

Theme: Health Reform and Social Security Policy

Main venue: Graduate Centre L1 (64)
Breakaway Rooms for Social Security:
 1. Graduate Centre L2 (67)
 2. Graduate Centre L2 (71)

TIME	TOPIC	PRESENTERS
9:00 – 9:30	Inequality, poverty traps and social welfare	Kholekile Malindi
9:30 – 10:30	Understanding the role of social security policy in economic and social development	Alex van den Heever
10:30 – 10:45	TEA	
10:45 – 12:30	Social security and the pursuit of universal health coverage	Adam Wagstaff Ronelle Burger
12:30 – 13:15	LUNCH	
13:15 – 14:00	Time costs and health	Adam Wagstaff Ronelle Burger
14:00 – 15:00	Income, prices and health	Adam Wagstaff Anja Smith
15:00 – 15:15	TEA	
15:15 – 16:15	Education, knowledge, information and health	Adam Wagstaff Carmen Christian

Theme: Health Reform and Social Security Policy

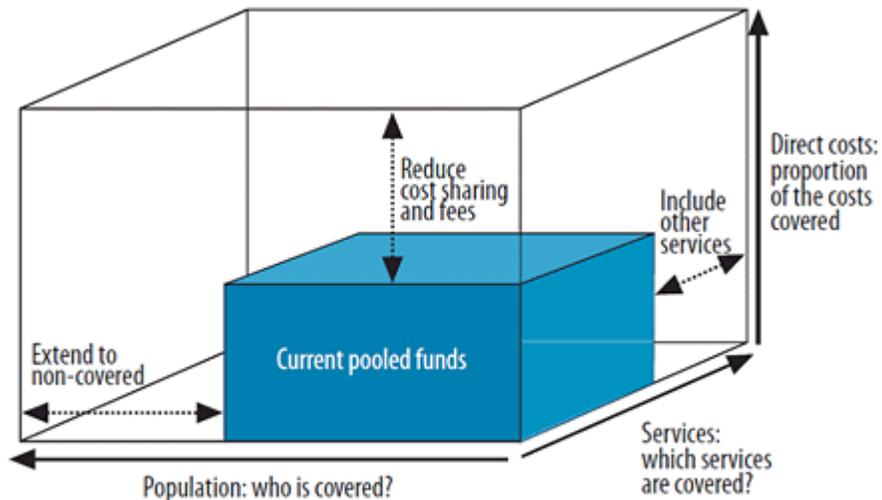
Main venue: Graduate Centre L1 (64)
Breakaway Rooms for Social Security:
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 2. Graduate Centre L2 (71)

TIME	TOPIC	PRESENTERS
9:30 – 10:30	Quality measurement and performance management in public and private health services	Adam Wagstaff Anja Smith
10:30 – 10:45	TEA	
10:45 – 12:30	Contracting, incentives and supply-induced demand, including interactive session on GP contracting in NHI	Adam Wagstaff Ronelle Burger
12:30 – 13:15	LUNCH	
13:15 – 14:00	Inequities in resources and expenditure in the South African health system	Carmen Christian Simphiwe Khoza
14:00 – 15:00	Health services and health outcomes in South Africa	Yogan Pillay
15:00 – 15:15	TEA	
15:15 – 16:15	<u>Panel discussion</u> How to improve service delivery and health outcomes in the South African health sector	Panellists: Mark Blecher Pren Naidoo Eric Buch Yogan Pillay (facilitator)

Social Security and the Pursuit of Universal Health Coverage

The popular (but rather misleading) UHC cube

A Rather Misleading Cube

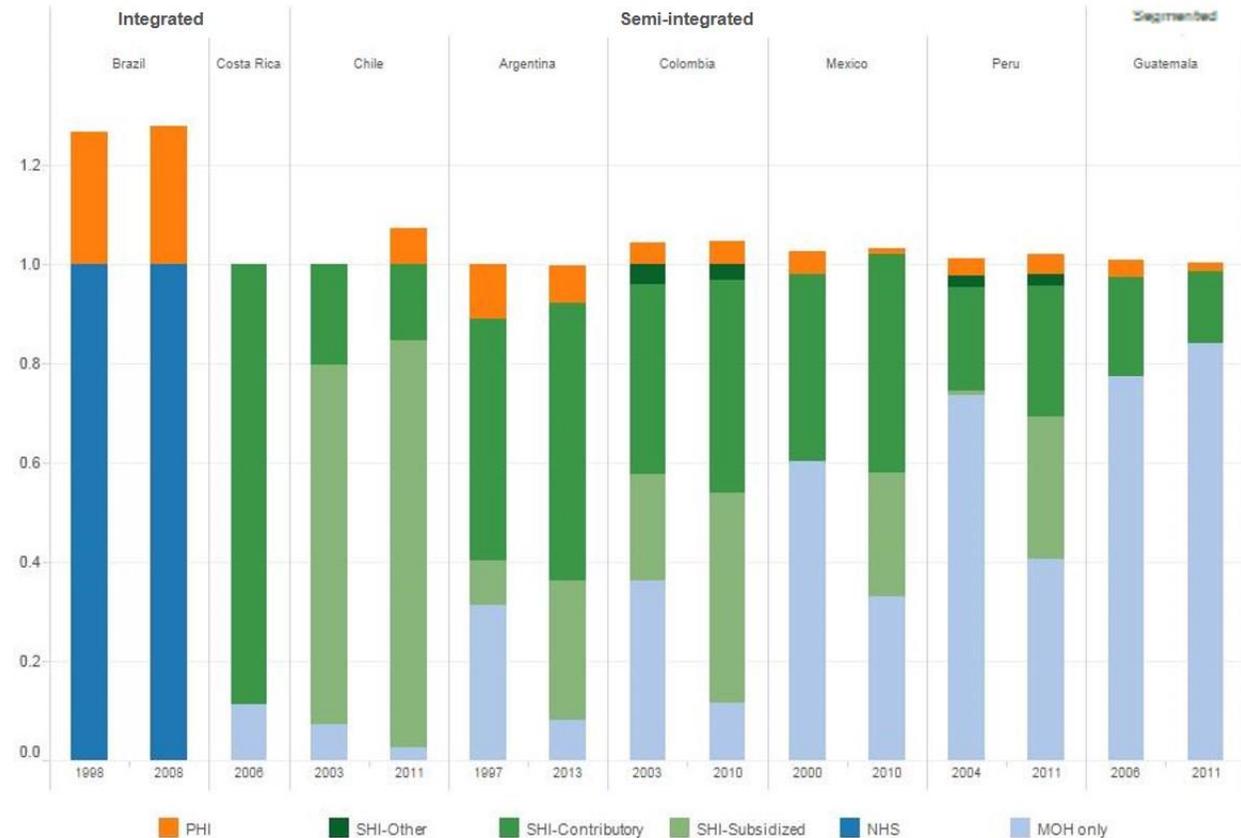


Three dimensions to consider when moving towards universal coverage

- According to the UHC cube, UHC is about
 - Extending coverage to those who aren't covered
 - Expanding the range of services covered to those with coverage
 - Reducing cost-sharing among those with coverage

Actually “extending coverage to those who aren’t covered” is a **non-issue**

- Everyone in the world is covered by subsidized public health facilities operated by the MOH
- Some people are also covered by a formal health insurance scheme, e.g.
 - a (contributory) social health insurance scheme, or
 - a private health insurance scheme



What's the link between UHC and social security?

- At the health system level, heavy reliance on out-of-pocket expenditures is unlikely to get a country far along the road to UHC
- Poor or near-poor families will
 - Either go without the care they need,
 - Or end up spending a considerable share of their resources on health care, risking poverty or deeper poverty
- Health systems are often a patchwork of different coverage 'schemes' – different 'umbrellas'
- Not all umbrellas provide equal protection
- In some schemes, when they seek care, people may find...
 - Drugs – and sometimes even staff too – aren't in the clinic
 - Only some tests and treatments are covered
 - They have to make out-of-pocket payments – often quite large ones
- **Often it's the better-off whose umbrellas work better**
 - They may be in a more generous scheme
 - Or locality gets fewer resources



Inequalities in per capita spending across schemes in Mexico and S Africa



- Prior to 2002 reforms, expenditure per capita in formal-sector health insurance schemes was 2.3 times that of expenditure per capita by MOH
- Ratio of federal per capita expenditure on health in the state with the highest figure to that in the lowest was 5:1

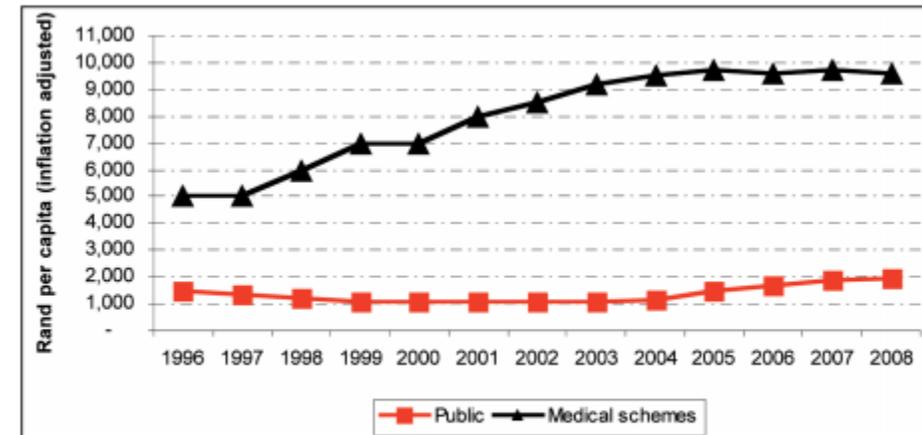
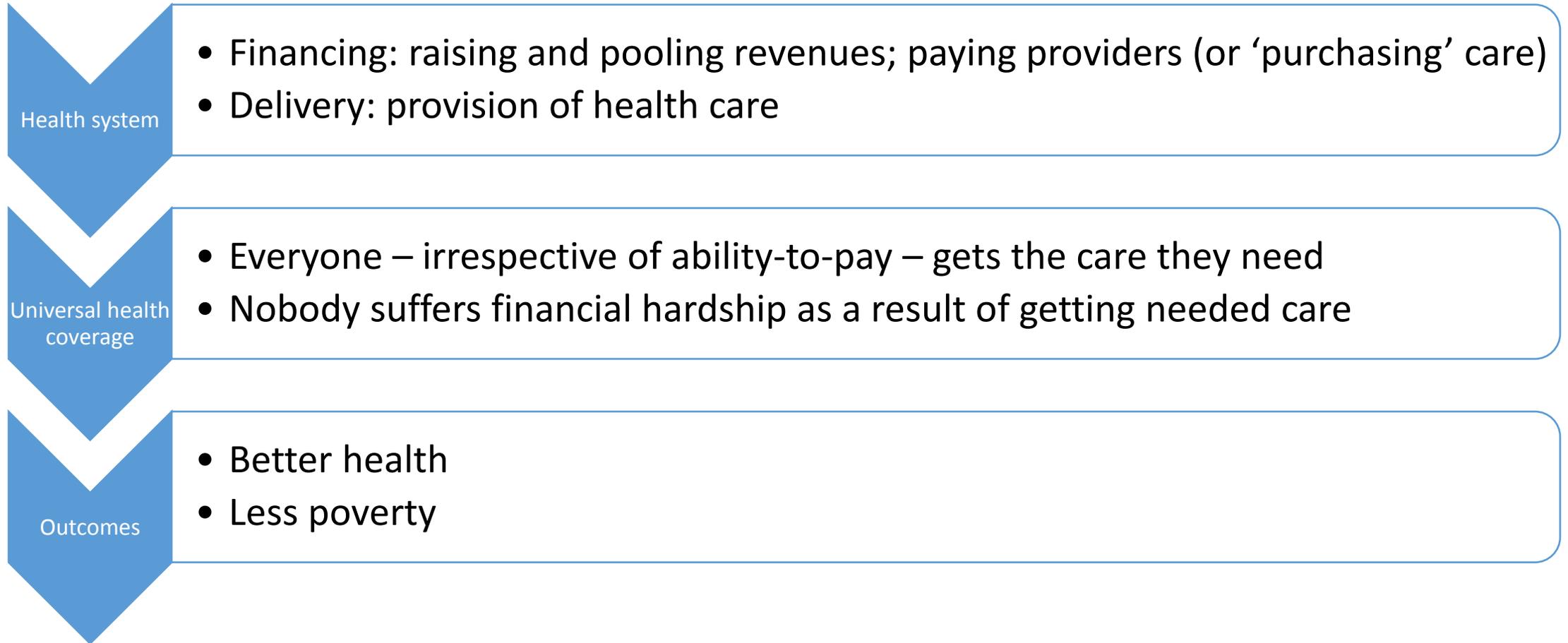


Fig. 1. Trends in real per capita spending by medical schemes and the public health sector. Source: Council for Medical Schemes Annual Reports (for medical schemes); National Treasury annual Budget Reviews (for public spending); Statistics South Africa (for CPI and population).

