AR
A B

3 . A

,

4 . A C , ,

;

,

5 .

L (L)
F I , J H
C H E R
G
. I

100 . L

.

.

L

,

, “ ,” .

-

,

. H
HO CHO I
C -E (CHOICE) 6
O H (OH) 7

,

.

Me h d:

- -

.

L

:

E 1: C = P + D +
C + O - + I

. HO CHOICE -
“ ”

(. .,
) ,

2 . (
) 191
. OH ,
, -
, (
-) 8 . F 1
/
( ) L .

Calculating other-direct and indirect cost shares

H HO CHOICE -
- (
,) (/
) ,
M M C
(MMC) 9 . D -
, , , , -
.
I
/ , -
- , , “ ,” - 4 80

G ,

G $1.29 (A 1 - ($0.38)

G -

G). - $0.48:

MMC E 2: O - /I

A 1, ($0.48) =O - / ($0.38) +

$0.09 $0.29 , , (5 /20) -

$0.38 - /

. - ($0.10)

- ,

1.

. Cost of bundled visits

Additional indirect and other-direct outreach cost .

-

, -

. (

- 8).

, -

. F :

,

100 20 , E 3: O - = (-

/20) O -

. .

(20) , $0.10 E 4: I = (

/20) I -

.

F , -

G (2/20)

0.075 $1.29 $.009. -

,

G (2/20) 0.2 $1.29

$0.03.

Re

Applying other-direct and indirect cost shares to build a comprehensive unit cost for LiST interventions

R

L :

E 1: C = P + D + C - + O + I

G - - , - HO CHOICE . , OH . -

. B - ANC .

Personnel, drug and consumable costs from One Health Model (OHT)

, OH G 8 , 2. A , ANC $0.68 , $0.28 , $0.25 , - $1.20. N ANC ( )

$0.01 .

HO- - . N OH - 2.

Calculating Other-direct and Indirect Costs from WHO CHOICE

R , - MMC , - (,) 6.7% 23% HO CHOICE 7 8

Table 3 Other-direct (excluding patient time) and indirect costs added per ANC patient delivered at health centers in Ghana

	Per visit cost		Annual cost	
	Other-Direct cost	Indirect cost	Other-Direct cost	Indirect cost
Basic ANC visit	$0.0	$0.2	$0.37	$1.17
Syphilis detection and treatment	$0.0	$ 0.2	$0.1	$ 0.5
Tetanus toxoid	$0.0	$ 0.2	$0.1	$ 0.5
Balanced energy supplementation	$0.0	$ 0.2	$0.37	$ 1.17
Multiple micronutrient supplementation	$0.0	$ 0.2	$0.37	$ 1.17
Pregnant women protected via IPT	$0.0	$ 0.2	$0.1	$ 0.5

Source: Table 1 and authors' calculations as applied to Ghana data.

,
ANC 8 . ANC
4 - .
(. . (5):
ANC), 1) ANC
(HO-). ;
B , ANC , 2) -
20 , - -
ANC ;
3 . 3) ,
, , , - ANC .
- . -
- $69.76,
- $61.18,
, - $8.58, 12.2 . N
- 75 - ,
ANC
. , - -
- . I ,
IP - - - ;
90 - , 12.2 -
ANC . .
N L ,
Comparing unit costs of bundling services versus . I
delivering separately , -
F , , ,
4, ; ;

Table 4 Incremental time and other-direct (excluding patient time) and indirect costs added per ANC patient delivered at health centers in Ghana

	Per visit cost			Annual cost	
	Incremental visit time in minutes	Other-Direct cost	Indirect cost	Other-Direct cost	Indirect cost
Basic ANC visit	20 (average)	$0.0	$0.2	$0.36	$1.17
Syphilis detection and treatment	5	$0.023	$0.07	$0.046	$0.14
Tetanus toxoid	2	$0.01	$0.02	$0.01	$0.05
Balanced energy supplementation	5	$0.023	$0.07	$0.02	$0.2
Multiple micronutrient supplementation	5	$0.023	$0.07	$0.02	$0.2
Pregnant women protected via IPT	2	$0.01	$0.02	$0.01	$0.05

Source: WHO OHT [8] and authors' calculations

-
. ANC ,
ANC
12.2 . -
, L
,
OH -
HO
CHOICE . F L

- -
. I ,
, F P
.

-
-

. -

(,);
. C
(, , ,), (
, -
), .

Limitations of the analysis

. D -
,
MMC ,

. I ,
MMC
,
. F ,

HO ,
,
.

C c
I
,

.

-

.

/13/3.
Published: 17 September 2013

References

1. Bringing it all together: effective maternal and child health practice as a means to improve public health. *Matern Child Health J* 2013, **17**:767-775.
2. Costs of HIV/AIDS outpatient services delivered through Zambian public health facilities. *Tropical Medicine and International Health* 2011, **16(1)**:110-11 .
3. Effectiveness of an integrated approach to reduce perinatal mortality: recent experiences from Matlab, Bangladesh. *BMC Public Health* 2011, **11**: 14.
4. Experiences integrating delivery of maternal and child health services with childhood immunization programs: systematic review update. *J Infect Dis* 2012, **205(Suppl 1)**: 6-1 .
5. Strategies for integrating primary health services in low- and middle-income countries at the point of delivery. *Cochrane Database Syst Rev* 2011, **6(7)**: 00331 .
6. CHOosing Interventions that are Cost Effective (WHO-CHOICE). 2012, 21 .
7. The One Health Model (OHT). 2012, 4. 21 .
. OneHealth Model: Treatment Assumptions. 2012, 1
. Using Stochastic Frontier Analysis to Estimate the Efficiency of Medical Male Circumcision Programs [abstract]. *Intl AIDS Conf* 2012, .
10. Voluntary medical male circumcision: modeling the impact and cost of expanding male circumcision for HIV prevention in eastern and southern Africa. *PLoS Med* 2011, **8(11)**: 1001132, 2011 2 .

doi:10.1186/1471-2458-13-S3-S27
Cite this article as: Estimating the cost-savings associated with bundling maternal and child health interventions: a proposed methodology. *BMC Public Health* 2013 **13**(3): 27.