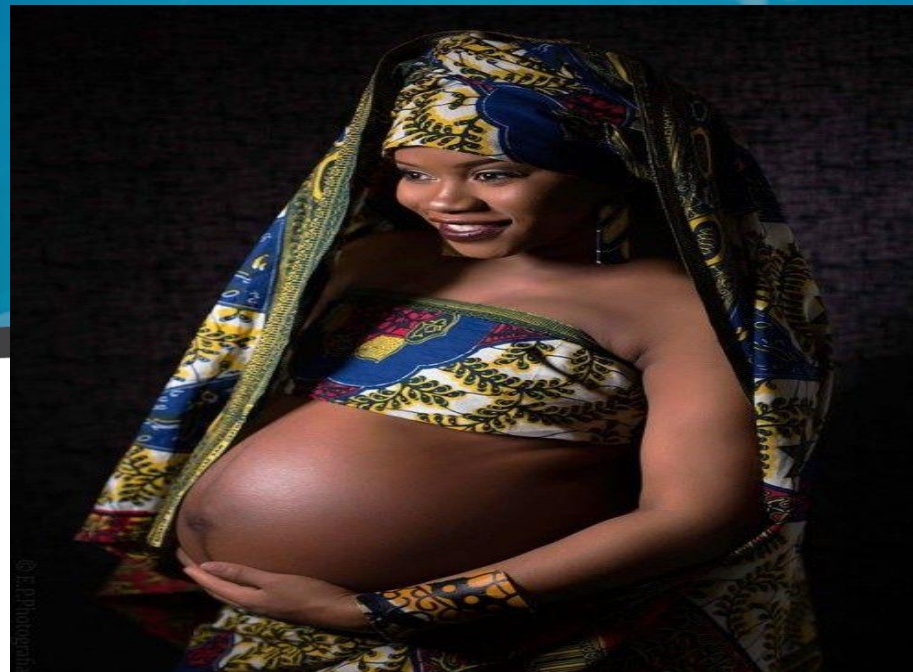




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**8 - 10 AUGUST 2019  
DURBAN**

**Leadership & Quality  
in Healthcare  
Let's close the gap**

## **Trend in maternal deaths at the Ekurhuleni district for last seven years: a District Clinical Specialist Team experience**



