

Examining the impact of subsidized vouchers on service use before and after public sector fees were removed: An evaluation of the Kenya safe motherhood voucher program

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The windy path to financial protection in Kenya...

Colonial era

User fees in all gov't facilities

1965/66

User fees removed & NHIF established

1989

User fees reintroduced

1990

User fees suspended

1991-2003

User fees reintroduced

2004

10/20 policy: fees removed at lower level facilities & social health insurance bill passed

2007

All fees removed for deliveries at lower level facilities

2013

Free maternity care in all gov't facilities

Safe motherhood voucher program



Demand side

Subsidized vouchers sold to poor women to be redeemed at facilities enrolled in the voucher program

KSh 200
(\$1.94/£1.45)

4 Antenatal
care (ANC)
visits

Facility
delivery
care

Postnatal
care (PNC)



Supply side

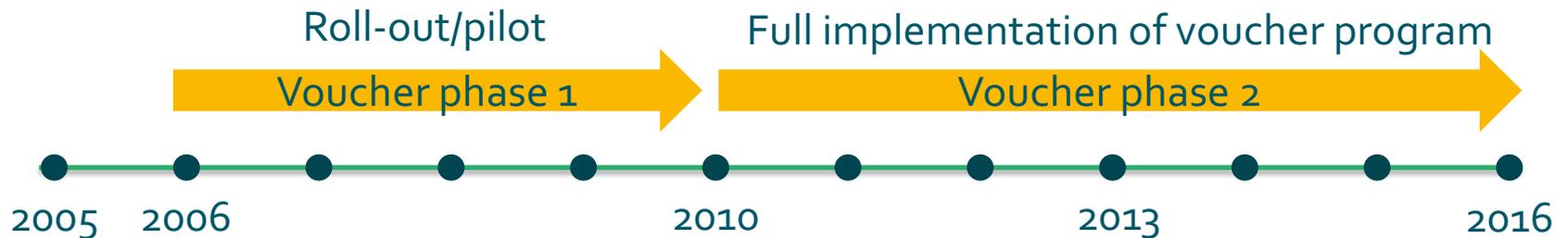
Public & private sector facilities that met minimum standards in terms of staffing and infrastructure were accredited

Each facility was reimbursed at standard, pre-negotiated rates for each service provided

Facilities that failed to upkeep minimum standards risked losing their accreditation

Safe motherhood voucher program

- Implemented from 2006-2016



- Intervention covered five districts: Kiambu, Kilifi, Kisumu, Kitui, & Nairobi
- Program managed by PricewaterhouseCoopers on behalf of the Government of Kenya & supported by the German Development Bank (KfW)
- Evaluation managed by Population Council Kenya

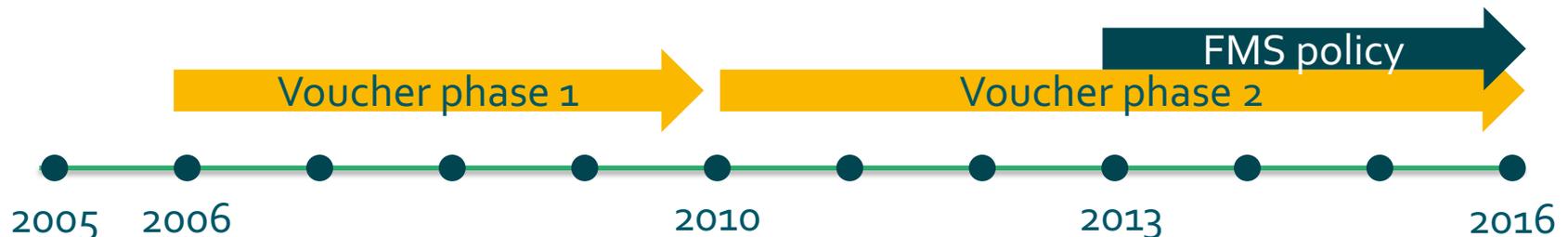
Free maternity services policy



On 1 June 2013, the Kenyan government announced that maternity services were to be provided for free in all public sector facilities across the country with immediate effect



From 2013-2016 both the voucher program & free maternity services (FMS) policy operated concurrently