Thinking a little more systematically about UHC



Closing the equity gap in Mexico

Old Mexican system

	MOH system	Social security schemes
Target population	Everyone (in practice those not in SS)	Formal-sector workers and their families
Revenues	General revenues; funding per capita much lower than SS scheme	Payroll taxes plus subsidies from general revenues
Pooling	National or subnational levels	Scheme
Purchasing	No clear benefit package; Budgets and salaries	Somewhat clearer benefit package; Various payment methods
Provision	MOH facilities	SS providers

New Mexican system

	MOH Seguro Popular scheme	Social security schemes
Target population	Everyone not covered by a SS scheme	Formal-sector workers and their families
Revenues	General revenues (income-related contributions abandoned); revenue gap closing	Payroll taxes plus subsidies from general revenues
Pooling	National and subnational levels	Scheme
Purchasing	Clear benefit package, mix of cost-effective and catastrophic; Some shift to case-based payments	Somewhat clearer benefit package; Various payment methods
Provision	MOH facilities	SS providers

Closing the equity gap in Thailand

Old Thai system

	MOH system	Civil servant scheme	Social security schemes
Target population	Everyone, with cards for the poor entitling them to zero out-of-pocket expenditures	Civil servants	Formal-sector workers
Revenues	General revenues; funding per capita much lower than CS and SS schemes	General revenues	Payroll taxes plus subsidies from general revenues
Pooling	National or subnational levels	National	Scheme
Purchasing	No clear benefit package; Budgets and salaries	Generous benefit package	Somewhat clearer benefit package; Various payment methods
Provision	MOH facilities		Large public and private hospitals

New Thai system

	MOH Universal Coverage scheme	Civil servant scheme	Social security schemes
Target population	Everyone not in CS or FS scheme	Civil servants	Formal-sector workers
Revenues	General revenues; funding gap closing	General revenues	Payroll taxes plus subsidies from general revenues
Pooling	National or subnational levels	National	Scheme
Purchasing	Clear benefit package; Capitation for OP; Global budgets and case-base payments	Generous benefit package	Somewhat clearer benefit package; Various payment methods
Provision	MOH networks		Large public and private hospitals

Closing the equity gap in Colombia

Old Colombian system

	MOH system	Social security schemes
Target population	Everyone (in practice those not in SS)	Formal-sector workers
Revenues	General revenues; funding per capita much lower than CS and SS schemes	Payroll taxes plus subsidies from general revenues
Pooling	National or subnational levels	Scheme
Purchasing	No clear benefit package; Budgets and salaries	Comprehensive benefit package; Various payment methods
Provision	MOH facilities	SS providers

New Colombian system

	Subsidized regime	Contributory regime
Target population	People below a proxy means test threshold	People above a proxy means test threshold
Revenues	General revenues plus solidarity contribution from CR members ; only a small funding gap, now illegal	Payroll taxes
Pooling	Insureds enroll with competing public and private insurers (ARS) who receive a capitation payment	Insureds enroll with competing public and private insurers (EPS) who receive a capitation payment
Purchasing	Less generous benefit package for SR insured, but this difference now illegal; case-base payment	Case-base payment
Provision	Public, private, or insurer's own providers. Insurers must contract with public provider network for $\geq 40\%$ of premiums	Public, private, or insurer's own providers

Closing the equity gap in post-apartheid SA

- Moving away from centralist, hospital-based curative system to system that is more decentralised and focused on primary care
- Since the political transition in 1994, much effort has been invested in improving health outcomes by making public health care more accessible to the poor
- In an attempt to remove obstacles to accessing health services, the government introduced free care for pregnant mothers and young children in 1994 and free primary health care for all in 1996
- Since 1994 the primary health care facility network has been expanded, with more than 1300 clinics being built or upgraded (Manuel, 2006)

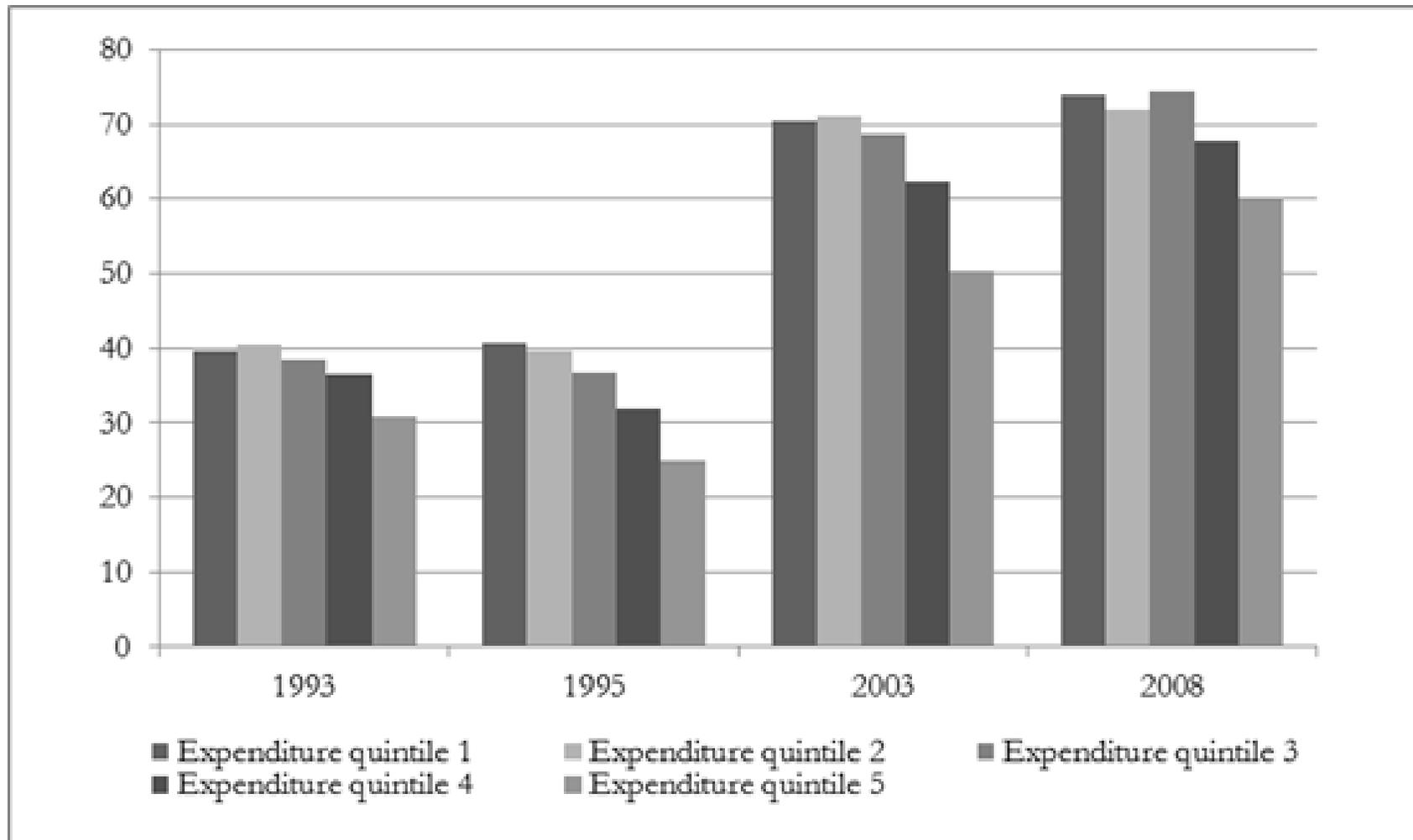
Closing the equity gap in post-apartheid SA

Did you consult a health worker when you were ill?

	1993	1995	2003
Poorest 20%	71.9	78.3	83.3
Quintile 2	77.8	80.4	83.3
Quintile 3	83.3	82.1	82.5
Quintile 4	85.6	86.5	82.7
Most affluent 20%	84.0	87.9	86.4
Total	80.5	83.0	83.6

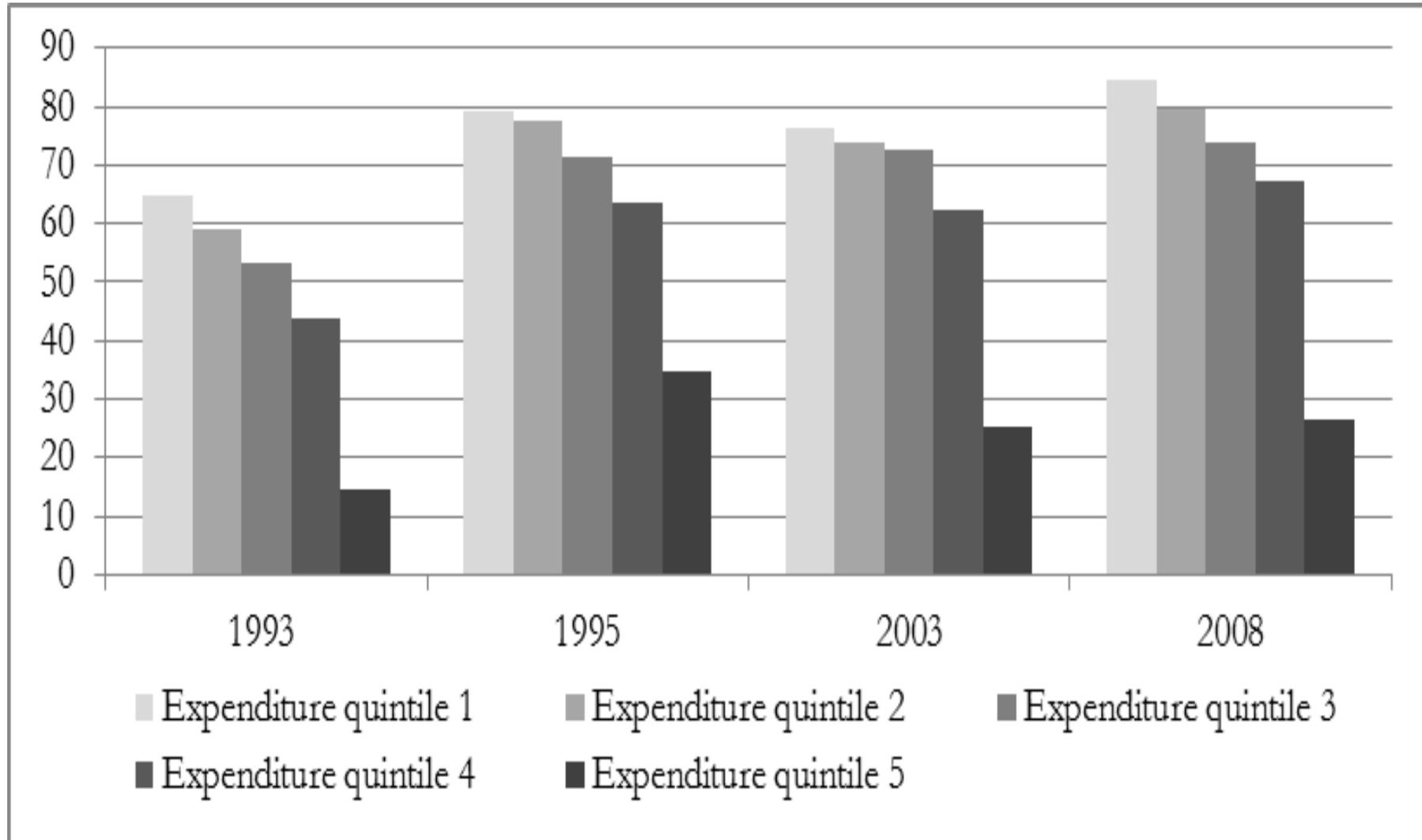
Closing the equity gap in post-apartheid SA

Share of clinics in total utilisation of public health facilities, by per capita household expenditure quintile, 1993–2008



Closing the equity gap in post-apartheid SA

Share of public health care facilities in total health care utilisation, by per capita household expenditure quintile, 1995–2008