**Dr J Basu  
Specialist Obstetrician & Gynecologist  
Ekurhuleni District Clinical Specialist Team  
Gauteng Province**

**9<sup>th</sup> August 2019**

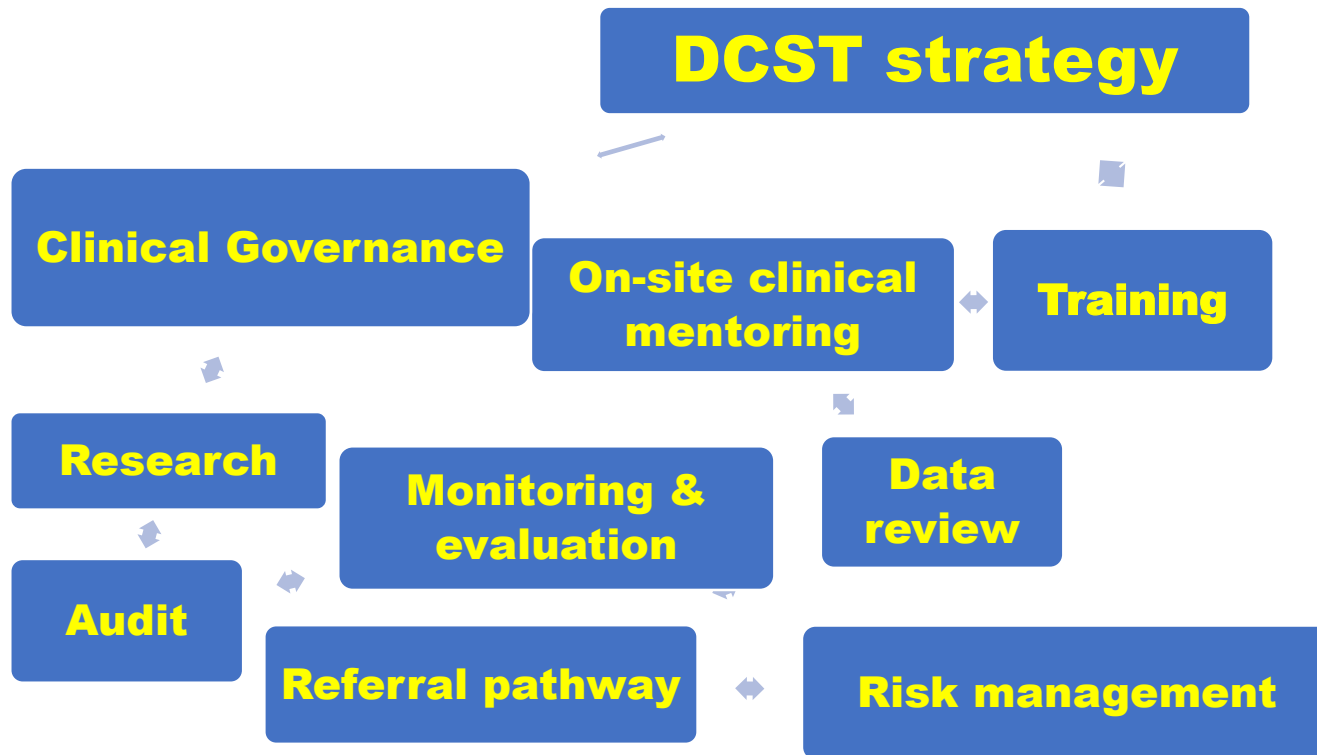


# Introduction & Objectives (1)

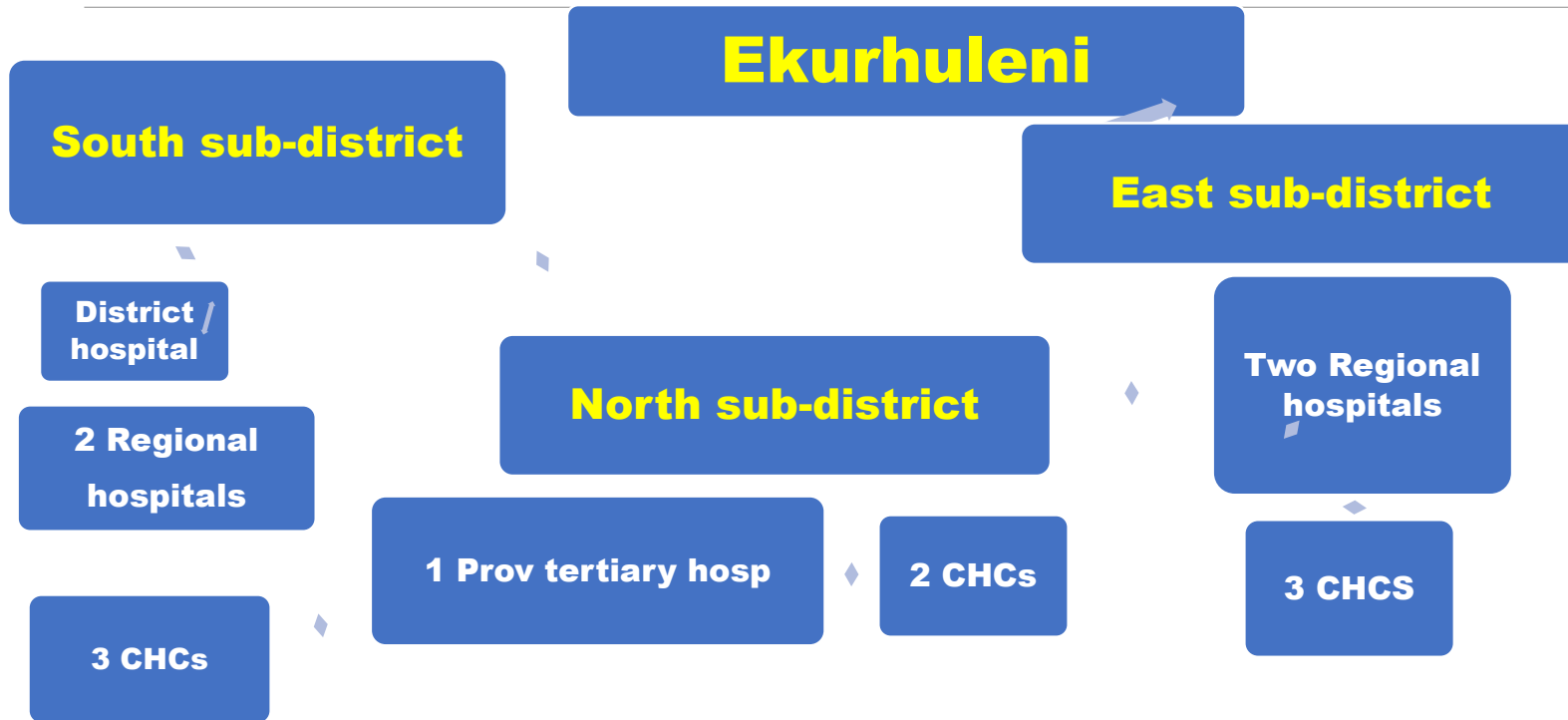
- **Maternal death is a notifiable condition in SA.**
- **Ekurhuleni District has a population of 3, 6 million approx. It has 3 sub-districts namely South, North & East.**
- **The district was identified as one of the 25 worst districts in the country in South Africa in 2012 in relation to its maternal deaths.**
- **District Clinical Specialist Team (DCST) was implemented in July 2012 in order to improve maternal, women, newborn & child health at the district level which in turn should improve maternal health in the country. Maternal death was the most important indicator which needed to be reduced.**
- **The objective of this study was to determine the trend of maternal deaths before and after the introduction of DCST for 7 years (from January 2012 to December 2018) at the Ekurhuleni district & its three sub-districts.**