Key research questions

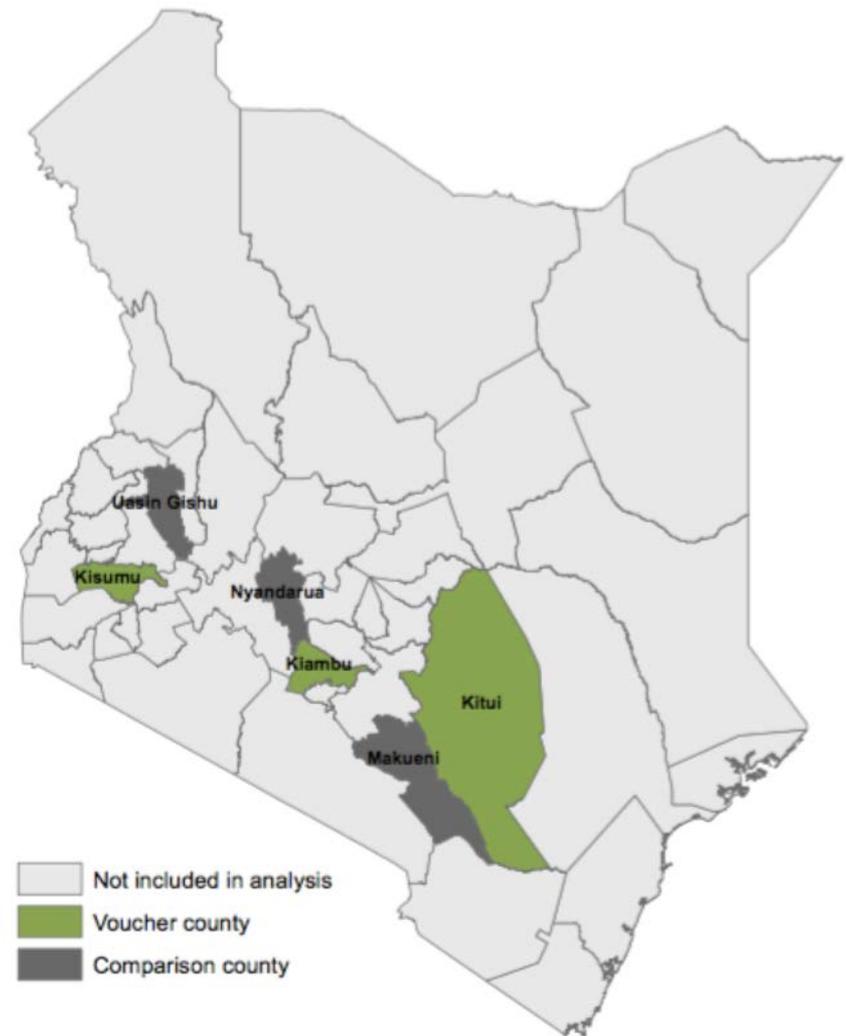


What are the longer-term impacts of the voucher program on maternal health service use and sources of care?

Did any positive effects of the voucher program persist after the free maternity services policy was introduced in 2013?