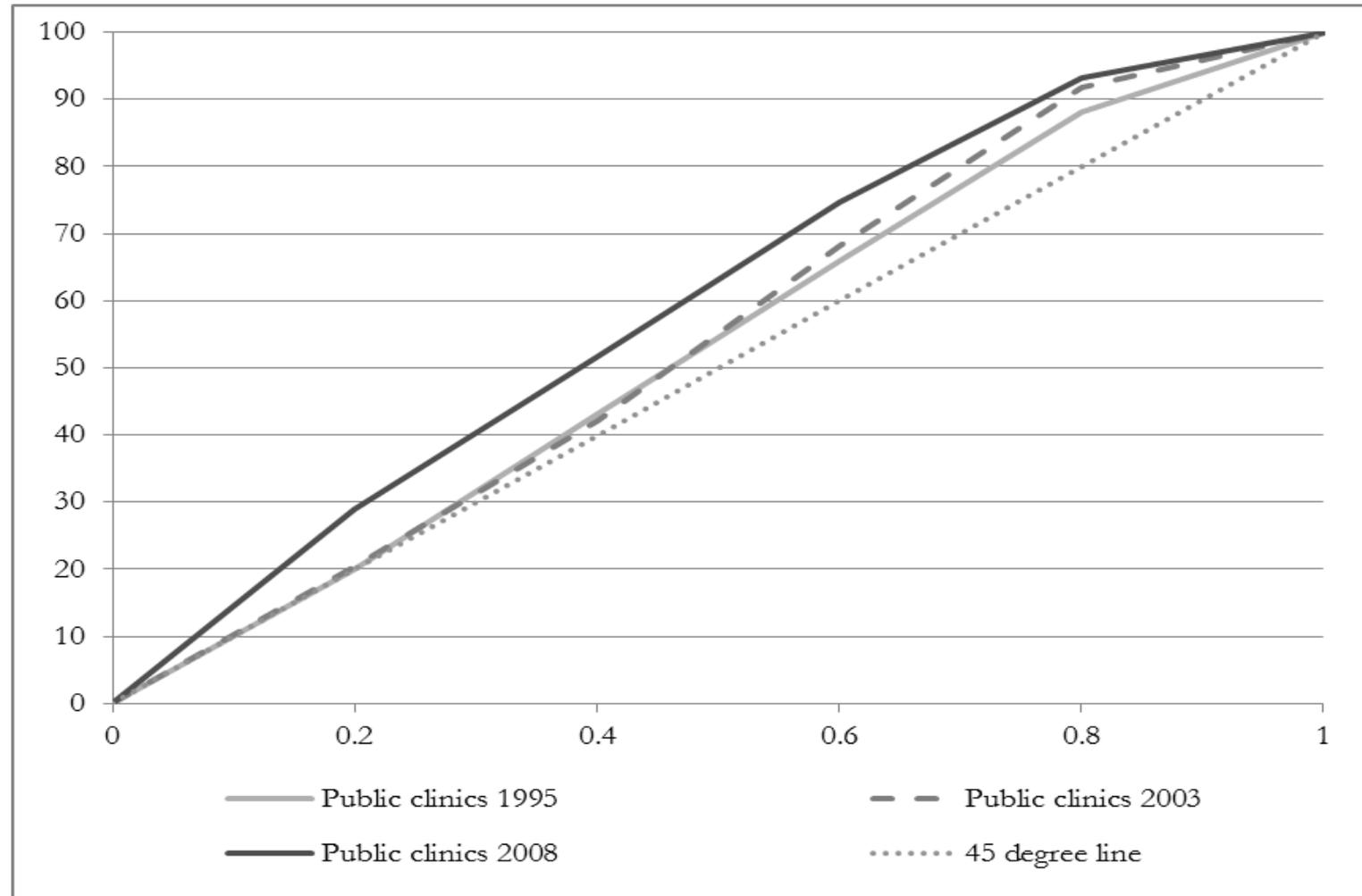


Closing the equity gap in post-apartheid SA

- Real per capita public expenditure on health has increased over this period
- To improve equity, budget allocations have been shifted towards historically poorly endowed provinces and, within provinces, particularly to primary health care
- In 2000 the government was spending just over R2 on primary care for every R10 it spent on hospitals but by 2007 the rate was R3 for every R10
- This shift was achieved by both increasing the share of the health budget allocated to primary care and reducing the share allocated to hospitals.

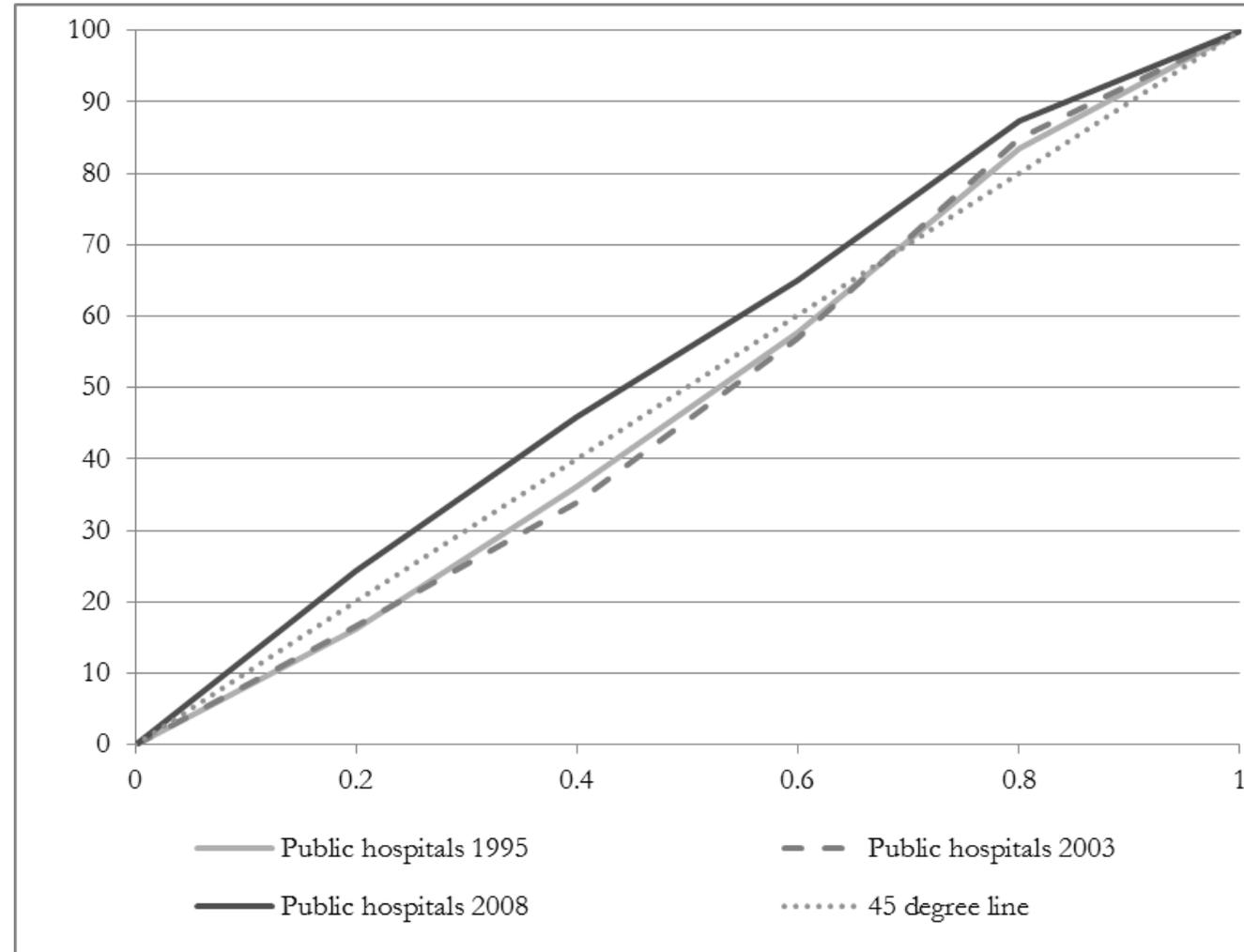
Closing the equity gap in post-apartheid SA

Concentration curves for public clinics, 1995–2008



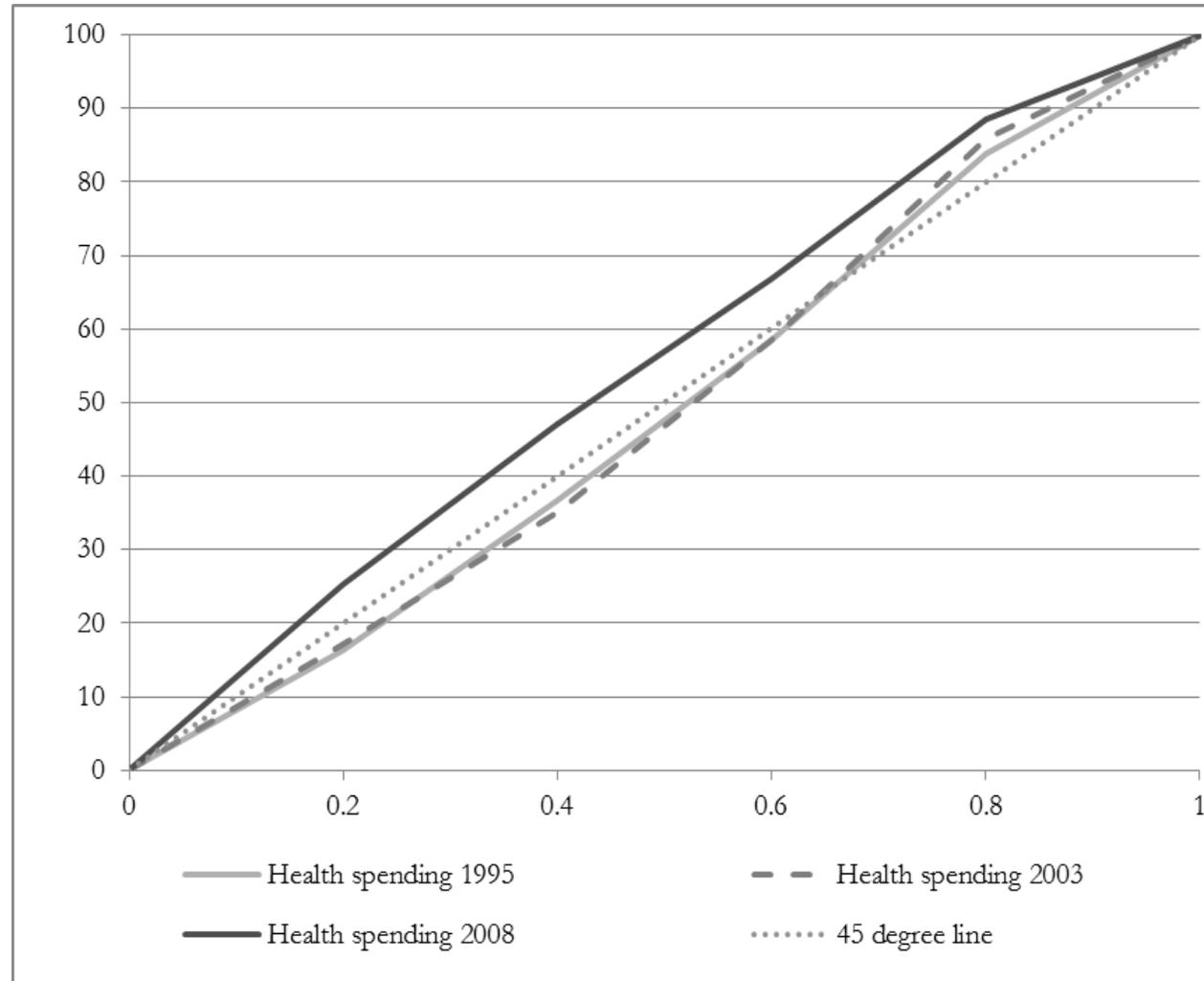
Closing the equity gap in post-apartheid SA