# Introduction & Objectives (2)

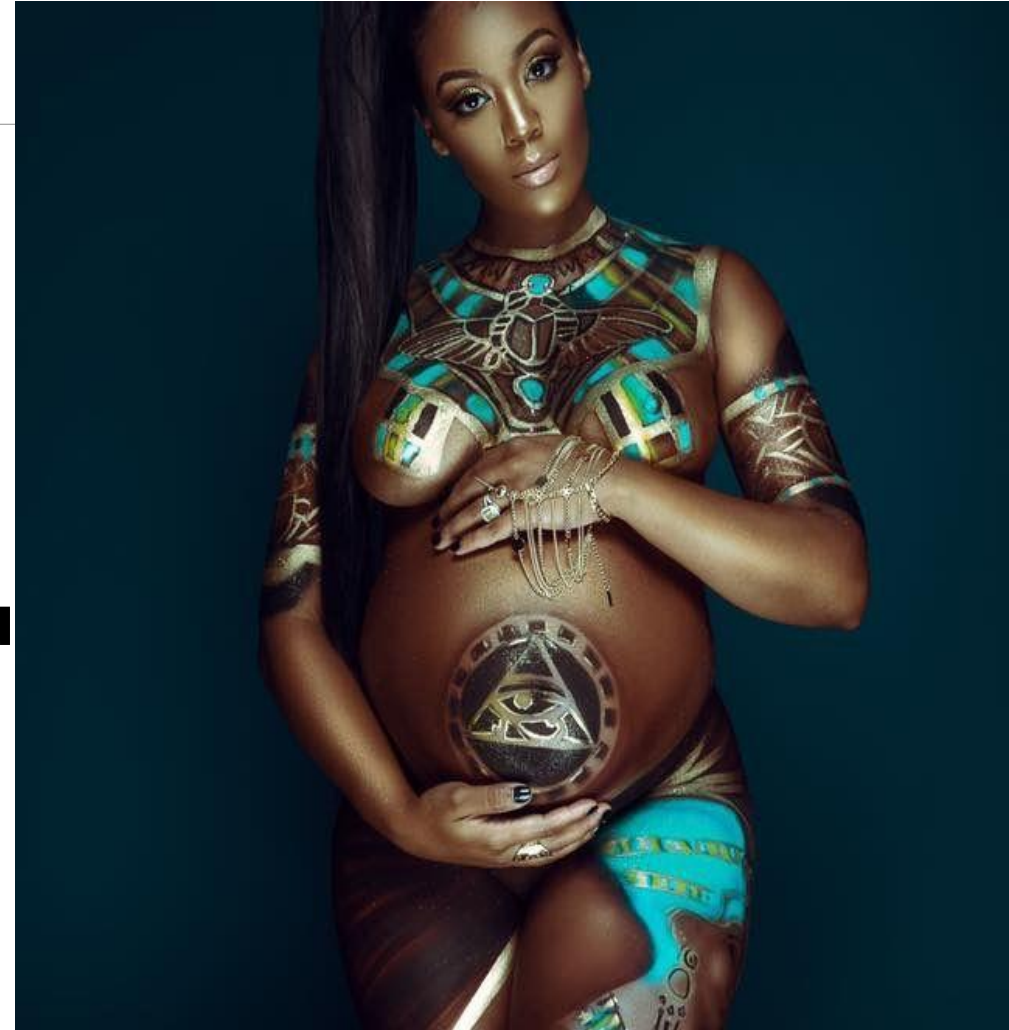


# Introduction & Objectives (3)



# Methodology

- **Quantitative analysis of secondary data.**
- **Institutional maternal death reports.**
- **Seven (2012 January to 2018 December) years period.**
- **All pregnant and postpartum mothers who died in public health facilities in the three sub-districts at the Ekurhuleni District.**
- **Descriptive statistics.**
- **Ethical clearance from Wits university & Ekurhuleni District research committee.**



# RESULTS (1)-DISTRICT

Indicator	2012	2013	2014	2015	2016	2017	2018	Total
<b>Maternal deaths</b>	<b>130</b>	<b>118</b>	<b>116</b>	<b>85</b>	<b>73</b>	<b>84</b>	<b>79</b>	<b>685</b>
<b>Total live births</b>	<b>57522</b>	<b>63230</b>	<b>62288</b>	<b>60845</b>	<b>60293</b>	<b>64838</b>	<b>64960</b>	<b>433976</b>
<b>Maternal mortality ratio</b>	<b>226</b>	<b>187</b>	<b>186</b>	<b>140</b>	<b>121</b>	<b>129</b>	<b>121</b>	

**Maternal Mortality Ratio =**

**$\frac{\text{Maternal deaths} \times 100,000}{\text{Total live births}}$**

- **Total number of deaths = 685**
- **Gradual reduction in maternal deaths from 2012 to 2018.**
- **Gradual increase in total live births.**





## RESULTS (2) - SUB-DISTRICTS

Year	South		North		East		Total	
	Maternal deaths	Total live births	Maternal deaths	Total live births	Maternal deaths	Total live births	Maternal deaths	Total live births
<b>2012</b>	68	26974	40	16420	22	14128	130	57522
<b>2013</b>	55	25903	44	22034	19	15293	118	63230
<b>2014</b>	55	26707	34	20177	27	15404	116	62288
<b>2015</b>	35	25501	30	20235	20	15109	85	60845
<b>2016</b>	34	25152	25	20054	14	15087	73	60293
<b>2017</b>	38	27160	26	20937	20	16741	84	64838
<b>2018</b>	42	27136	19	21577	18	16247	79	64960
<b>Total</b>	<b>327 Highest</b>		<b>218</b>		<b>140 Lowest</b>			

- **South = gradual reduction in maternal deaths & Highest delivery rate**
- **North = gradual reduction of maternal deaths**
- **East= very minimal change & lowest delivery rate.**
- **Total live births =Minimal increase in all sub-districts**

## RESULTS (3) – WHEN DID THE MOTHERS DIE (DISTRICT)

Year	District			
	AN	Labour	PN	Early pregnancy
2012	34	2	89	0
2013	39	5	74	0
2014	56	2	56	1
2015	38	2	45	6
2016	31	1	36	6
2017	37	0	45	1
2018	36	1	38	7
<b>Total</b>	<b>271</b>	<b>13</b>	<b>383</b>	<b>21</b>