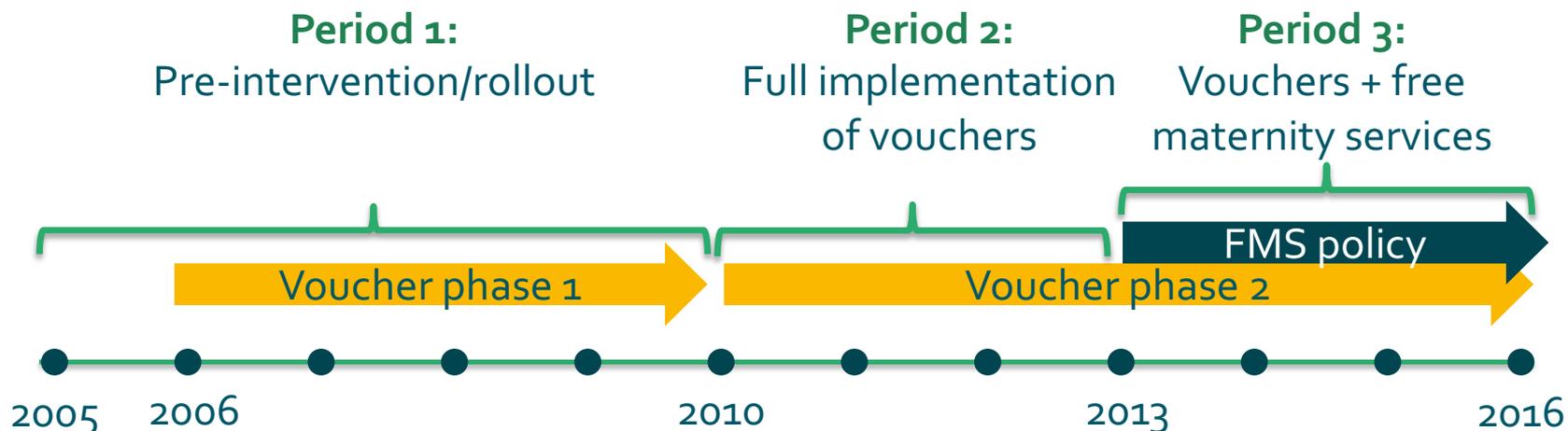
Study design & analysis

- Repeated cross-sectional surveys conducted in 2010/11, 2012, & 2016 in 6 counties (3 voucher, 3 comparison)
- Multi-stage sampling of sub-locations & villages within the study counties
 - Within villages, poorest households selected for inclusion in study
- Women aged 15-49 years asked to report on maternal health service-seeking for all of their births in the previous five years
- Analysis compares outcomes at the community level, not voucher users vs. non-users



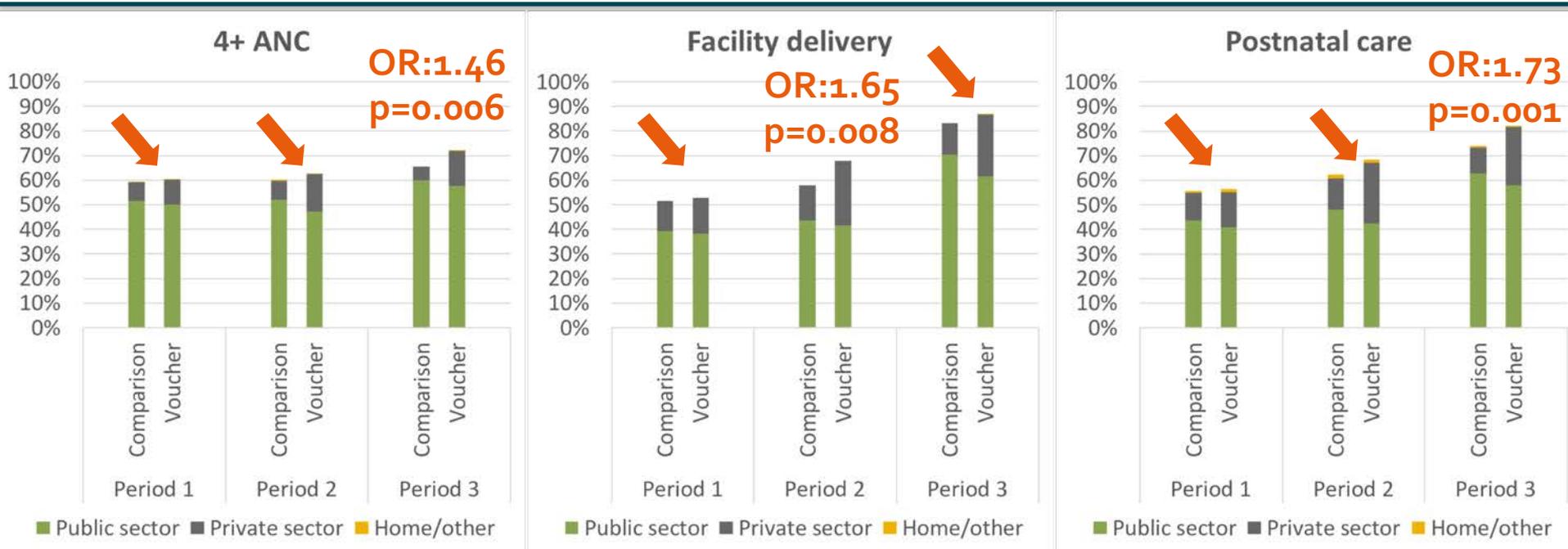
Statistical analysis

- Data from all three surveys pooled and births (N=7,136) were categorized into three periods:



- Mixed effects regression models accounting for clustering at the county sub-location, village, and woman levels
 - All results presented adjusted for: woman's age at birth, education, wealth, residence, marital status, employment, parity
- Conducted a difference-in-difference analysis to assess the impact of the safe motherhood voucher program on service-seeking & continuity of maternal care

Results: Use of maternal health services



By Period 3, 60% of births in the voucher group received 4+ ANC, compared to 50% in the comparison group. No significant difference in coverage of 4+ ANC between groups in Period 1 and 2. More use of 4+ ANC in Period 2 likely to receive 4+ ANC.

No significant difference in coverage of facility delivery between groups in Period 1 and 2. Facility-based delivery more likely to be used in Period 3.

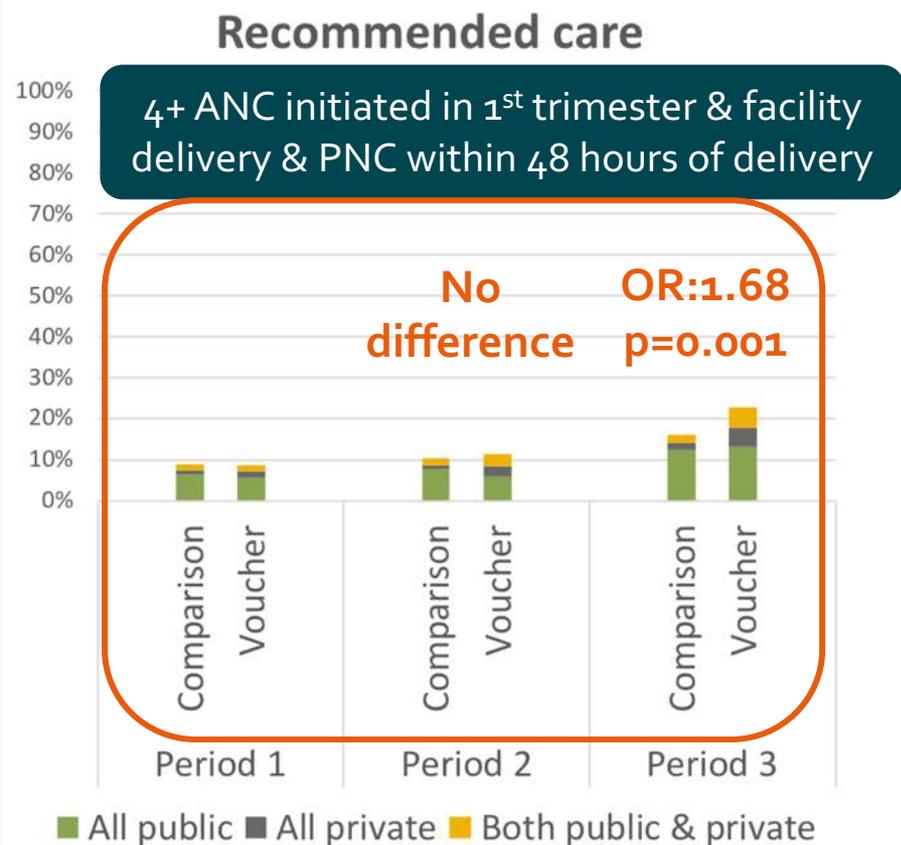
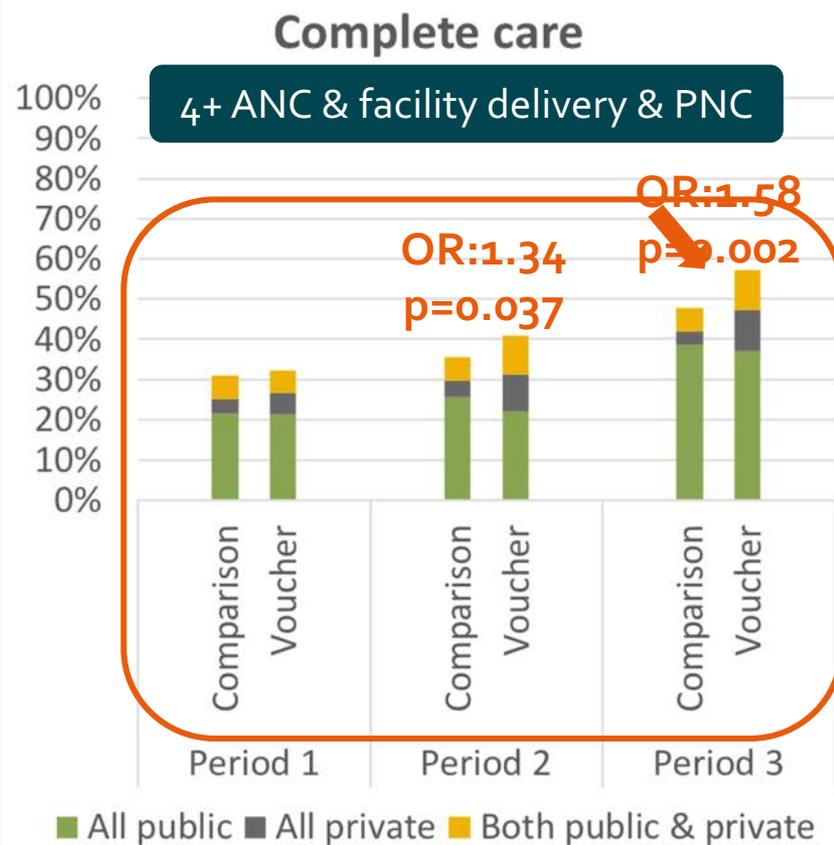
In Period 3, births in the voucher group received PNC ~60% compared to 50% in the comparison group. No significant difference in coverage of PNC between groups in Period 1 and 2. More use of PNC in Period 3 likely to receive PNC.

Period 1:
Pre-intervention/rollout

Period 2:
Full implementation of vouchers

Period 3:
Vouchers + free maternity services

Results: Continuum of care



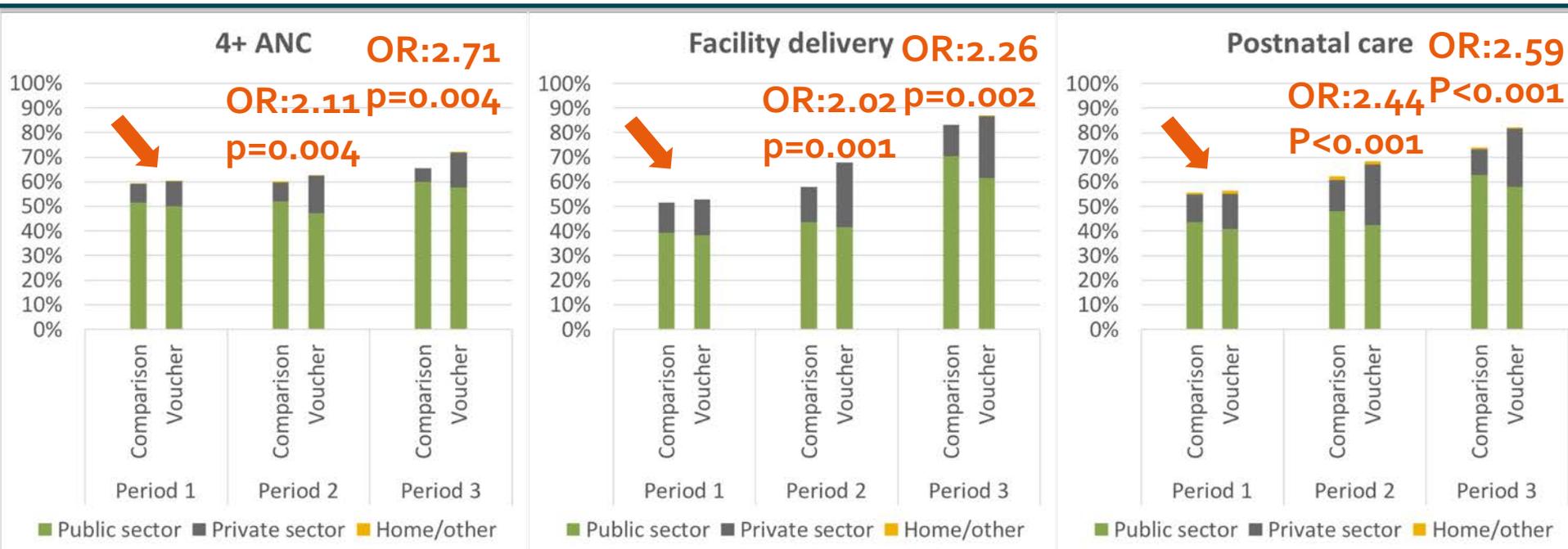
The proportion of births that received all three services was substantially lower than the proportions that received each individual care among births for ANC & PNC