Concentration curves for public hospitals, 1995–2008



Closing the equity gap in post-apartheid SA

Concentration curves for public clinics and hospitals, 1995–2008

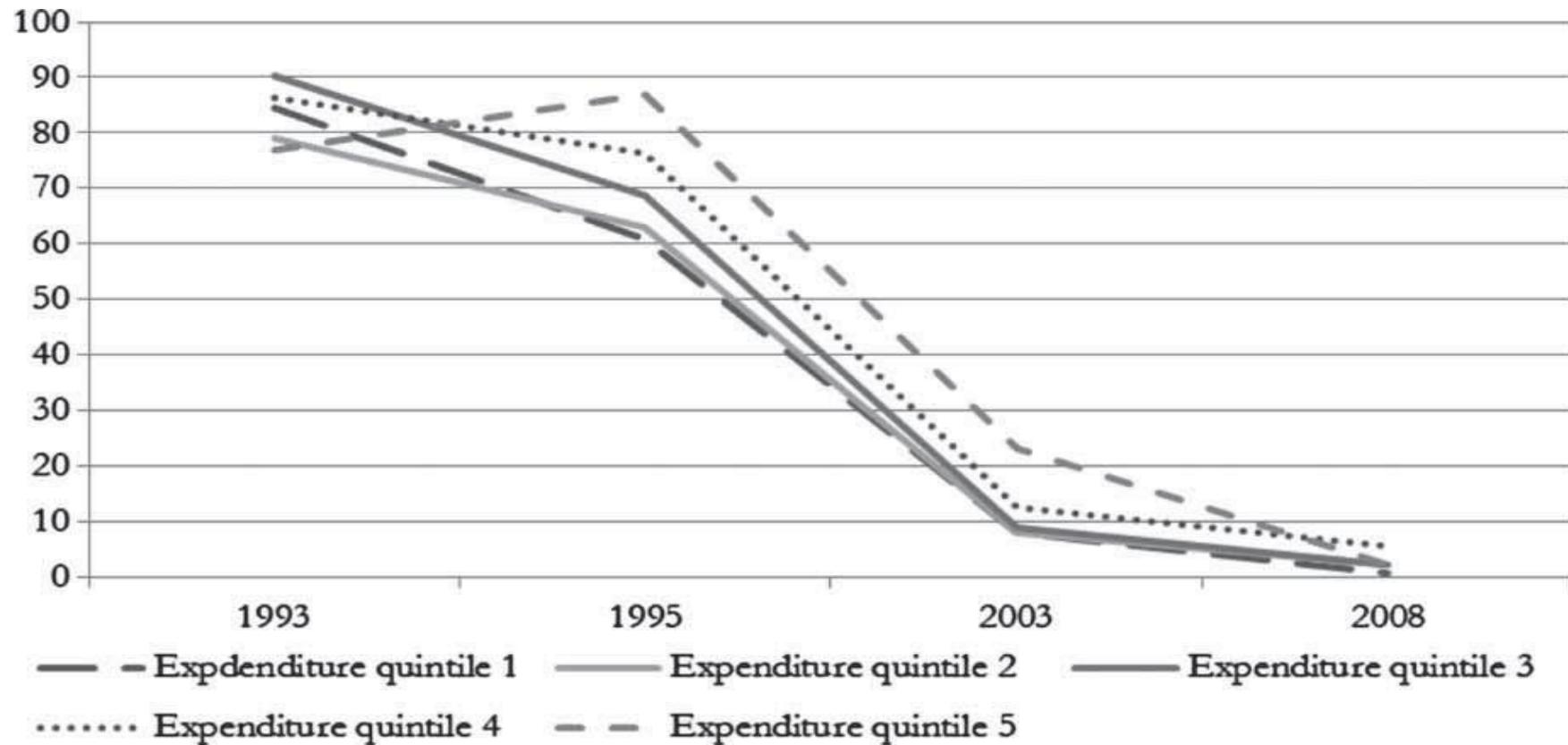


Closing the equity gap in post-apartheid SA

- User fees abolished in 1996
- Decline in affordability ratios between 1993 and 2003
- Relatively low prevalence of catastrophic expenditure.
- However, still important to look at such cases in more detail as some may be “falling through the cracks” e.g. those who need to pay for public hospital visits, but are too poor to afford insurance
- But on the whole this does not appear to be an important constraint at current levels
- According to 2008 GHSes only 3% of those who were ill decided to not consult a health worker because of affordability concerns

Closing the equity gap in post-apartheid SA

Prevalence of self-reported payment for users of public clinics



Closing the equity gap in post-apartheid SA

Average affordability ratios for the uninsured by per capita household expenditure quintile, 1993 – 2008 (%)					
Per capita household expenditure quintiles	1993	1995	2000	2005	2008
Poorest 20%	1.5	1.0	1.1	2.8	4.0
Quintile 2	0.8	0.9	1.3	2.4	2.9
Quintile 3	0.7	0.8	1.3	2.2	2.1
Quintile 4	1.0	0.8	1.2	1.7	2.0
Most affluent 20%	2.4	1.3	1.2	1.5	1.7
Total	1.3	0.9	1.2	2.3	2.7

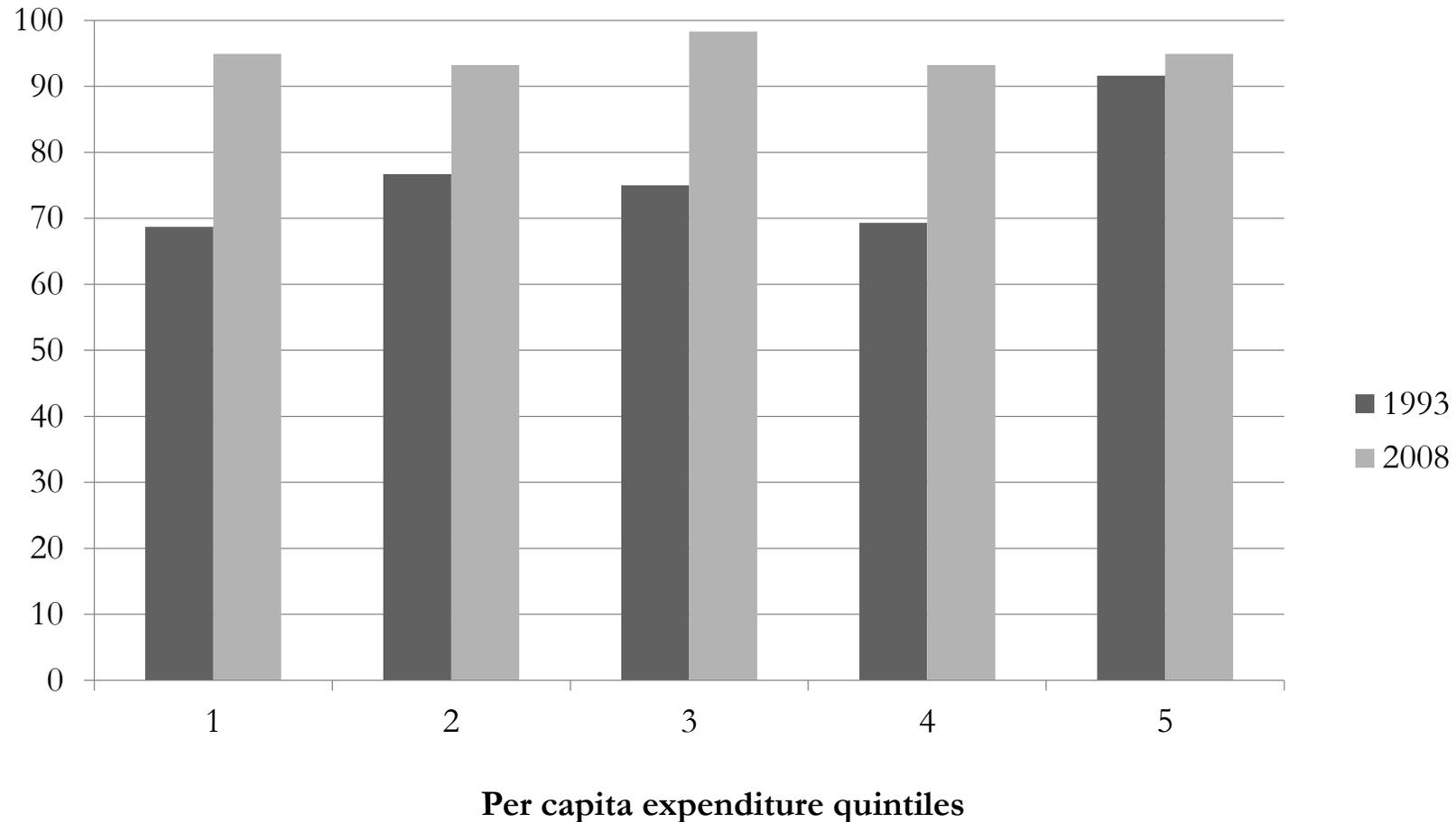
Note: This analysis uses the PSLSD 1993, the 1995, 2000 and 2005 IES surveys and the 2008 NIDS. Estimates do not include health insurance and thus only reflect direct out-of-pocket payments for health services, medicine and medical supplies. Affordability ratios express health expenditure for households as a share of their non-food expenditure

Closing the equity gap in post-apartheid SA

Prevalence of catastrophic expenditure for the uninsured by per capita expenditure quintiles, 1993 - 2008 (%)					
Per capita household expenditure quintiles	1993	1995	2000	2005	2008
Poorest 20%	2.8	1.2	1.6	4.0	8.3
Quintile 2	2.7	1.2	2.2	2.1	6.6
Quintile 3	2.9	0.7	1.8	2.2	8.0
Quintile 4	4.3	0.7	1.5	1.7	5.7
Most affluent 20%	7.6	2.0	2.1	0.8	4.7
Total	4.1	1.1	1.8	2.3	7.1

Note: This analysis uses the PSLSD 1993, the 1995, 2000 and 2005 IES surveys and the 2008 NIDS. "Catastrophic expenditure" is here defined as health expenditure per annum exceeding 10% of non-food expenditure. O'Donnell et al. (2008) recommend a threshold of 10%, when defined relative to total household expenditure, and 40% when defined relative to expenditure minus nondiscretionary expenses (which is usually taken to mean non-food expenditure). By these measures, the incidence of catastrophic expenditure is virtually zero. These estimates are only slightly below the ratios reported by McIntyre and Ataguba (2009). They are also in line with the findings of Xu et al. (2003).

Private provider share of out-of-pocket expenditure by per capita household expenditure quintile, 1993 and 2008



Closing the equity gap in post-apartheid SA

Prohibitive cost cited as reason for not consulting a health worker, 1993 – 2009 (%)				
Wealth quintiles	1993	2002	2005	2008
Poorest 20%	8.9	8.7	5.1	3.7
Quintile 2	8.7	6.5	4.0	2.5
Quintile 3	7.5	5.7	3.8	2.6
Quintile 4	5.2	5.3	3.7	3.4
Wealthiest 20%	2.7	3.3	1.4	1.2
Total	6.2	5.9	3.6	2.7

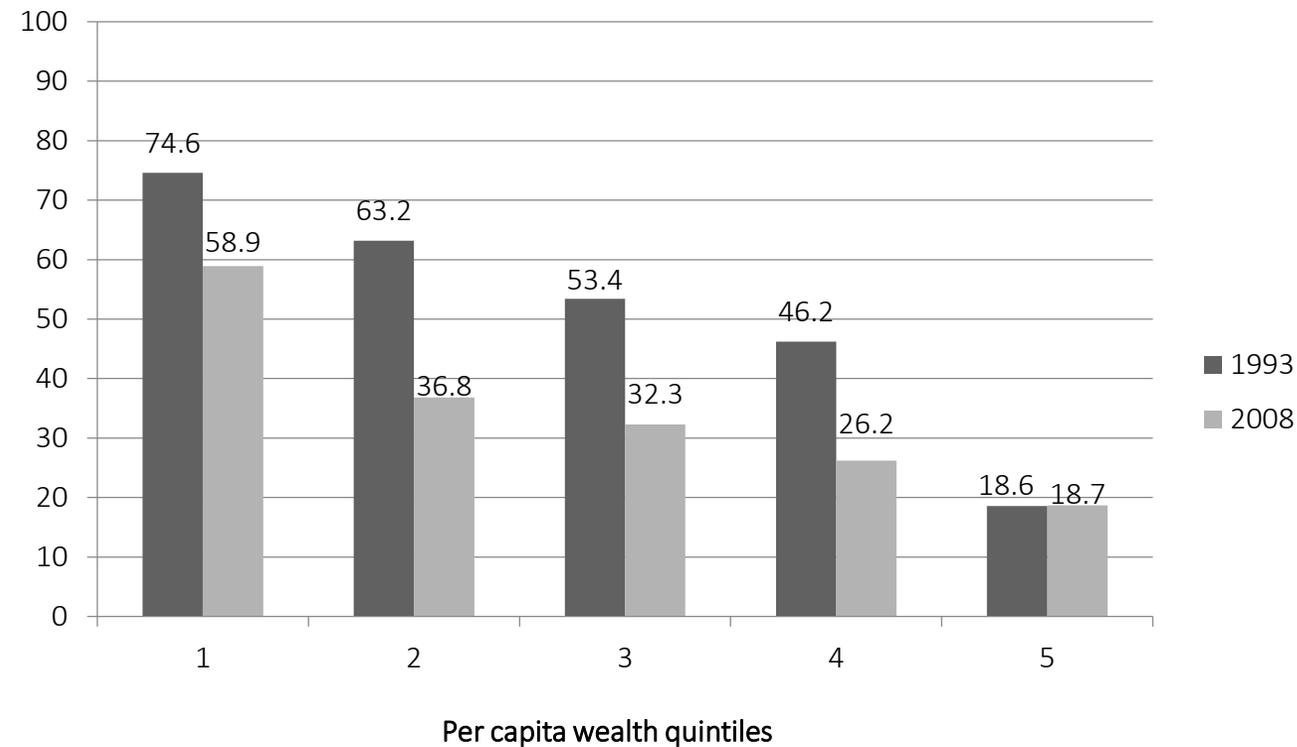
Notes: Due to the lack of expenditure data in the GHS surveys, an asset index was estimated in the PSLSD and the GHSs using a set of 10 overlapping household assets and characteristic to create asset quintiles. The 2002, 2005 and 2008 estimates are from the GHS and from identical questions, but the 1993 estimates are from the PSLSD where the question was different and other responses categories were provided.

Closing the equity gap in post-apartheid SA

- Considerable improvement in travel time to clinics
- Also see that travel to clinics no longer a major constraint in terms of acute care
- According to Smith et al. (1999) the proportion of black respondents who travelled less than 15 minutes to their closest public health facility rose from 36% to 54% between 1995 and 1998.
- GHS 2008 shows only 3.8% of users in bottom quintile reported that they did not consult a health worker when they were ill due to the distance of travel to the closest facility
- May be impediment to preventative and chronic care

Closing the equity gap in post-apartheid SA

**More than 30 minutes travel time to the closest public health facility
by per capita wealth quintile, 1993 & 2008**

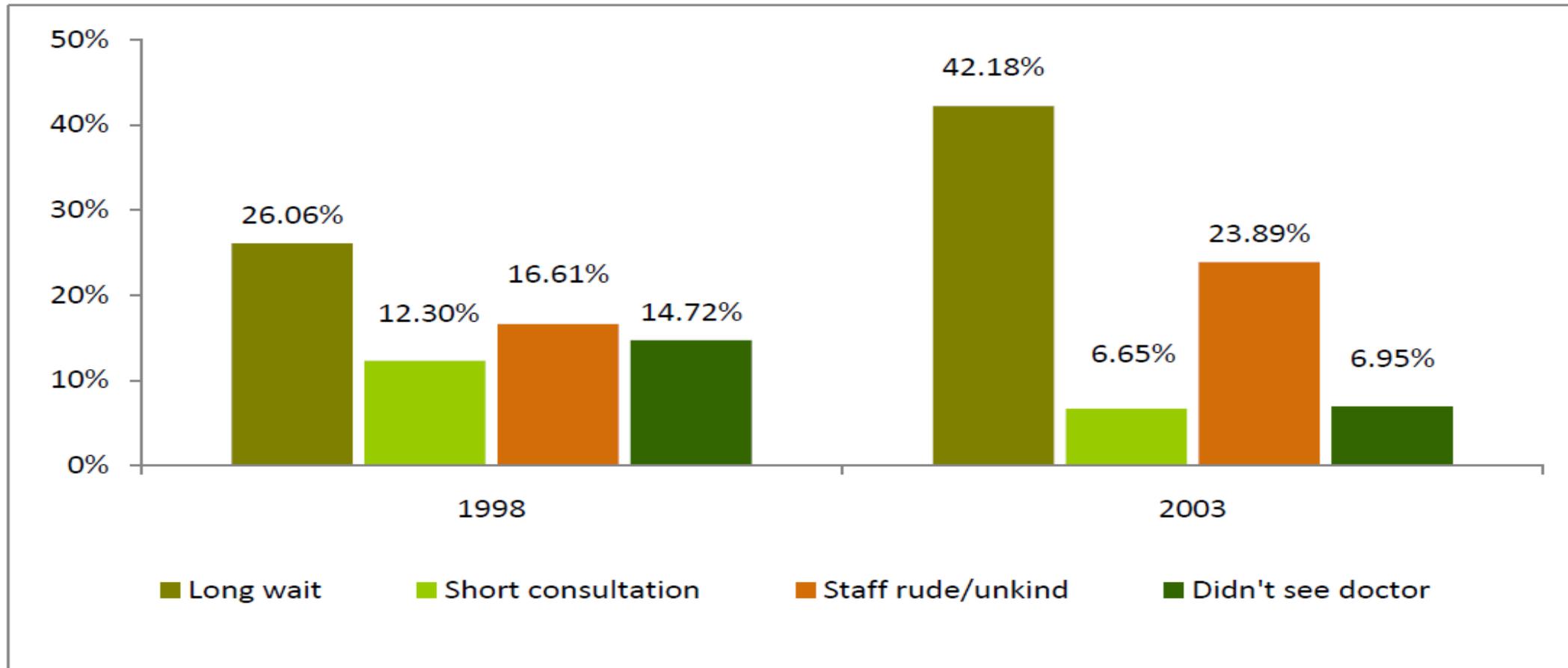


Source: 1993 PLSD and 2008 GHS.

Closing the equity gap in post-apartheid SA

- Most convincing evidence of poor quality and user acceptability of public sector services is 20% and more utilisation of private providers amongst individuals in poorest quintile of households
- Some tentative evidence on user satisfaction
 - Focus group discussions and exit interviews (Schneider and Palmer, 2002; Palmer, 1997) have probed the reasons for poor individuals visiting private providers and reported the following reasons
 - long waiting times
 - perceptions of inferior service
 - poor treatment by staff (e.g. rudeness) and
 - a lack of power due to absence of the payment mechanism
 - Similar to most frequent complaints by users of public health facilities (as reported in the GHSeS)
 - long waiting times (41%)
 - the availability of prescribed drugs (14%) and
 - staff attitudes (11%)

Reasons for dissatisfaction for users of public health facilities, 1998 and 2003



Source: DHS 1998 and 2003

Closing the equity gap in post-apartheid SA

- According to the NHI green paper: “ In many areas access has increased in the public sector, but the quality of healthcare services has deteriorated or remained poor. The public health sector will have to be significantly changed so as to shed the image of poor quality services that have been scientifically shown to be a major barrier to access (Bennett & Gilson, 2003)”
- Bob Pattison’s hospital audits show a significant number of avoidable maternal and baby deaths which may cast doubt into “effective coverage”
- But perhaps more concerning the 2015 Saving Mothers report finds a 25% increase in deaths due obstetric haemorrhage in 2009 – 2011 compared to the earlier three year assessment period
- Most common avoidable hospital factors
 - Poor clinical assessment
 - Delays in referral
 - not following standard protocols and
 - not responding to abnormalities in monitoring of patients

Closing the equity gap in post-apartheid SA

- Further reforms are needed and several initiatives have been implemented to address quality and equity
 - Operation Phakisa Ideal Clinic Realisation Programme
 - Office for Health Standards Compliance
- Significantly, there is also the health reform planned under the umbrella of the NHI, including
 - Abolishment of user fees for hospitals
 - Better gatekeeping with bypassing fees
 - Expansion of contracting of GPs
 - Reduce cost + improve efficiency via better contracts and active purchasing
 - Capitation for GPs
 - DRG-based reimbursement or global budgets for hospitals
 - Accreditation of providers by OHSC

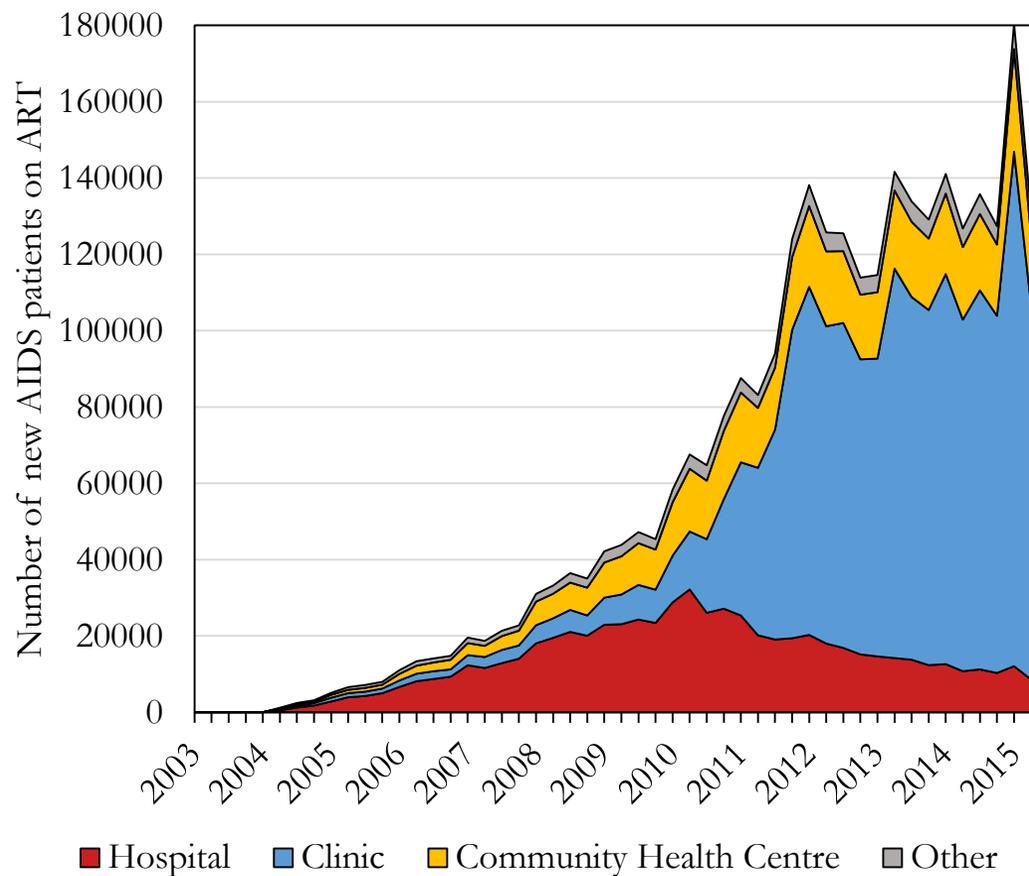
Distance from clinics as barrier to access

Distance from clinic as a barrier to access

- McLaren et al (2014) examines distance decay in likelihood of consulting a health provider over previous 12 months (using DHIS and NIDS data)
- They find if you live 2 km from the nearest health facility
 - Adults are 5 - 8 percentage points less likely to have visited a health provider over the past 12 months ($p < 0.01$)
 - Mothers giving birth are 6 - 8 percentage points ($p < 0.05$) less likely to have a doctor or nurse present at their birth

Case study:
Distance to ARVs and mortality

Program rollout in terms of # of new AIDS patients treated by ART, by facility



Sept 2005 85,100 people enrolled on ARVs
 Dec 2007 424,000 people receiving ARVs
 Dec 2008 678,550 individuals on ARVs
 Jul 2011 1.79 million people on treatment.
 Today Close to 3 million people are on ARV

2004 ►

2006

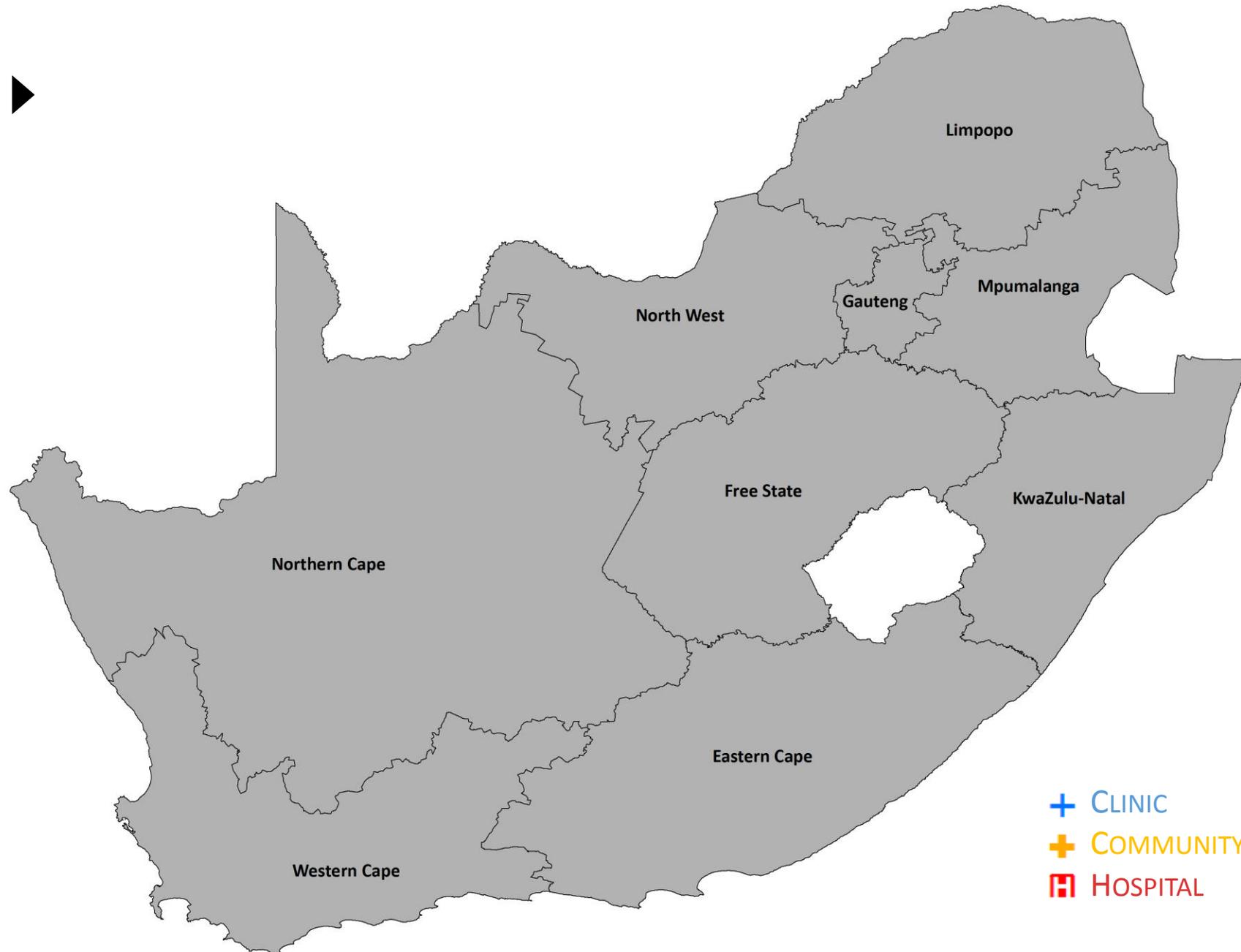
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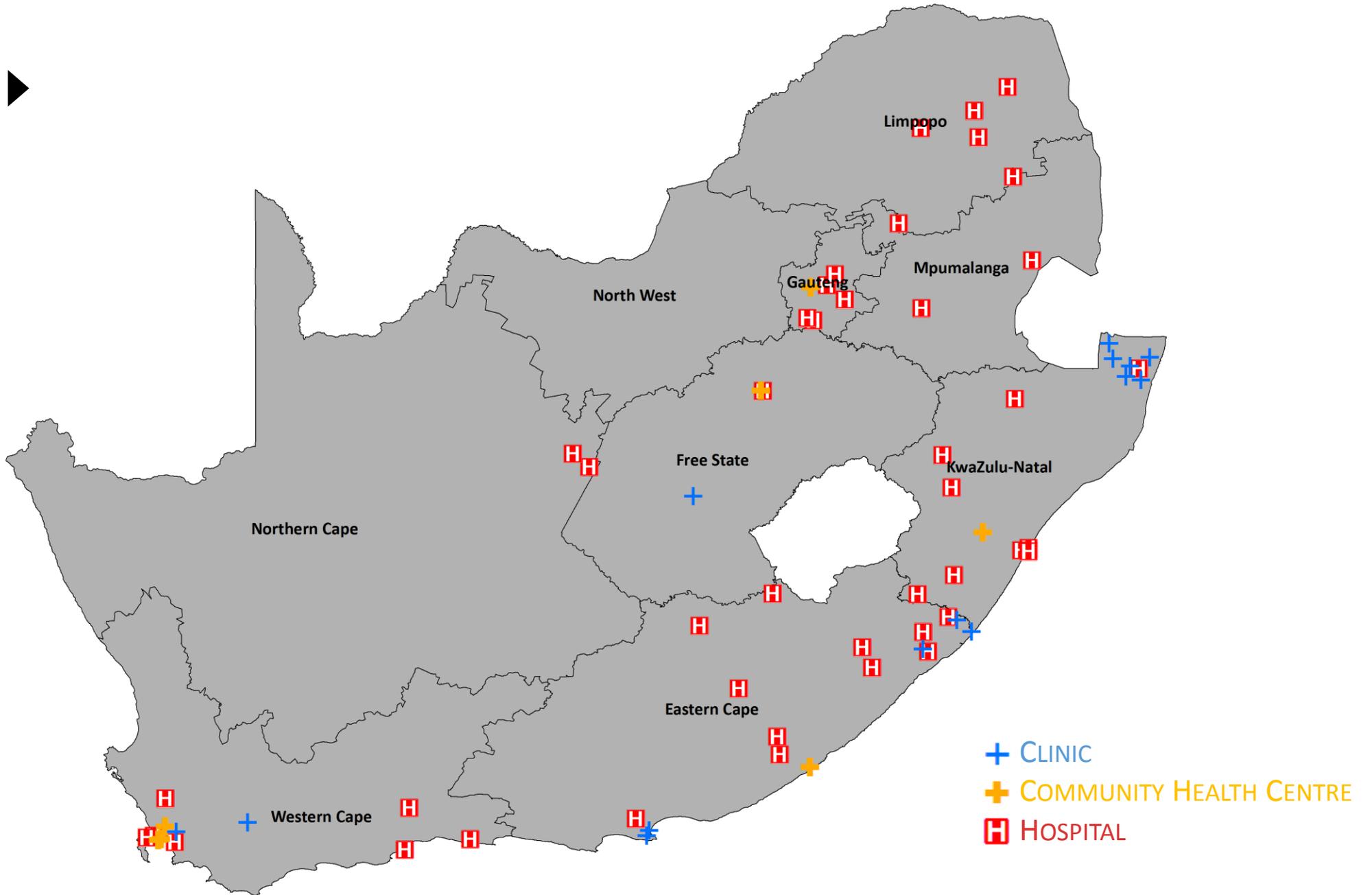


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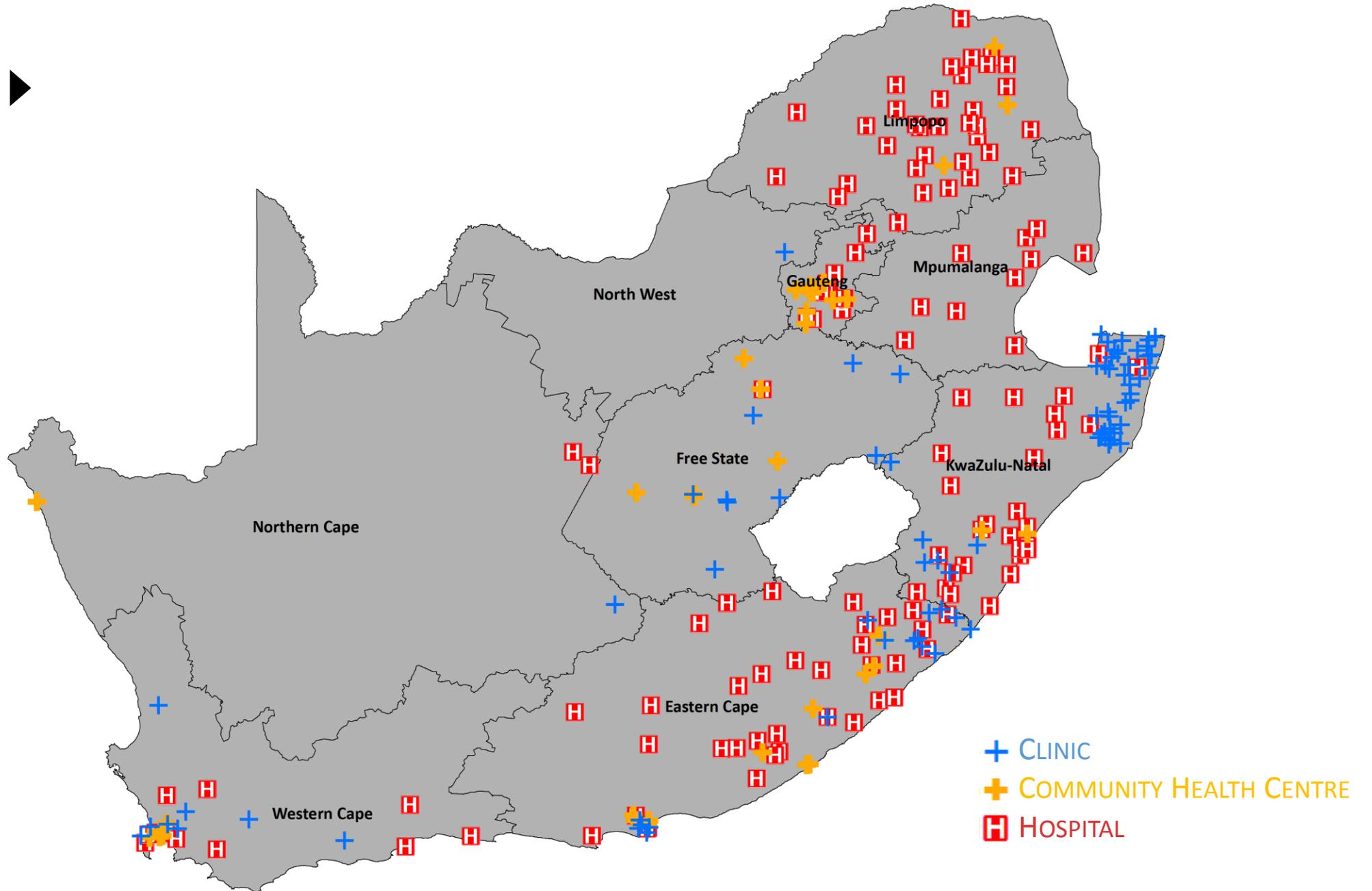
+ COMMUNITY HEALTH CENTRE

■ HOSPITAL

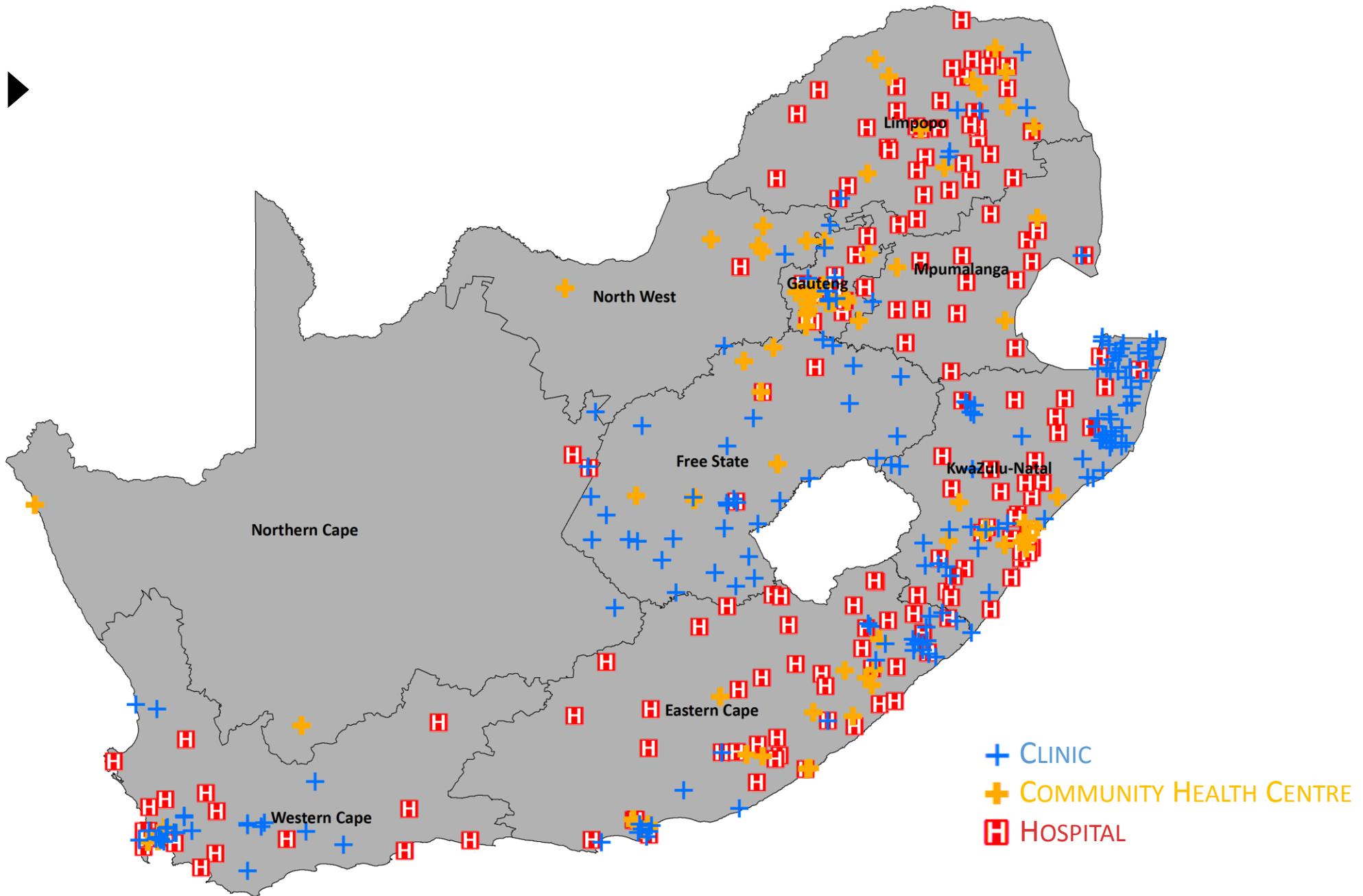
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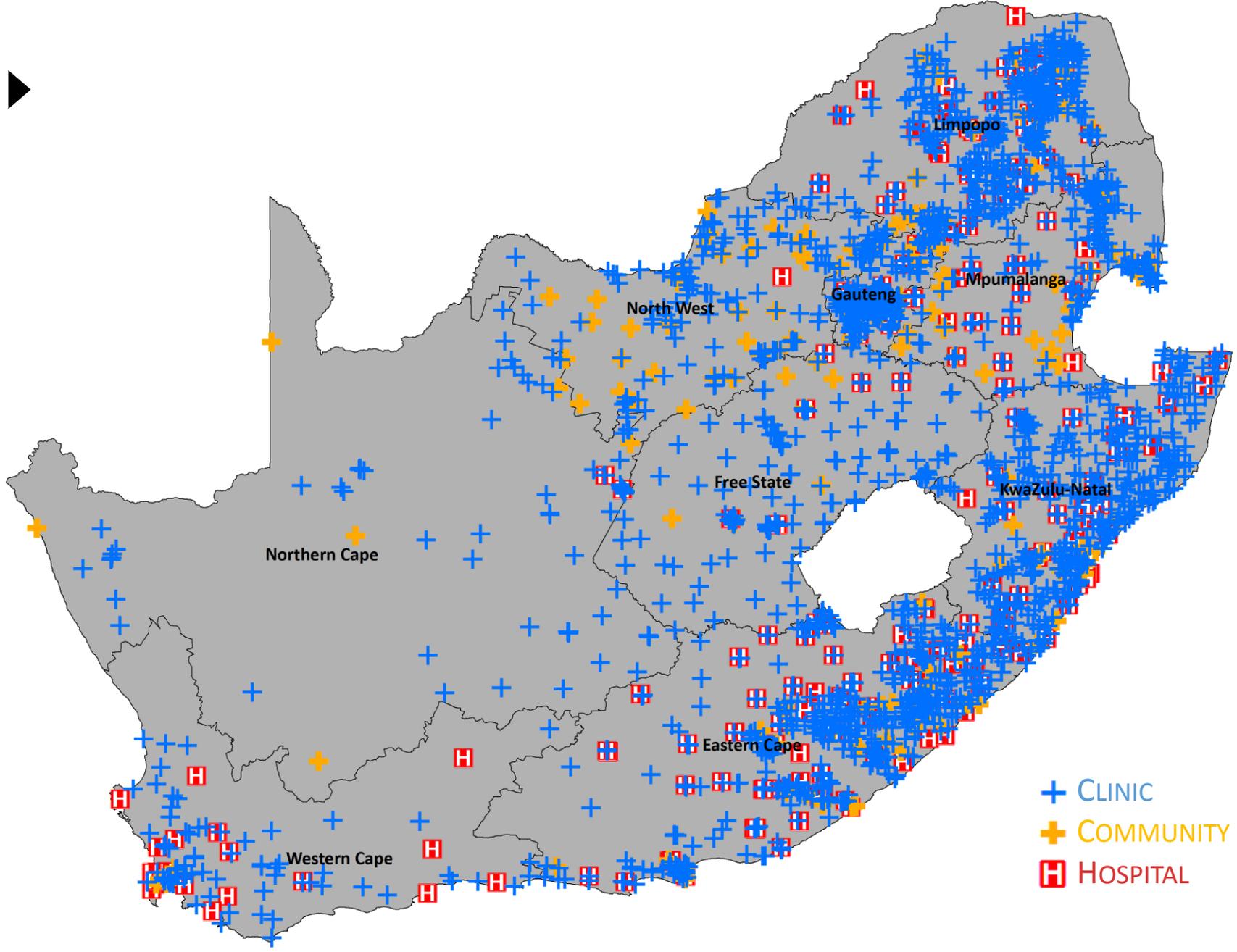
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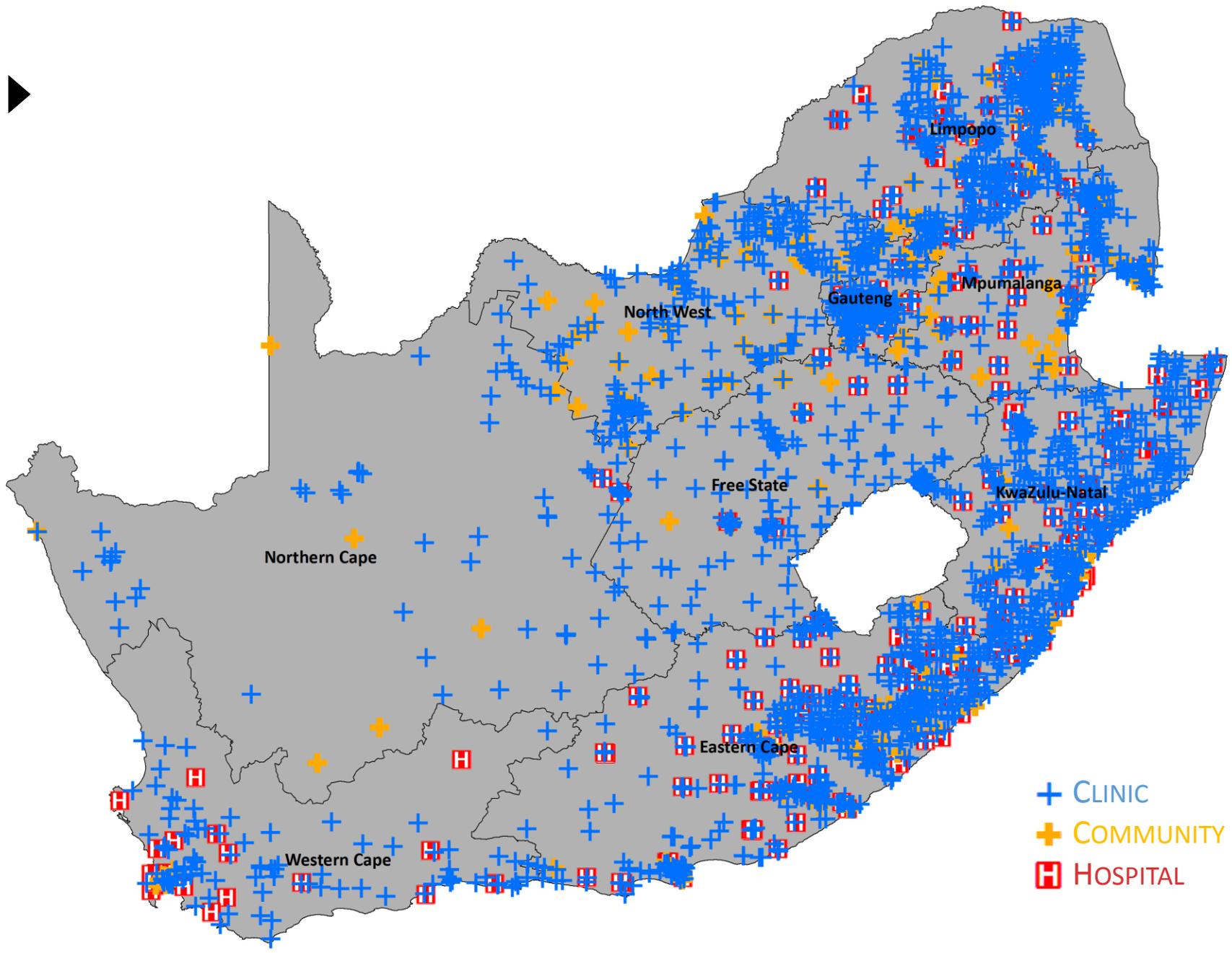


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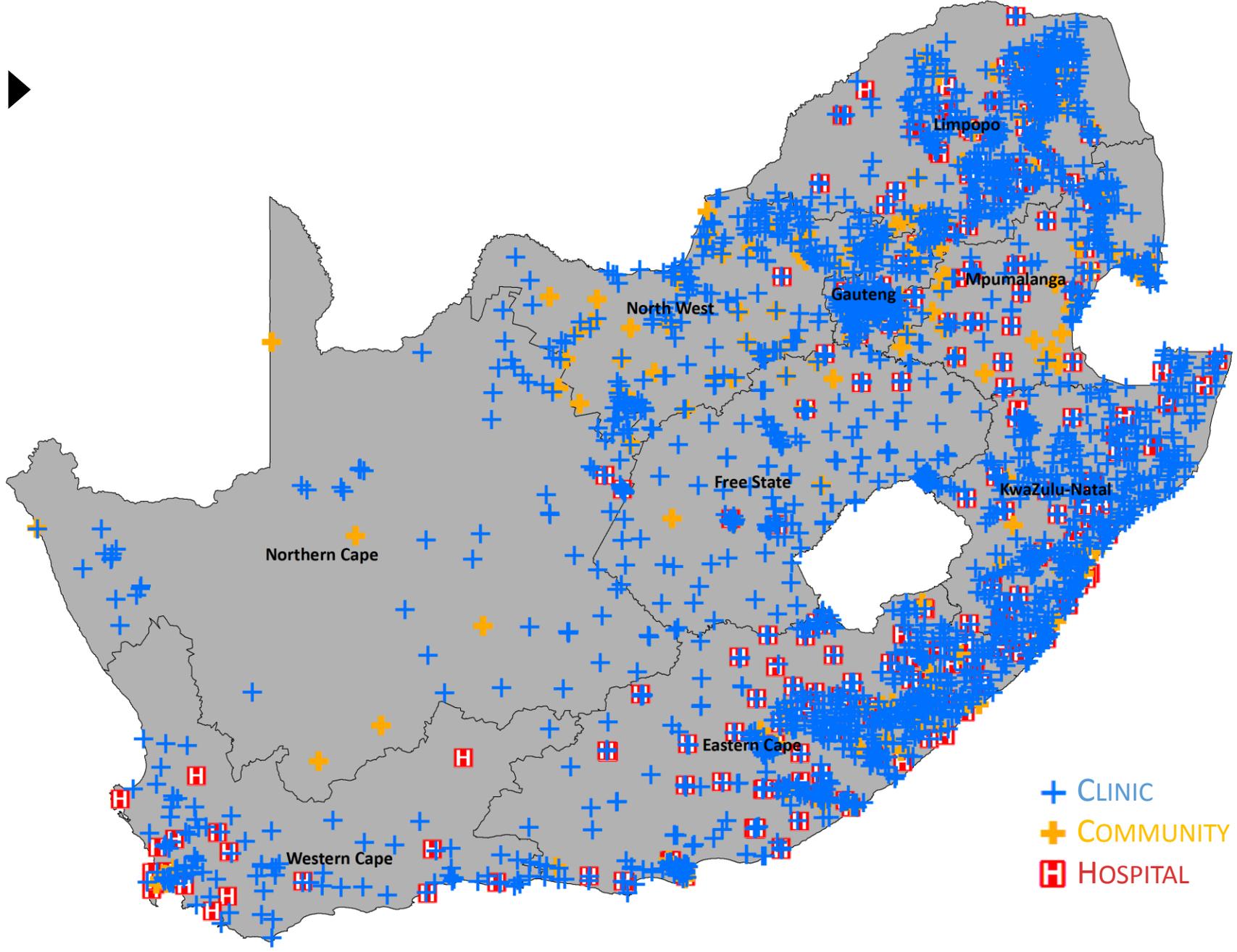
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Modelling, results and conclusions

We are interested in estimating the casual effect of ARV access on mortality in South Africa.