**Commonest time of death was during postpartum period.**

**Least number of mothers died during labour.**

**Number of deaths during antenatal period & labour remained same.**

**Number of deaths during postnatal period have a reducing trend.**

**Early pregnancy deaths are increasing.**



## RESULTS (4) – WHEN DID THE MOTHERS DIE (SUB-DISTRICT)

Year	South				North				East			
	AN	Labour	PN	Early pregnancy	AN	Labour	PN	Early pregnancy	AN	Labour	PN	Early pregnancy
<b>2012</b>	<b>28</b>	<b>0</b>	<b>35</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>38</b>	<b>0</b>	<b>4</b>	<b>2</b>	<b>16</b>	<b>0</b>
<b>2013</b>	<b>24</b>	<b>1</b>	<b>30</b>	<b>0</b>	<b>6</b>	<b>3</b>	<b>33</b>	<b>0</b>	<b>9</b>	<b>1</b>	<b>11</b>	<b>0</b>
<b>2014</b>	<b>32</b>	<b>0</b>	<b>20</b>	<b>1</b>	<b>13</b>	<b>1</b>	<b>20</b>	<b>0</b>	<b>11</b>	<b>1</b>	<b>16</b>	<b>0</b>
<b>2015</b>	<b>14</b>	<b>0</b>	<b>21</b>	<b>4</b>	<b>18</b>	<b>2</b>	<b>10</b>	<b>2</b>	<b>6</b>	<b>0</b>	<b>14</b>	<b>0</b>
<b>2016</b>	<b>9</b>	<b>1</b>	<b>20</b>	<b>4</b>	<b>16</b>	<b>0</b>	<b>7</b>	<b>2</b>	<b>6</b>	<b>0</b>	<b>9</b>	<b>0</b>
<b>2017</b>	<b>17</b>	<b>0</b>	<b>21</b>	<b>0</b>	<b>9</b>	<b>0</b>	<b>17</b>	<b>0</b>	<b>11</b>	<b>0</b>	<b>7</b>	<b>1</b>
<b>2018</b>	<b>21</b>	<b>0</b>	<b>20</b>	<b>4</b>	<b>4</b>	<b>1</b>	<b>11</b>	<b>3</b>	<b>11</b>	<b>0</b>	<b>7</b>	<b>0</b>
<b>Total</b>	<b>145</b>	<b>2</b>	<b>167</b>	<b>13</b>	<b>68</b>	<b>7</b>	<b>136</b>	<b>7</b>	<b>58</b>	<b>1</b>	<b>80</b>	<b>1</b>

- **Commonest time of death was postpartum period for all sub-districts.**
- **Antenatal death was the second common.**
- **Death during postpartum period has been reduced in all sub-districts.**



## RESULTS (5) – HOW DID THE MOTHERS DIE (DISTRICT)

Year	District			
	Hypertension	HIV	Hemorrhage	Total
2014 (July – Dec)	12	5	11	28
2015	11	8	33	52
2016	9	8	17	34
2017	8	20	20	48
2018	10	10	22	42
<b>Total</b>	<b>50 (25%)</b>	<b>51(25%)</b>	<b>103 (50%)</b>	<b>204</b>

- Data was available from 2014.
- Only big 3 causes of maternal deaths were included in this analysis.
- Haemorrhage was the commonest cause of death at the Ekurhuleni district. SA commonest cause is Hypertension.
- Death due to hypertension rising slowly after a decline.
- Death due to HIV is increasing rapidly.
- Death due to Haemorrhage is rising rapidly after a decline.



## RESULTS (6) – HOW DID THE MOTHERS DIE (SUB-DISTRICT)

Year	South				North			East		
	Hypertension	HIV	Hemorrhage	Hypertension	HIV	Hemorrhage	Hypertension	HIV	Hemorrhage	
<b>2014 (July – Dec)</b>	6	2	3	3	3	4	3	0	4	
<b>2015</b>	5	1	15	3	7	7	3	0	11	
<b>2016</b>	3	3	7	1	3	7	5	2	3	
<b>2017</b>	3	13	9	4	4	8	1	3	3	
<b>2018</b>	4	8	11	2	1	9	4	1	2	
<b>Total</b>	21	27	45	21	13	35	16	6	23	

- **South = Haege & HIV common causes of deaths. Hypertension deaths are reducing.**
- **North = Haege is common cause followed by HIV. HIV deaths are reducing. Hypertension deaths remained same.**
- **East = Haege is the common cause. Haege deaths are reducing. All other causes remained same.**



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## DISCUSSION & RECOMMENDATIONS

- **Haemorrhage is the commonest cause of death in the district & subdistricts.**
- **South sub-district should focus on reducing the HIV & haemorrhage related deaths.**
- **North South sub-district should focus on reducing the hypertension & haemorrhage related deaths.**
- **East South sub-district should focus on reducing the haemorrhage related deaths.**
- **DCST implementation might have a role in overall reduction of maternal deaths at the Ekurhuleni district.**





# THANK YOU

**“A NATION THRIVES WHEN  
MOTHERS SURVIVE; WE MUST  
STRIVE TO KEEP THEM ALIVE”  
ELLEN JOHNSON SIRLEAF**

**THANK YOU TO SAMA CONFERENCE  
COMMITTEE.**

**THANK YOU TO ALL HOSPITALS & CHCS AT  
THE EKURULENI DISTRICT.**

