



# CAESAREAN SECTION RATES IN SA

A case study of the health systems challenges  
for the NHI

Emmanuelle Daviaud  
SAMRC

**UHC NATIONAL DIALOGUE**

21-22 November 2019

Johannesburg

**Co-Investigators**

Geetesh Solanki

Sue Fawcus



# CS AS A CASE STUDY

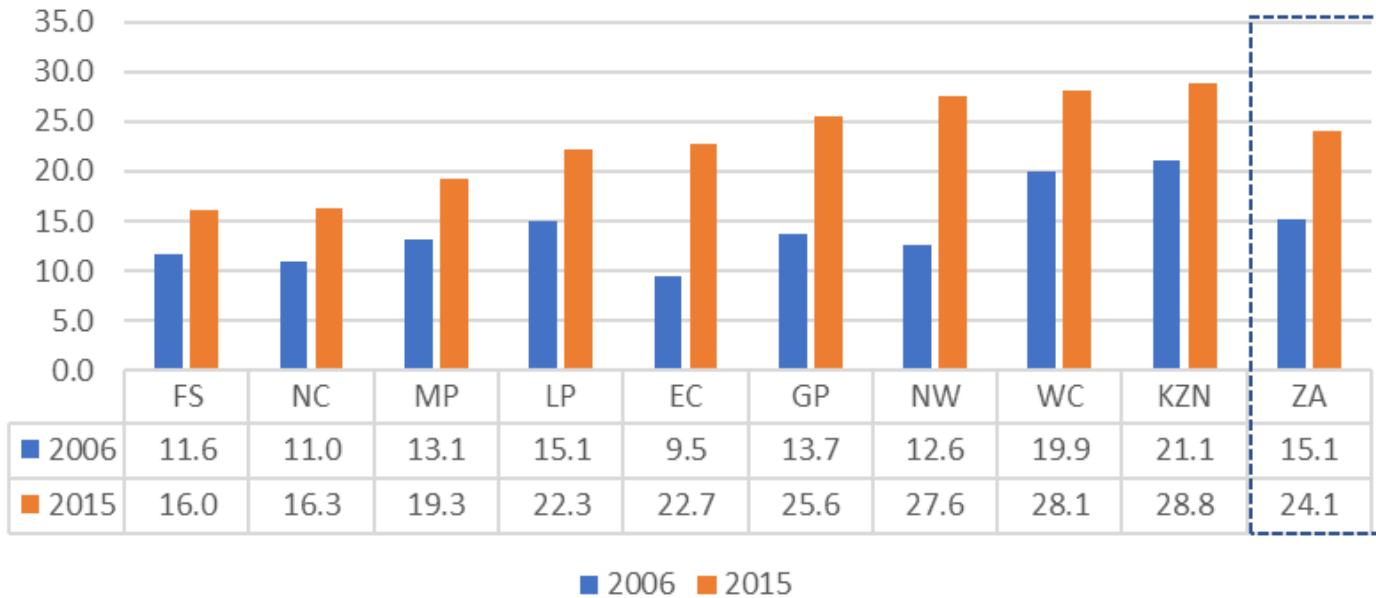
- ❑ Need for broader NHI policy debates to be complemented by “case studies” to examine specific challenges that NHI would need to address
- ❑ Comparing pattern of delivery between public and private sector useful to determine how to manage contracting of private providers and identify benefits for the public sector
- ❑ CS chosen as a case study:
  - 1.2m births in South Africa in 2018
  - Increasing CS rates
  - Substantial difference in Public vs. Private CS rates in SA - provides opportunity to assess and understand the underlying health systems drivers for differences and how these can be addressed in an NHI environment



# THE SA PUBLIC SECTOR:

## Increasing CS rates

Public Sector C Section Rates by Province:  
2015 vs. 2006



## Safety concerns

- NCCEMD: maternal deaths in women having CS - 3 x for those having NVD
- Increasing deaths from CS bleeding; >70% are preventable

