How much is enough?

Bringing actuarial modelling to bear on medical specialist planning in a changing world

AGENDA

1. The need for long-term health worker planning
2. Current supply of medical specialists
3. Types of health workforce planning models
4. South African data sources
5. Our approach
6. Onward we go

01 FLYING BLIND...

- Outdated figures in the public domain
- Previous recommendations in the HRH strategy have not been implemented
- No ongoing process to ensure that planning takes place
- No integrated source of data

ACTUARIAL SOCIETY OF SOUTH AFRICA

- Maldistribution – public/private, regionally
- Shortages & collapsing services
- Supply-induced demand
- Demographic changes in the medical profession: ageing, feminization
- Changes in the SA population: burden of disease, migration

01 PLANNING IS THE KEY TO UNLOCKING PARALYSIS

ACTUARIAL SOCIETY OF SOUTH AFRICA

- Not easy to get a handle on the dynamics
- Complexity
- Moving parts

- Evidence-based interventions
- Supply-side reorganization
- Innovative contracting
- Vertical and horizontal substitution
- Targeted training

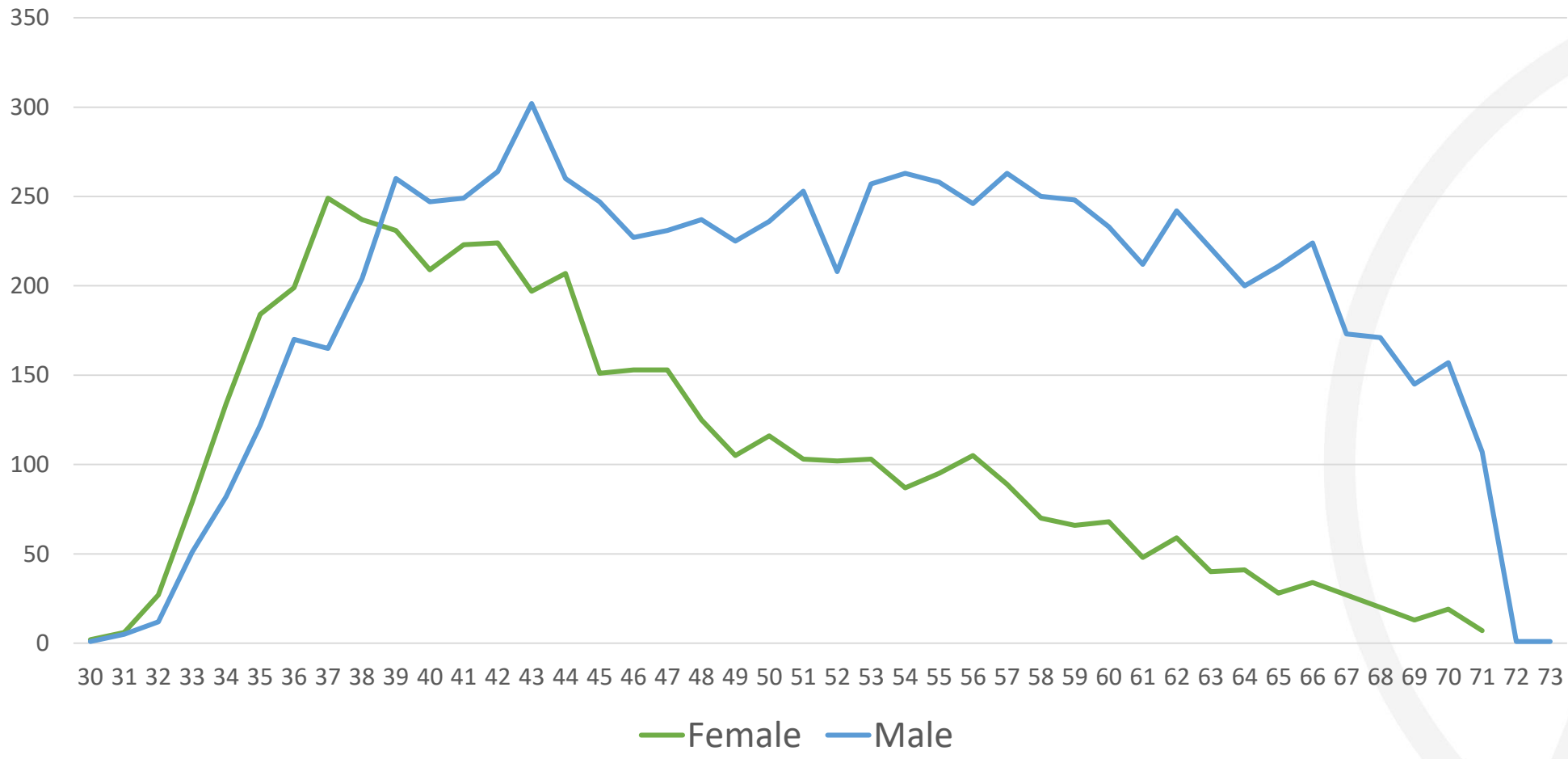
02 HOW MANY MEDICAL SPECIALISTS ARE THERE?

