

A Cost Analysis of Service Provision of Medical Abortions in the Public Health Sector at Primary and Secondary Level

***WOMEN'S HEALTH RESEARCH UNIT
Department of Public Health and Family
Medicine
University of Cape Town***

AIM:

Cost analysis of service provision of medical abortions in the public health sector at primary and secondary level.

Objectives:

- 1. Define a standard protocol for medical abortion at primary and secondary level;**
- 2. Identify and quantify resources and costs required;**
- 3. Determine the average cost at different levels of service delivery utilizing an economic model; and**
- 4. Identify additional costs required for implementation.**

1. DEFINE A STANDARD PROTOCOL:

Gestation < 56 days

Initial visit MIFEPRISTONE



Home MISOPROSTOL



Unscheduled follow up visits



Unscheduled telephone calls



Scheduled follow up visit 14 days



Minor complaints: No treatment required



Complications

MVA (3-8%)

Transfusion (0.1%)

Infection (0.05-0.9%)

2. IDENTIFY AND QUANTIFY COSTS:

- Questionnaire to key informants**

- Quantify costs:**

- Drugs - mifepristone*, other drugs
- Diagnostic tests / Investigations / Laboratory costs
- Ultrasound
- Human resources
- Overhead costs

*USD/ZAR exchange rate = 11.45492 (18/01/02)

a. Drugs - mifepristone*, other drugs

	SPECIFIED DRUG	TOTAL DOSE	TOTAL COST (in Rands)
INITIAL VISIT:			
	Mifepristone		
	Option 1:	200mg	R 137.46
	Option 2:	600mg	R 412.38
	Misoprostol	400 mcg	R 2.10
	Paracetamol	500 mg tabs X 4	R 0.20
COMPLICATIONS:			
Incomplete – requiring MVA	Ligniocaine	1 ampoule (5ml)	R 3.71
	Paracetamol	500 mg tabs X 10	R 0.50
	Metronidazole	100 mg bd X 10/7	R 2.60
	Doxycycline	400 mg tds X 1/52	R 2.52
Infection	Metronidazole	100 mg bd X 10/7	R 2.60
	Doxycycline	400 mg tds X 1/52	R 2.52
Bleeding – Requiring BT	Syntocinon	10 IU	R 6.77
	Packed cells	1 unit	R 343.00
	FeSO4	i tablet od X 1/12	R 2.40

b. Diagnostic tests / Investigations / Laboratory costs

	INVESTIGATION	TOTAL COST (in Rands)
INITIAL VISIT:		
	Pregnancy test	R 1.56
	Finger-prick Hb (cost of personnel included in HR costing)	R 0.00
	Rhesus blood grouping	R 19.50
	RPR (qualitative)	R 9.40
COMPLICATIONS:		
Incomplete – requiring MVA	Serum haemoglobin	R 7.05
Infection	Serum haemoglobin	R 7.05
Bleeding – Requiring BT	Serum haemoglobin ABO blood grouping	R 7.05 R 19.50

c. Ultrasound

	PRIMARY LEVEL	SECONDARY LEVEL
TOTAL NUMBER OF SCANS PREDICTED FOR 2001	2470	3970
ANNUAL REPLACEMENT COST	<i>R29 415.88</i>	<i>R 29 415.88</i>
ANNUAL RECURRENT COSTS		
Consumables:		
Maintenance	R650.00	R650.00
Gel	R242..64	R390.00
Paper	R1000.00	R1607.29
Total	R1892.65	R2647.29
Personnel:		
Option1: PN 10mins/scan @R0.69/minute	R6.90	R6.90
COST PER US SCAN	R19.58	R14.98

d. Human Resources

Personnel required (identified by the key informants)

Admin staff, PN, EN, MO, Pharmacist, Social Worker

The total **personnel cost** per management process was calculated using the **contact time per provider** and the **cost per minute for that provider**

d. Human Resources cont.

	TOTAL PERSONNEL COST
INITIAL VISIT	
PN	R 34.13
MO	R 54.88
UNSCHEDULED FOLLOW UP VISIT	
PN	R 12.30
MO	R 24.75
SCHEDULED FOLLOW UP VISIT	
PN	R 35.70
MO	R 44.00
COMPLICATIONS	
Incomplete abortion requiring MVA	
PN	R 102.90
MO	R 140.40
Infection	R 34.05
Blood transfusion	R 62.55

e. Overhead costs

	OVERHEAD COST PER OPD VISIT
Primary care level	R 7.43
Secondary care level	R 58.62

TOTAL AVERAGE COST OF PROVIDING MEDICAL ABORTION (PN)

	PRIMARY LEVEL	SECONDARY LEVEL
Mifepristone dose 200 mg	R 266.06	R 375.00
Mifepristone dose 600 mg	R 540.98	R 649.92

11% increase when medical abortion (mifepristone 200mg) performed by a doctor at primary level and 8% increase when performed by a doctor at secondary level.

There is on average an 84% increase in the total cost of medical abortion when a dosage regimen of 600mg versus 200 mg is used.

ULTRASOUND (PN)

	Cost U/S /pt	Increase of total cost using mifepristone 200mg	Increase of total cost using mifepristone 600mg
PRIMARY	R19.58	7%	4%
SECONDARY	R14.98	4%	2%

ADDITIONAL COSTS REQUIRED FOR IMPLEMENTATION

- Adequate **training resources** for education of providers
- Resources to ensure continued **support of providers**
- Resources for **research** purposes (including **M&E**)
- Resources relating to the ? provision of **ultrasound** for early gestational dating
- **Marketing resources** to ensure that **clients are aware** of the **method** and the **early gestational age** at which this method may be chosen
- Resources for **educational purposes** at **community level** (for example, to enable clients to **identify early signs of pregnancy**)
- Resources to ensure that **pre-, and post-abortion counseling** is provided

COST DRIVERS

- The main cost driver is the **DOSAGE REGIMEN** used (200mg versus 600mg)
- **PERSONNEL** performing the procedure
- **PRIMARY** or **SECONDARY** level
- Current **EXCHANGE RATE**