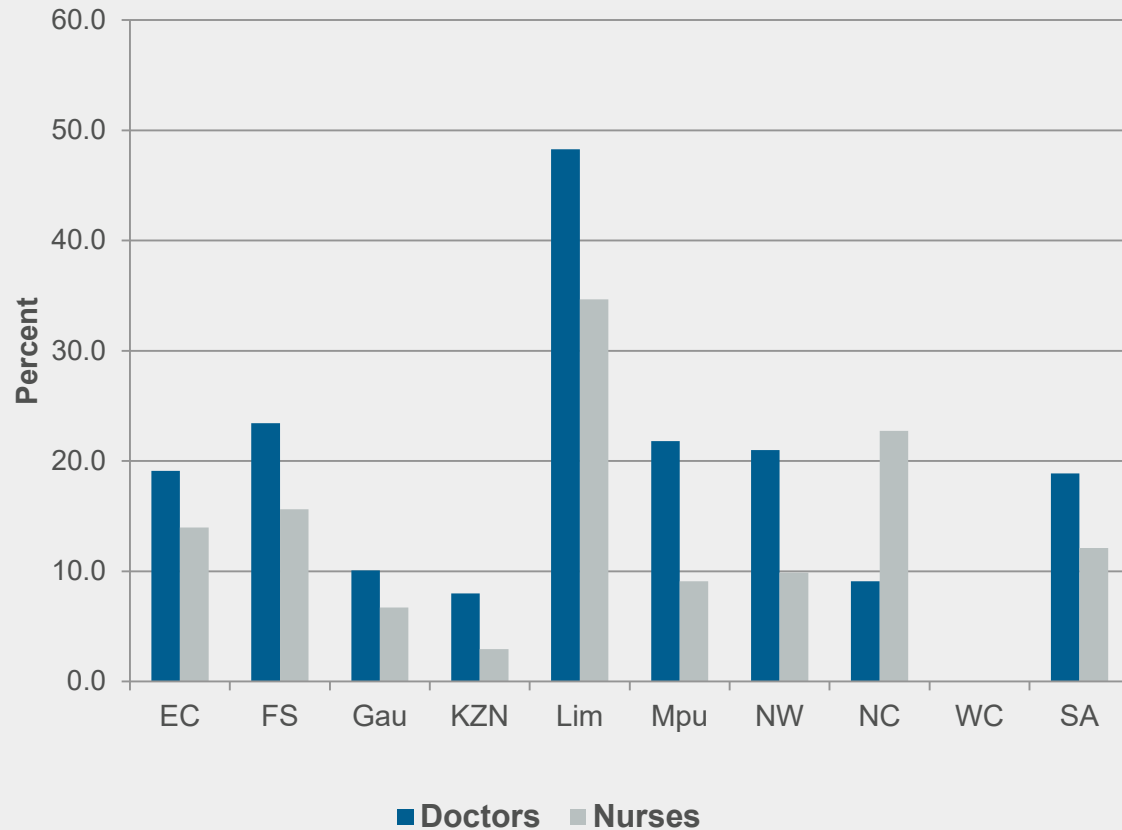
District Health Barometer 2015\_16

NB: CSR 28% in 2017

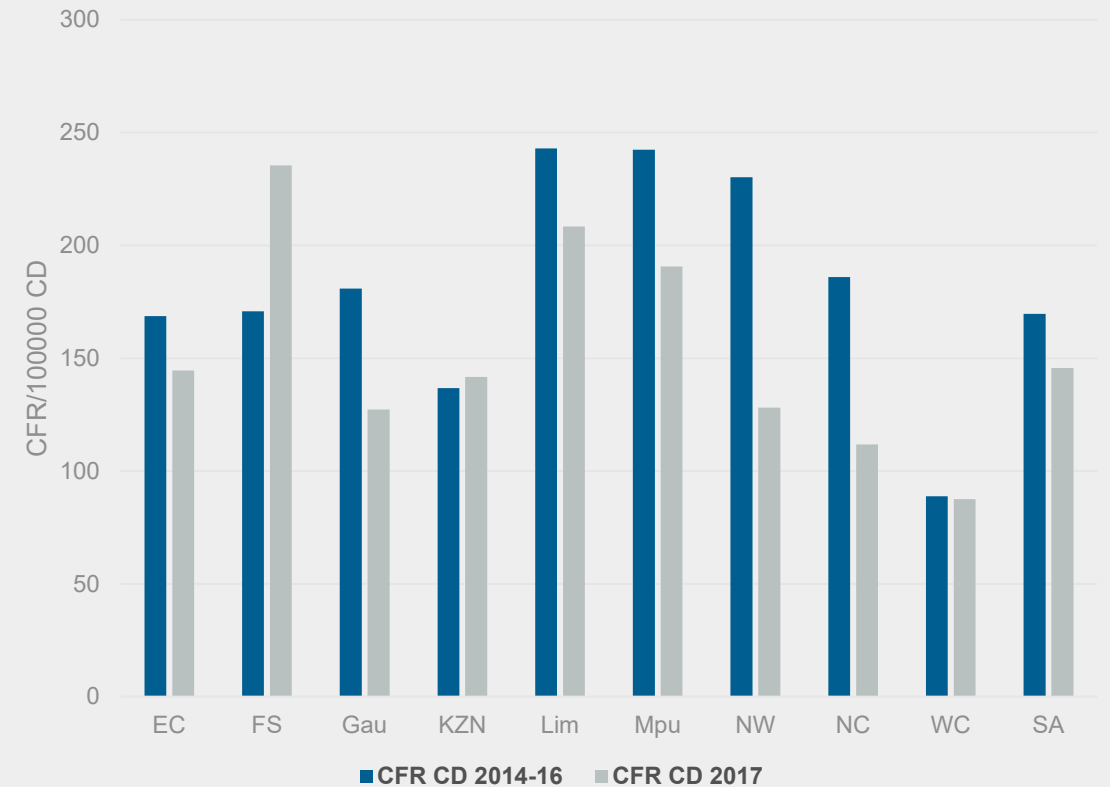


# CS: PROVINCIAL INEQUITIES IN CS SAFETY AND SKILLED STAFF

Lack of appropriately trained staff per province



Comparisons of Case Fatality Rate of CD per province: 2014-16 and 2017



# CS RATES PRIVATE SECTOR: LARGE SAMPLE STUDY

- 2015 Medical claims and member records of approx. half a million lives
- Sample profile (avg. age, contribution, expenditure) comparable with broader medical scheme population –
- 6,542 Maternity events (279,648 women)
  - CS rate 73.6%
  - 39.7% of CS for emergency

| Delivery Mode |                        | N           | % Caesarean/<br>Vaginal | % All Deliveries |
|---------------|------------------------|-------------|-------------------------|------------------|
| Caesarean     | Emergency              | 1912        | 39.7%                   | 29.2%            |
|               | Elective               | 1904        | 39.5%                   | 29.1%            |
|               | Unknown/Unspecified    | 999         | 20.7%                   | 15.3%            |
|               | <b>Total Caesarean</b> | <b>4815</b> | <b>100.0%</b>           | <b>73.6%</b>     |
| Vaginal       | Unassisted             | 1589        | 92.0%                   | 24.3%            |
|               | Assisted               | 55          | 3.2%                    | 0.8%             |
|               | Unknown/Unspecified    | 83          | 4.8%                    | 1.3%             |
|               | <b>Total Vaginal</b>   | <b>1727</b> | <b>100.0%</b>           | <b>26.4%</b>     |
| <b>Total</b>  |                        | <b>6542</b> |                         | 100%             |



# FEES PER DELIVERY

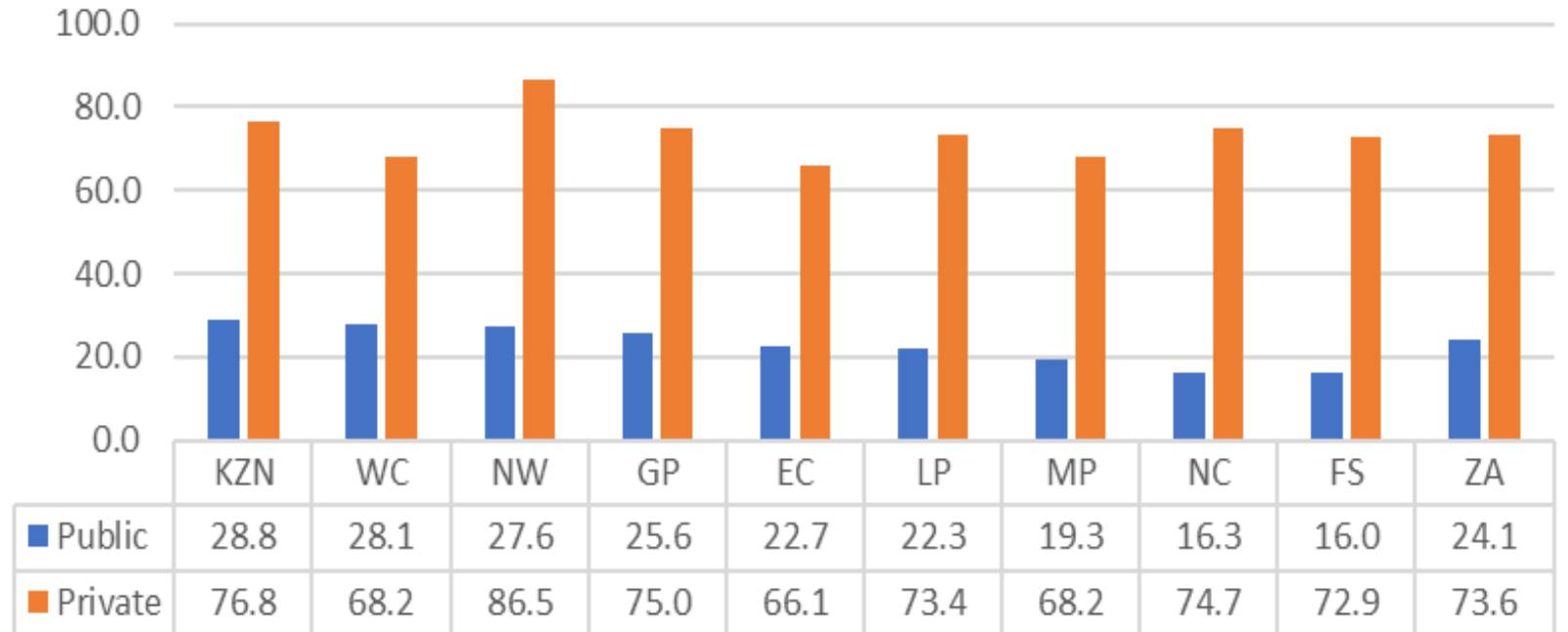
| Provider Type | Average Fees (ZAR) Per Case (95% CI) |                                |
|---------------|--------------------------------------|--------------------------------|
|               | Vaginal Delivery                     | Caesarian                      |
| Hospital Fees | 18 311 (17 893 - 18 730)             | 26 739 (25 894 -27 584)        |
| Gynaecologist | 5 336 (5 166 - 5 505)                | 7 285 (7 133 -7 437)           |
| Anaesthetist  | 1 051 (931 - 1 172)                  | 2 074 (2 007 -2 140)           |
| GP            | 304 (247 - 362)                      | 1 524 (1 456 -1 591)           |
| Other         | 659 (508 - 811)                      | 1 296 (1 213 -1 379)           |
| <b>Total</b>  | <b>25 662 (25 056 - 26 267)</b>      | <b>38 918 (38 033 -39 803)</b> |

- ❑ Average fees higher for Caesareans than for vaginal deliveries
- ❑ Difference driven largely by difference in hospital fees
- ❑ Gynecologists earned more doing caesareans – debatable as to whether the magnitude of the difference in fees is sufficient to influence behavior

# PUBLIC VS. PRIVATE RATES

Private sector rates substantially higher across all provinces

C Section Rates 2015:  
Public vs. Private



Public: District Health Barometer. Private: Solanki, Fawcus, Daviaud (2019)



# PUBLIC VS. PRIVATE DRIVERS OF CS RATE ?

| Area                              | Differences Public Vs. Private ?  |
|-----------------------------------|---|
| Women & Community Factors         | <ul style="list-style-type: none"><li>• Demographic and health status of women – need for CS?</li><li>• Socio-economic - demand for CS?</li></ul>   |
| Health Professional Factors       | <ul style="list-style-type: none"><li>• Training?</li><li>• Financial rewards CS (fees not time based)</li><li>• Solo Environment</li><li>• Convenience of CS</li><li>• Medico-legal concerns</li></ul> |
| Organisational and system Factors | <ul style="list-style-type: none"><li>• Team environment</li><li>• Hospital pressures</li><li>• Commitment to evidence/guidelines?</li><li>• Culture of intervention?</li></ul>                         |

Source: Bertran Et al. Lancet 2018; 392: 1358–68.





# DISCUSSION

- ❑ CS rates in SA private sector exceptionally high, 3X rates of the SA public sector
  - ❑ Large proportion carried out for elective reasons amongst women with no medical condition
  - ❑ How will CS rate be dealt within an NHI purchasing environment – could we end up with 70%+ CS rate for entire country?
- ⇒ Urgent need for regulations and monitoring capacity to ensure:
- ⇒ Team-based (obstetrician & midwives) service delivery (HPCSA)
  - ⇒ Evidence based practice following guidelines.
- ❑ Regulations will take time. For earlier contracting of private sector must be included in contracts



# THANK YOU



OUR PEOPLE · YOUR ASSET