ACTUARIAL SOCIETY OF SOUTH AFRICA

South African Health Review
15,008
(2015)

HPCSA with age filters
12,776
(2018)

Econex
10,585
(2012)


350
300
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150
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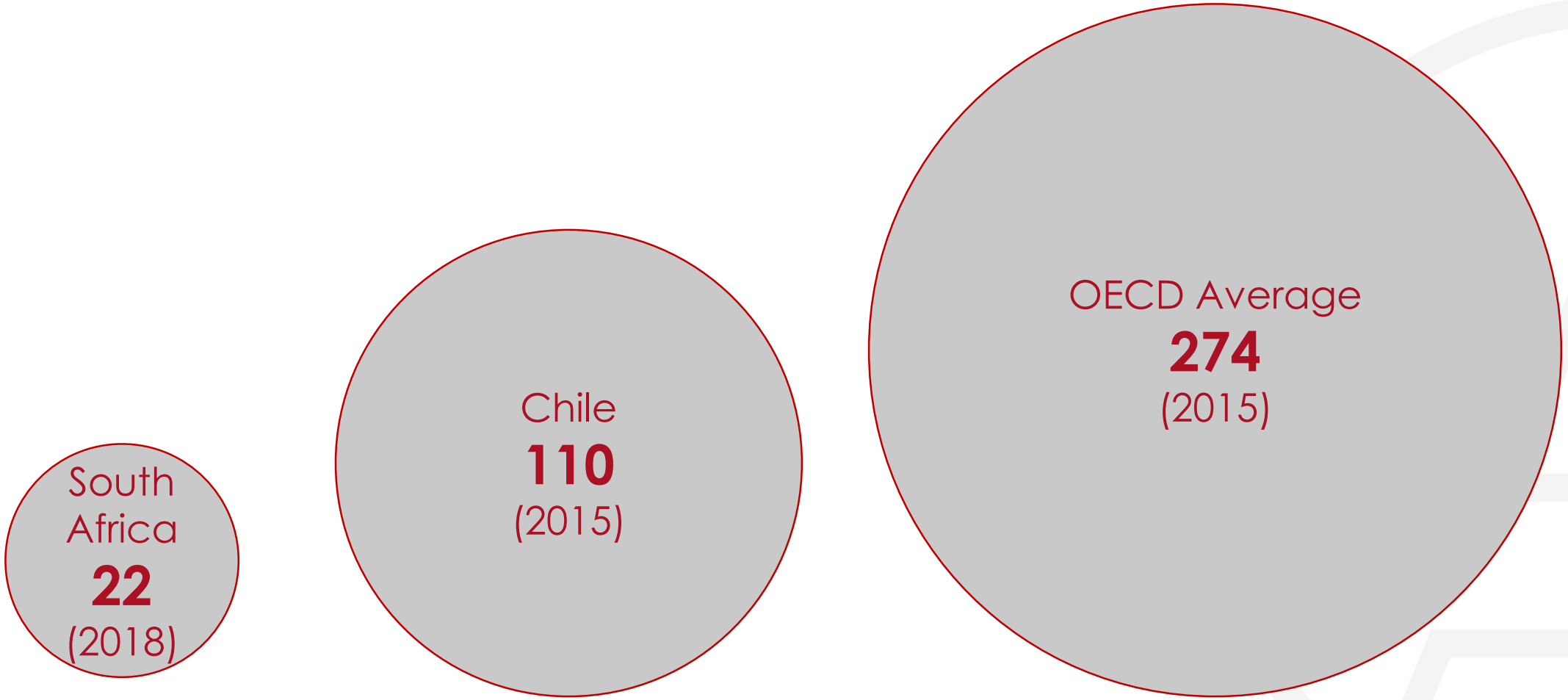
50
0
30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73
Female
Male

SUPPLY RELATIVE TO POPULATION



Our approach

- 2008/9 CMSA project
- Econex 2009 & 2010
- National Human Resources Strategy for South Africa 2011

ACTUARIAL SOCIETY OF SOUTH AFRICA

HPCSA

- Registration to permit clinical practice
- Age, sex, specialty, date of registration, sector, province
- Overstated (emigration, non-clinical work, death)
- Sector data is not useable