Period 1:
Pre-intervention/rollout

Period 2:
Full implementation of vouchers

Period 3:
Vouchers + free maternity services

Results: Sector of care for maternal health services



The public sector was the predominant provider across time for all three services

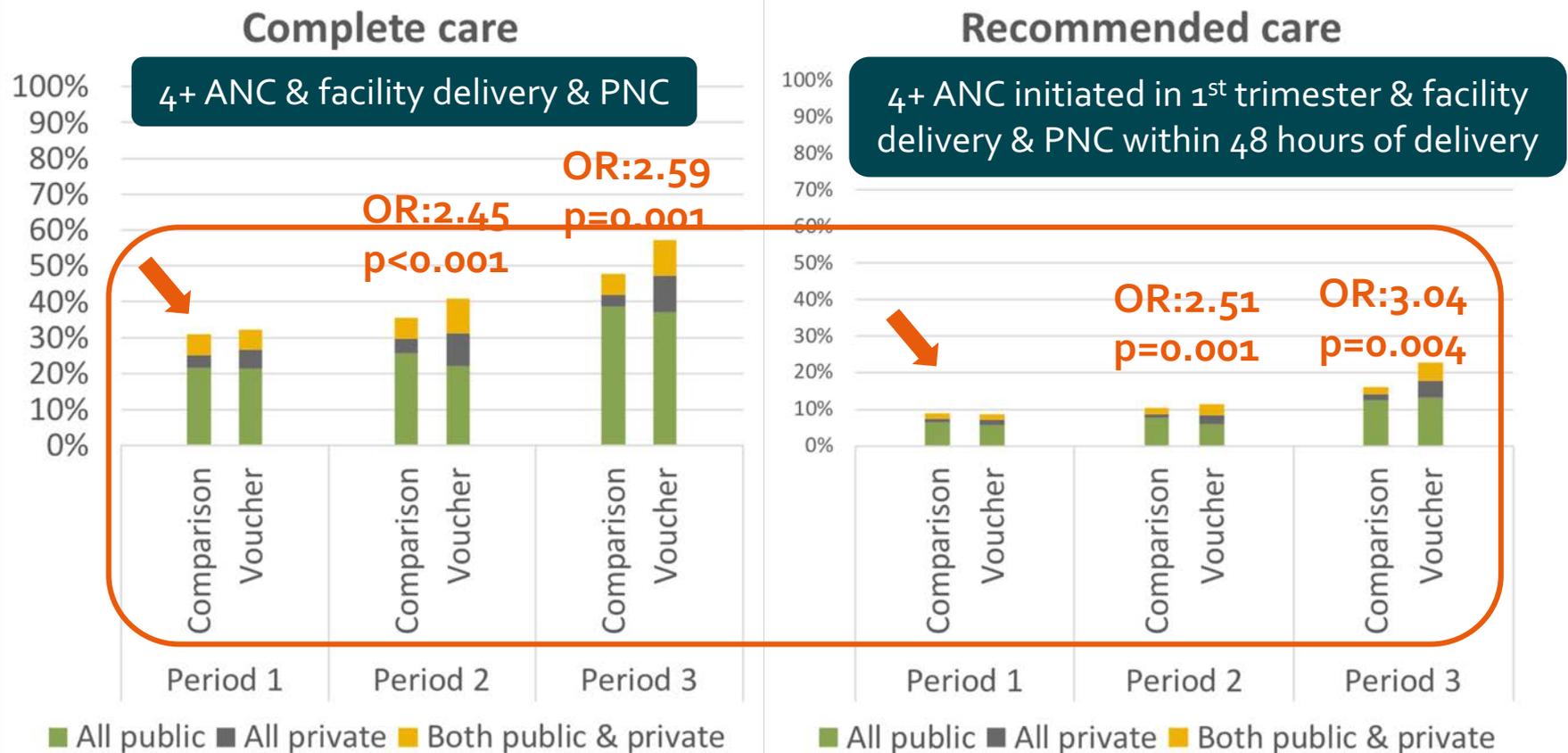
No significant difference in use private care between intervention groups in Period 1, for all three services
 In Period 3, use of private care was significantly higher in voucher countries for all three services

