

MORPHINE COSTING

Date: 4 September 2014

A: Cost of Mist Morphine 10mg/ml preparation

RAW MATERIALS	QUANTITY	COST
Morphine Hydrochloride	10g	R 206.37 ¹
Aqueous Chloroform Concentrate	250ml	R 37.13 ²
Water for Injection	10 000ml	R 73.50 ³
Total cost of preparation		R 317.00
Cost for each dose (10mg/10ml)		R 0.317
Cost of 2000ml preparation (excluding cost of employing a pharmacist)		R 63.40
Cost of 5000ml preparation (excluding cost of employing a pharmacist)		R 158.50

Cost based on standard dosage prescribed:

Standard dosage prescribed is 10mg/10ml 4hourly for a 28 day supply = 1680 ml. A total quantity of 2000 ml is usually dispensed:

$$= R 317.00/10\ 000ml \times 2000ml = \mathbf{R\ 63.40}$$

High dosage prescribed as 30mg/30ml 4 hourly for a 28 day supply = 5040 ml. A total quantity of 5000 ml is usually dispensed:

$$= R 317.00/10\ 000ml \times 5000ml = \mathbf{R\ 158.50}$$

Cost to employ a pharmacist:

The cost of employing a pharmacist to compound/supervise the compounding of a 10 000 ml/ 2000ml/ 5000ml batch:

$$\begin{aligned} \text{Pharmacist Grade 2 (full time)} &= R\ 507\ 615 \text{ per annum}^4 \\ &= \mathbf{R\ 244.05 \text{ per hour}} \end{aligned}$$

Assumption:

Total time to manufacture 10 000ml/ 2000ml/ 5000ml of mist morphine 10mg/ml = **30 minutes**
Total cost of employing a pharmacist to compound/supervise the compounding of the 10 000ml / 2000ml/ 5000ml preparation = **R 122.025**

Total cost:

10mg/10ml 4hourly for a 28 day supply

Raw materials (**R 63.40**) + cost of employing pharmacist to compound/supervise the compounding of the 10mg/ml preparation; 2000ml (**R 122.025**) = **R 185.425**

30mg/30ml 4hourly for a 28 day supply

Raw materials (**R 158.50**) + cost of employing pharmacist to compound/supervise the compounding of the 10mg/ml preparation; 2000ml (**R 122.025**) = **R 280.525**

¹ HP08-2014SSP

² Product not currently listed on tender. Thus, adjusted 2012 price (R34.40 – Adult review of 2012), using SEPA adjustment for 2012 (2.14%)&2013 (5.8%)

³ HP11-2012LVP, 1Oct2012 to30Sep2014

⁴ DPSA salary scales, 1 April 2013 (Assuming 40 hours/ week)

B: Comparative cost of Morphine Sulphate tablets

Assumption:

The following Mist Morphine doses are comparable to the following controlled-release doses:

- Mist Morphine 10mg/10ml 4hourly comparable to Morphine Sulphate 10mg controlled-release 12hourly
- Mist Morphine 30mg/30ml 4hourly comparable to Morphine Sulphate 30mg controlled-release 12hourly

Cost of Morphine Sulphate tablets:

Strength/dosage form	Cost per 60 tablets	Cost per 10mg tablet	Cost at 10mg/ 30mg 12 hourly for 28 days
10mg controlled-release	R 96.3900 ⁵	R 1.6065	R 89.964
30mg controlled-release	R 153.10 ⁵	R 2.552	R 142.89

Cost to employ a pharmacist:

The cost of employing a pharmacist to dispense 56 x Morphine Sulphate tablets, 10mg/ 30mg controlled-release tablets:

$$\begin{aligned} \text{Pharmacist Grade 2 (full time)} &= \text{R } 507\,615 \text{ per annum}^4 \\ &= \text{R } 244.05 \text{ per hour} \end{aligned}$$

Assumption:

Total time to dispense 56 x Morphine Sulphate tablets, 10mg/ 30mg controlled-release tablets = **10 minutes**

Total cost of employing a pharmacist to dispense 56 x Morphine Sulphate tablets, 10mg/ 30mg controlled-release tablets = **R 40.675**

Total cost:

10mg controlled-release 4hourly for a 28 day supply

Medicine (**R 89.964**) + cost of employing pharmacist to compound/supervise the compounding of the 10mg/ml preparation; 2000ml (**R 40.675**) = **R 130.639**

30mg controlled-release 4hourly for a 28 day supply

Medicine (**R 142.89**) + cost of employing pharmacist to compound/supervise the compounding of the 10mg/ml preparation; 2000ml (**R 40.675**) = **R 183.565**

C: SUMMARY:

Strength	Cost for Mist Morphine	Cost for CR tablets
10 mg	R 185.425	R 130.639
30 mg	R 280.525	R 183.565

⁵ HP09-2012SD,1Aug2012to31Jul2014: