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**The Role of Public and Private Facility-based Delivery Care:
The Case of Bangladesh from a Universal Coverage Perspective**

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Main sources of facility-based delivery care in Bangladesh:

Public health facilities
Private care Providers
NGOs

Ensuring universal access to facility-based delivery care is essential for:

accelerated implementation of maternal and newborn continuum of care
and to achieve Millennium Development Goal (MDG) 4 and 5



Policy-makers need to understand the role and relative importance of public-and private-sector delivery care providers in the design, resource allocation and implementation of universal maternal health coverage strategies



Objective:

To assess the relative role of the public and the private sectors in the delivery care by

examining household utilization and expenditure patterns associated with socio-economic status.



Methods

In total, 13,200 women were independently selected from 22 sub-districts of 4 rural districts

Women who delivered within a year prior to the survey were interviewed

The sample sizes were 600 from each sub-district

Sampling: a two stage cluster sampling procedure

20 villages from each sub-district with probability of selection proportional to size

30 women were interviewed in each of the villages



Data collection

Age, Parity

health facility and
delivery care

Delivery place & type

Socio-economic status,
Use of public/private

Expenditure for facility-based

The cross-sectional survey was conducted during May-July 2008.

Data analysis

Descriptive analyses

HH per-capita delivery expenditure, HH per-capita total expenditure

Multinomial logistic regression



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Distribution of deliveries by location (n=13,200)

Public facility	Private facility	Home	Total
1124 (8.5%)	836 (6.3%)	11240 (85.2%)	100% (13200)

Distribution of deliveries by type and facility (n=1,960) (excluding home-based)

Type of delivery	Public facility	Private facility	Total
Normal delivery	821 (73%)	231 (28%)	1052 (53.7%)
Caesarean I delivery	303 (27%)	605 (72%)	908 (46.3%)
Total	1124 (100%)	836 (100%)	1960 (100%)

P=0.000



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Descriptive characteristic of deliveries (Predisposing factors)

		Public facility	Private facility	Home
Household size	<=5	607 (8.5%)	396 (5.5%)	6140 (86.0%)
	>5	517 (8.5%)	440 (7.3%)	5100 (84.2%)
Birth order	<=2	844 (11.0%)	649 (8.4%)	6189 (80.6%)
	>2	280 (5.1%)	187 (3.4%)	5051 (91.5%)
Mother' s age	<20 years	319 (9.6%)	170 (5.1%)	2833 (85.3%)
	20-29 years	634 (8.3%)	511 (6.7%)	6454 (84.9%)
	> 30 years	171 (7.5%)	155 (6.8%)	1953 (85.7%)
Mother' s education	Primary or less	243 (6.7%)	110 (3.0%)	3257 (90.2%)
	Secondary	542 (12.2%)	451 (10.2%)	3438 (77.6%)
	Secondary +	113 (21.2%)	187 (35.0%)	234 (43.8%)
Father' s education	Primary or less	289 (8.8%)	129 (3.9%)	2876 (87.3%)
	secondary	334 (10.9%)	316 (10.4%)	2401 (78.7%)
	Secondary +	204 (18.5%)	259 (23.5%)	639 (58.0%)



Descriptive characteristic of deliveries (Enabling factors)

		Public facility	Private facility	Home
Asset Index	Poor	117 (4.4%)	33 (1.2%)	2493 (94.3%)
	Lower poor	166 (6.3%)	52 (2.0%)	2419 (91.7%)
	Middle	185 (7.0%)	69 (2.6%)	2386 (90.4%)
	Upper middle	274 (10.4%)	164 (6.2%)	2205 (83.4%)
	Rich	382 (14.5%)	518 (19.6%)	1737 (65.9%)
Number of ANC visits	<=3	641 (6.2%)	437 (4.2%)	9311 (89.6%)
	>3	483 (17.2%)	399 (14.2%)	1929 (68.6%)



Multinomial Logistic regression (Predisposing factors)

		Public vs Private		Public vs Home		Private vs Home	
		OR	CI	OR	CI	OR	CI
Household size	<=5	-	-	-	-	-	-
	>5	0.988	(0.789, 1.238)	0.960	(0.808, 1.141)	0.972	(0.807, 1.170)
Birth order	<=2	-	-	-	-	-	-
	>2	0.882	(0.636, 1.223)	0.469****	(0.365, 0.603)	0.532****	(0.410, 0.689)
Mother' s age	<20 years	-	-	-	-	-	-
	20-29 years	0.738**	(0.562, 0.970)	1.077	(0.889, 1.304)	1.459****	(1.161, 1.834)
	> 30 years	0.728	(0.477, 1.111)	2.149****	(1.540, 3.000)	2.953****	(2.071, 4.208)
Mother' s education	Primary or less	-	-	-	-	-	-
	Secondary	0.738	(0.528, 1.032)	1.358****	(1.097, 1.681)	1.839****	(1.389, 2.435)
	Secondary +	0.515***	(0.331, 0.800)	2.290****	(1.1623, 3.232)	4.448****	(3.084,6.418)
Father' s education	Primary or less	-	-	-	-	-	-
	secondary	0.703**	(0.525, 0.943)	0.945	(0.776, 1.151)	1.344***	(1.053, 1.715)
	Secondary +	0.819	(0.576, 1.163)	1.285**	(0.991, 1.666)	1.570***	(1.174, 2.100)

*p<=0.10, ** p<=0.05, *** p<=0.01, ****p<=0.001



Multinomial Logistic regression (Enabling factors)

Factors		Public vs Private		Public vs Home		Private vs Home	
		OR	CI	OR	CI	OR	CI
Asset Index	Poor	-	-	-	-	-	-
	Lower poor	1.356	(0.528, 3.483)	1.411	(0.866, 2.298)	1.041	(0.451, 2.404)
	Middle	0.962	(0.396, 2.335)	1.181	(0.734, 1.898)	1.227	(0.564, 2.673)
	Upper middle	0.719	(0.308, 1.680)	1.572**	(0.991, 2.495)	2.186**	(1.040, 4.594)
	Rich	0.368**	(0.158, 0.859)	1.923***	(1.202, 3.077)	5.224****	(2.496, 10.934)
Number of ANC visits	<=3	-	-	-	-	-	-
	>3	1.064	(0.855, 1.324)	2.551****	(2.160, 3.013)	2.398****	(2.001, 2.873)

*p<=0.10, ** p<=0.05, *** p<=0.01, ****p<=0.001



Average per-capita expenditure for delivery (US\$)

Socio-economic groups	Public		Private	
	Average per- capita delivery expenditure	% of total per-capita household expenditure	Average per-capita delivery expenditure	% of total per-capita household expenditure
Poor	12.04	6.41	34.6	16.50
Lower poor	16.61	7.96	33.7	15.32
Middle	14.9	7.23	35.8	14.88
Upper middle	16.2	6.84	37.4	14.36
Rich	17.6	5.90	37.0	11.13
Total	16.10	6.71	36.70	12.55



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C/S delivery by SES and by facility

Socio-economic groups	Public	Private	Total
Poor	23 (51.1%)	22 (48.9%)	45 (100%)
Lower poor	35 (52.2%)	32 (47.8%)	67 (100%)
Middle	38 (45.8%)	45 (54.2%)	83 (100%)
Upper middle	75 (38.7%)	119 (61.3%)	194 (100%)
Rich	132 (25.4%)	387 (74.6%)	519 (100%)
Total	303 (33.4%)	605 (66.6%)	908 (100%)



Average per-capita expenditure for C/S delivery (US\$)

Socio-economic groups	Public		Private	
	Average per-capita delivery exp	% of total per-capita household expenditure	Average per-capita delivery exp.	% of total per-capita household expenditure
Poor	25.40	11.93	46.30	21.40
Lower poor	35.17	15.49	43.57	19.43
Middle	36.00	13.93	48.13	19.76
Upper middle	35.58	14.36	44.78	16.76
Rich	32.89	10.40	44.34	13.08
Total	33.64	12.53	44.75	14.94

Key findings

The private sector was the source for:

- 6.3% of delivery care (8.5% public sector)
- 42.7% of the facility-based delivery care
- 67% caesarean delivery care

Positive relationship between mother's age, educational status, economic status and use of a mixed public-private health care system

High socioeconomic households use private facility for delivery more than the poor

Average per-capita delivery expenditure is regressive (Private Facility)



Key findings: Caesarean delivery

Caesarean delivery at the public and private facilities almost equal for poor and lower poor socio-economic groups

The average financial burden for these households for private delivery services was 1.5 times higher than imposed by the public delivery care services.



Conclusion

There remains a strong preference for home based delivery

The private sector is playing an important role in facility-based delivery care.

Policy-makers should carefully examine how to achieve an optimal public-private mix in the facility-based delivery care to accelerate

universal health coverage

Social health protection mechanisms to protect the poor
equity in health service-delivery and health care financing,

and improved maternal and neonatal health status

The findings have implications in health financing and health systems policy-making and particularly in the health systems strengthening



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Thank you