PERSAL

- Government employees
- Age, sex, province, pay-grade
- No data on specialty

BHF

- Practice number to enable private sector billing
- Age, sex, specialty, RWOPS

DISCOVERY

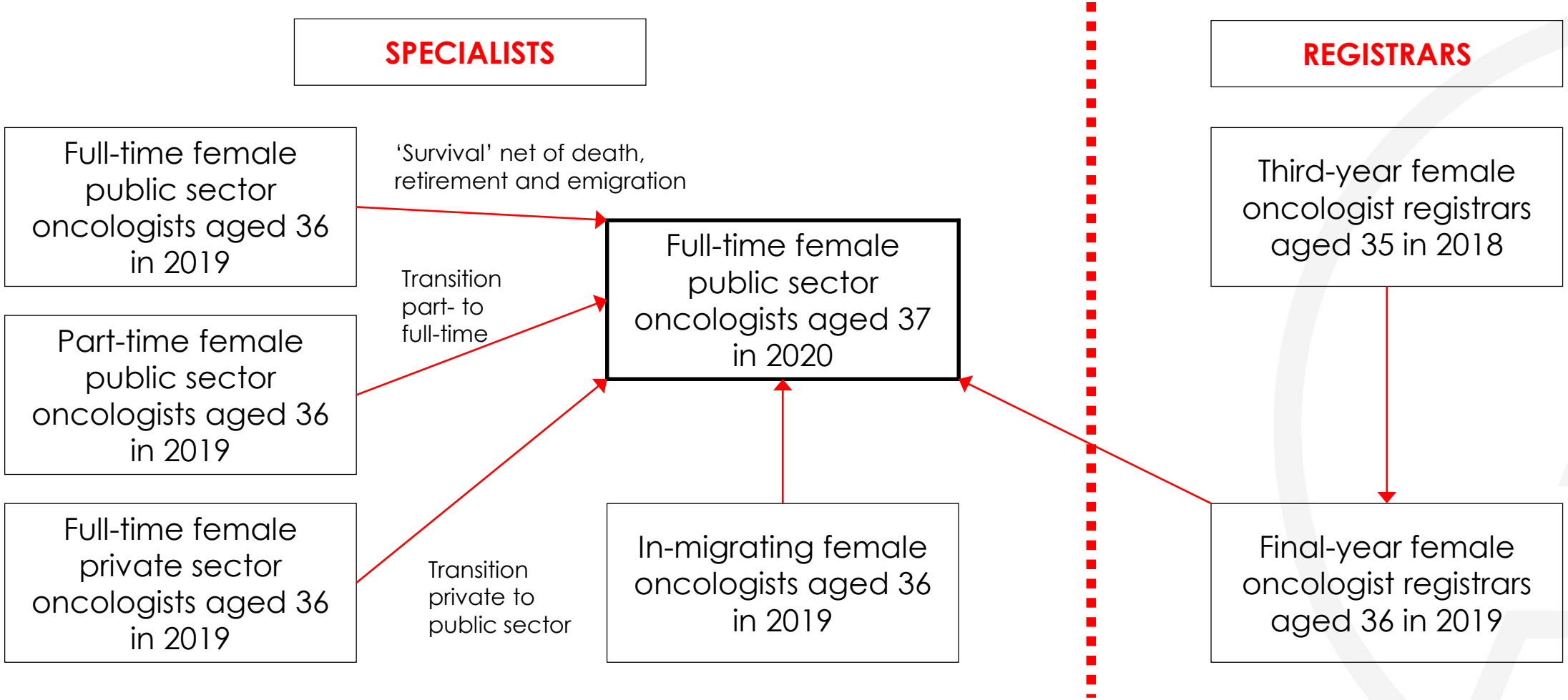
- Medical schemes claims
- Can discern level of activity

ACTUARIAL SOCIETY OF SOUTH AFRICA

Ethics clearance

Trusted third-party protocol

Fuzzy matching


SPECIALISTS
REGISTRARS
Full-time female public sector oncologists aged 36 in 2019
'Survival' net of death, retirement and emigration
Part-time female public sector oncologists aged 36 in 2019
Transition part- to full-time
Full-time female private sector oncologists aged 36 in 2019
Transition private to public sector
Full-time female public sector oncologists aged 37 in 2020
In-migrating female oncologists aged 36 in 2019
Third-year female oncologist registrars aged 35 in 2018
Final-year female oncologist registrars aged 36 in 2019

Modelling that accounts for both the supply-side and the need for services, that looks at both the public and private sectors, that projects into the future and that allows for changes in productivity

International Best Practice

Collated Data

1. Model optimisation
2. Final data receipt and processing
3. Academic standing
4. Political recommendations and buy-in