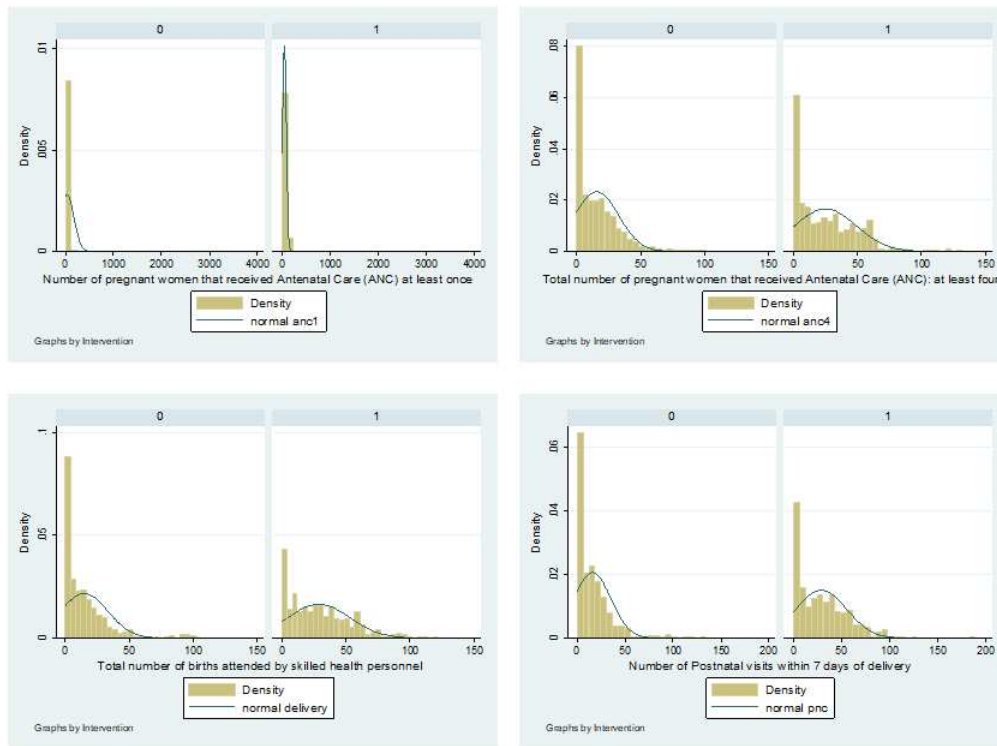


## Supplementary files

### Supplementary file I: Normality test of the maternal health service use variables

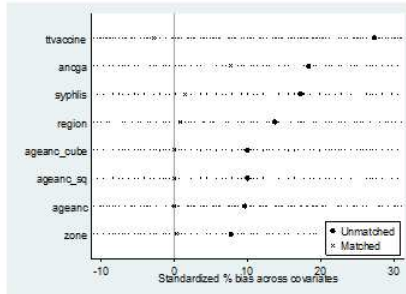
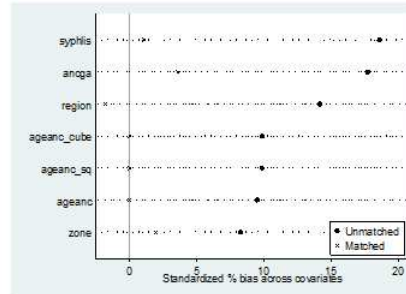
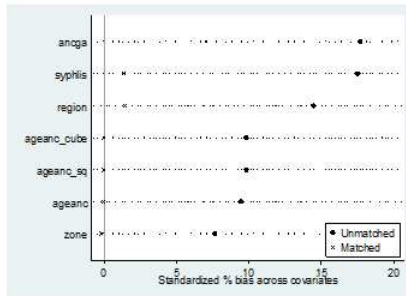
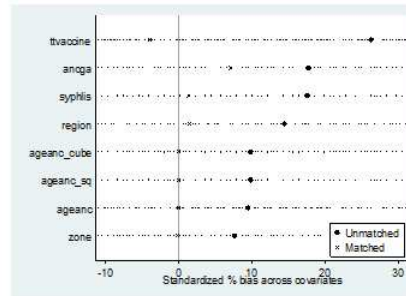
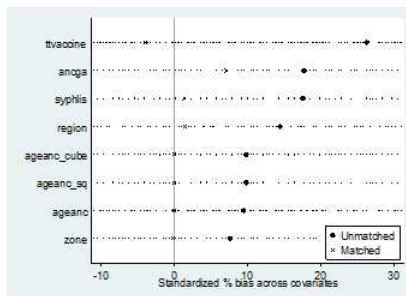


## Supplementary file II: Assumption checking: common Support

Table 1: Percentage reduction in bias as a result of propensity score matching

Outcomes	Matching variables	Radius		Kernel	
		% reduction of bias	P-value	% reduction of bias	P-value
<b>Four or More ANC</b>	Age of the mother	99.4	0.69	99.8	0.90
	Age squared	100	0.68	100	0.91
	Age cubed	100	0.68	100	0.91
	Gestational age	82.3	0.74	58.1	0.44
	Syphilis test	77.9	0.70	91.7	0.88
	TT Vaccine	81.3	0.62	89.5	0.78
	Region	97.2	0.97	94.1	0.93
	Zone	51.2	0.70	96.1	0.98
<b>Institutional delivery</b>	Age of the mother	99.8	0.91	99.6	0.80
	Age squared	100	0.96	100	0.82
	Age cubed	100	0.98	100	0.85
	Gestational age	95.5	0.93	79.6	0.71
	Syphilis test	93.9	0.91	94.1	0.91
	Region	92.2	0.91	87.4	0.85
<b>Referral during ANC</b>	Zone	94.1	0.96	76.5	0.84
	Age of the mother	99.6	0.80	99.4	0.67
	Age squared	100	0.81	100	0.68
	Age cubed	100	0.83	100	0.69
	Gestational age	60.1	0.47	71.4	0.60
	Syphilis test	92.3	0.89	86.7	0.81
<b>Postnatal care</b>	Region	89.8	0.88	99.1	0.99
	Zone	97.6	0.99	91.2	0.94
	Age of the mother	99.2	0.60	99.6	0.80
	Age squared	100	0.61	100	0.81
	Age cubed	100	0.62	100	0.83
	Gestational age	82.9	0.75	60.1	0.47
	Syphilis test	78	0.69	92.3	0.89
	TT Vaccine	76.6	0.55	85.1	0.70
<b>Continuum of care</b>	Region	97.3	0.97	89.8	0.88
	Zone	41.8	0.64	97.6	0.99
	Age of the mother	99.2	0.60	99.6	0.80
	Age squared	100	0.61	100	0.81
	Age cubed	100	0.62	100	0.83
	Gestational age	82.9	0.75	60.1	0.47
	Syphilis test	78	0.69	92.3	0.89
	TT Vaccine	76.6	0.55	85.1	0.70

## Supplementary file III: standardized difference in means (SMD) plots for Kernel Matching approach

**>= 4 ANC****Institutional delivery****Referral during ANC****Postnatal care****Continuum of care**

## Supplementary file IV: Plot of on support and off support of matching cases