Period 1:
Pre-intervention/rollout

Period 2:
Full implementation of vouchers

Period 3:
Vouchers + free maternity services

Results: Sector of care across the continuum



In Periods 2 & 3, use of private providers for at least one service dropped by the
 In Period 1, private sector market share among users of complete &
 maternal health at least one service from a private provider was higher
 recommended care was similar between intervention groups
 than the private market shares for each of the three services individually

Period 1:
Pre-intervention/rollout

Period 2:
Full implementation of
vouchers

Period 3:
Vouchers + free
maternity services

Results: Impact of the voucher program – service use

	Pre-intervention/rollout to full implementation of voucher program		Full implementation of voucher program to introduction of FMS policy	
	Period 1 – Period 2		Period 2 – Period 3	
	D-in-D estimator [95% CI]	p-value	D-in-D estimator [95% CI]	p-value
SERVICE USE				
4+ ANC visits	0.012 [-0.035, 0.059]	p=0.619	0.047 [-0.012, 0.105]	p=0.119
Facility delivery	0.055 [0.013, 0.098]	p=0.011	-0.049 [-0.102, 0.003]	p=0.064
PNC	0.038 [-0.005, 0.081]	p=0.083	0.009 [-0.045, 0.063]	p=0.733
Complete care	0.021 [-0.024, 0.066]	p=0.366	0.045 [-0.011, 0.101]	p=0.117
Recommended care	0.000 [-0.031, 0.031]	p=0.999	0.057 [0.018, 0.096]	p=0.004

After the FMS policy was introduced, the program was associated with a 5.7 percentage point increase in recommended care, a 4.9 percentage point decrease in facility delivery, and a 0.047 percentage point increase in 4+ ANC visits. The impact of the voucher program on 4+ ANC visits, facility delivery, PNC, and complete care was not statistically significant.

Results: Impact of the voucher program – sector of care

Pre-intervention/rollout to full implementation of voucher program

Full implementation of voucher program to introduction of FMS policy

	Period 1 – Period 2		Period 2 – Period 3	
	D-in-D estimator [95% CI]	p-value	D-in-D estimator [95% CI]	p-value
PRIVATE SECTOR MARKET SHARE				
ANC	→ 0.075 [0.043, 0.106]	p<0.001	0.025 [-0.015, 0.066]	p=0.218
Facility delivery	0.105 [0.049, 0.160]	p<0.001	0.000 [-0.059, 0.059]	p=1.000
PNC	0.110 [0.058, 0.162]	p<0.001	-0.001 [-0.067, 0.048]	p=0.744
Complete care	0.147 [0.073, 0.222]	p<0.001	-0.008 [-0.086, 0.070]	p=0.842
Recommended care	→ 0.181 [0.045, 0.317]	p=0.009	-0.030 [-0.160, 0.100]	p=0.652

After the introduction of the FMS policy in public facilities, use of private Full implementation of the voucher service was associated with greater increases in sector services decreased among all births & there were no differences in use of private sector care for all indicators of service use and continuity of care the level of decrease between voucher and comparison counties

Summary & final thoughts

Voucher program was associated with increased use of:

- (1) facility-based delivery care
- (2) private sector care

After free maternity services policy was introduced, voucher program was associated with:

- (1) lower increase in use of facility-based delivery care
- (2) Increased use of recommended care

Use of public sector services increased after free maternity services policy was introduced, but a significantly higher proportion of women in voucher counties continued to use private sector care



(1) Purchasing private sector care as a vehicle for increasing access to care among the poor?

(2) Role of accountability & oversight?

(3) Cannot ignore non-financial barriers

Read more in BMJ Global Health:

Research

BMJ Global Health

Evaluating the impact of a maternal health voucher programme on service use before and after the introduction of free maternity services in Kenya: a quasi-experimental study

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