The following outcome equation is modelled

$$Y_{it} = \tau ARV_{it} + \gamma_i X_{it} + v_{it}$$

where Y_{it} denotes mortality (whether an individual died in the last 2 years)

ARV_{it} denotes the availability of ARVs at the beginning of the 2 year period

X_{it} denotes set of covariates

Concern 1: No reliable information on HIV status

Unable to isolate our analysis to only estimating the effect of ARVs on HIV + individuals.

The average treatment effect will be a weighed average of the effect of individuals with and without HIV

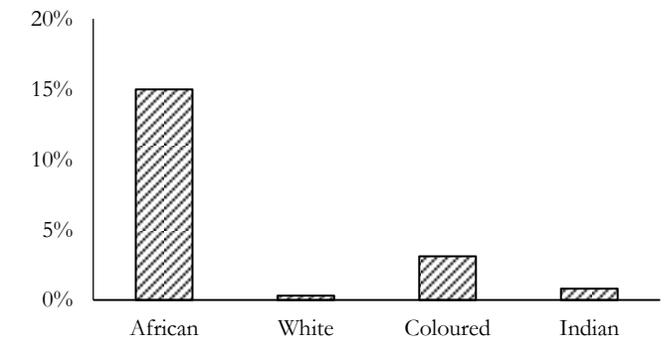
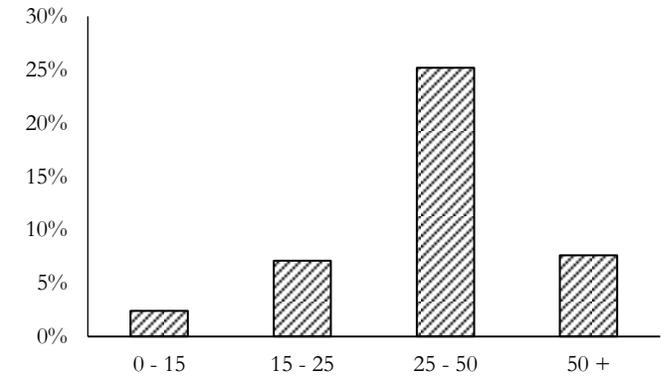
Expect the effect to be larger for the former

Expect the overall effect to be larger for groups with higher HIV rates

Proposed Remedy

Focus our analysis on more prevalent group (young Africans)

Exclude deaths that are caused by accidents or violence



Concern 2: Endogeneity

Simply regressing health outcomes on ARV access would deliver biased results if roll-out was not random (i.e. if the unobservable term v_{it} is correlated to our variable of interest, ARV_{it})

Proposed Remedy

Add controls: Control for elements that may be correlated to both the mortality and ARV expansion (e.g. SES, density of area, HIV rate)

Fixed Effects: Instead of using the geographical variation, we can use time variation among clusters

Probability of ART Access

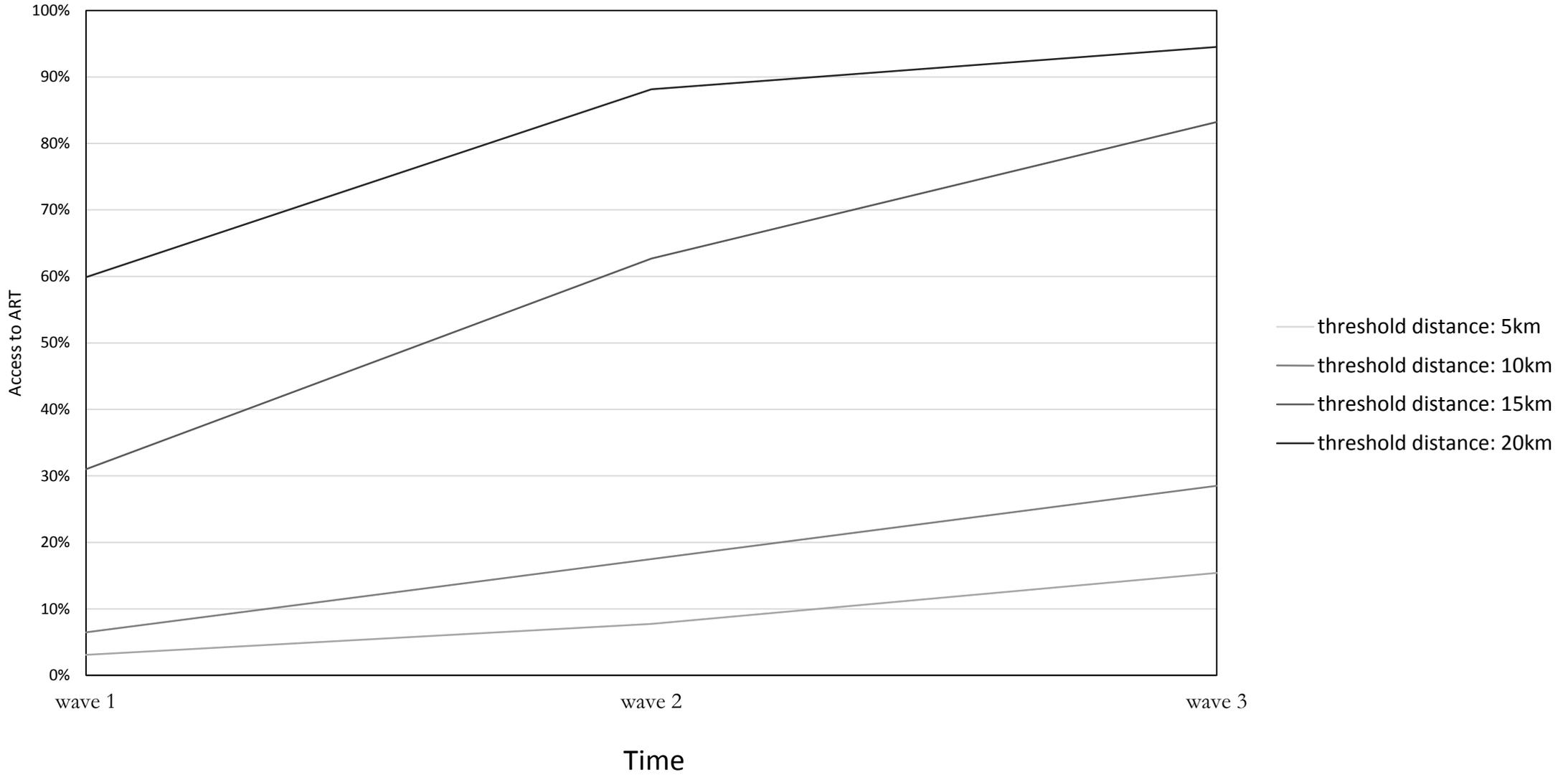


Table 2a: OLS with controls (all Races)

VARIABLES	(1) ALL	(2) ALL	(3) ALL	(4) ALL	(5) ALL
Treatment	-0.005***	-0.004***	-0.005***	-0.005***	-0.004***
Aged 10 - 20		-0.004***		-0.004***	-0.004***
Aged 20 - 30		0.009***	Effect remains, even if we control for SES, Province and Density	0.009***	0.009***
Aged 30 - 40		0.018***		0.019***	0.019***
Aged 40 - 50		0.023***		0.023***	0.023***
Aged 50 - 60		0.055***		0.053***	0.053***
Aged 60 - 70		0.069***		0.069***	0.069***
Aged 70 - 80		0.112***		0.111***	0.111***
Aged 80+		0.346***		0.347***	0.347***
Coloured		-0.006***		-0.001	-0.001
Indian		-0.013***		-0.016***	-0.016***
White		-0.011***		-0.008***	-0.007***
Household Quintile = 2		-0.006***		-0.008***	-0.008***
Household Quintile = 3		-0.010***		-0.011***	-0.011***
Household Quintile = 4		-0.010***		-0.011***	-0.011***
Household Quintile = 5		-0.014***		-0.013***	-0.013***
Period = 2					0.002
Period = 3					-0.003**
Constant	0.026***	0.018***	0.017***	0.001	0.001
Area Controls	No	No	Yes	Yes	Yes
Observations	91,048	91,019	88,507	88,480	88,480
R-squared	0.000	0.051	0.002	0.052	0.051

Source: 



Table 2a: OLS with controls (Young Africans)

VARIABLES	(1) AFR: 20-40	(2) AFR: 20-40	(3) AFR: 20-40	(4) AFR: 20-40	(5) AFR: 20-40
Treatment	-0.010***	-0.010***	-0.010***	-0.010***	-0.008***
Household Quintile = 2		-0.005*		-0.002	-0.002
Household Quintile = 3		-0.015***		-0.009***	-0.009***
Household Quintile = 4		-0.011***		-0.003	-0.003
Household Quintile = 5		-0.023***		-0.011**	-0.011**
Period = 2					0.001
Period = 3					-0.005*
Constant	0.028***	0.037**	0.020***	0.022***	0.022***
Area Controls	No	No	Yes	Yes	Yes
Observations	20,182	20,179	19,704	19,702	19,702
R-squared	0.001	0.003	0.008	0.009	0.009

Table 2a: Fixed Effect without any controls (only African)

VARIABLES	(1) AFR	(2) AFR: 0-20	(3) AFR: 20-40	(4) AFR: 40-60	(5) AFR: 60+
Treatment	-0.005*** (0.002)	-0.005*** (0.001)	-0.015*** (0.003)	-0.008 (0.006)	0.022* (0.012)
Constant	0.027*** (0.001)	0.009*** (0.001)	0.033*** (0.003)	0.044*** (0.004)	0.081*** (0.009)
Observations	1,065	1,005	1,035	1,014	865
Number of Clusters	363	348	355	349	313
R-squared	0.022	0.027	0.030	0.003	0.006

Table 2a: Table 2b: Fixed Effect with time dummies (only African)

VARIABLES	(1) AFR	(2) AFR: 0-20	(3) AFR: 20-40	(4) AFR: 40-60	(5) AFR: 60+
Treatment	-0.003 (0.002)	-0.003 (0.002)	-0.011** (0.004)	-0.005 (0.007)	0.024 (0.016)
Period = 2	-0.002 (0.002)	-0.002** (0.001)	-0.003 (0.003)	-0.006 (0.005)	0.027** (0.012)
Period = 3	-0.006*** (0.002)	-0.003** (0.001)	-0.006* (0.003)	-0.018*** (0.006)	0.022 (0.013)
Constant	0.027*** (0.001)	0.009*** (0.001)	0.033*** (0.003)	0.043*** (0.004)	0.076*** (0.009)
Observations	1,065	1,005	1,035	1,014	865
Number of Clusters	363	348	355	349	313
R-squared	0.037	0.037	0.035	0.020	0.016

What does this mean?

- Being closer to a facility providing ARVs
 - decreased the probability of mortality by between 30 and 50% for the younger African age-cohort.
 - decreased the probability of mortality by 10 to 20% for the larger African population as a whole
- Evidence of the powerful impact of distance to health services (and in this case also specifically treatment) on “life and death”
- Due to its apartheid legacy SA inherited a spatial distribution where an individual’s prospects and opportunities in life have a strong geographical association
- This research shows that distance to clinics can be an important pathway for such inequities to perpetuate themselves