



Q U A L S A

health risk management specialists

Medicine Pricing – current status and future

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Outline

Current status

- Legislation
- Impact of legislation on medicines expenditure

Future

- Development of new medicine price models
- Way forward

Current status - legislation

Maintained:

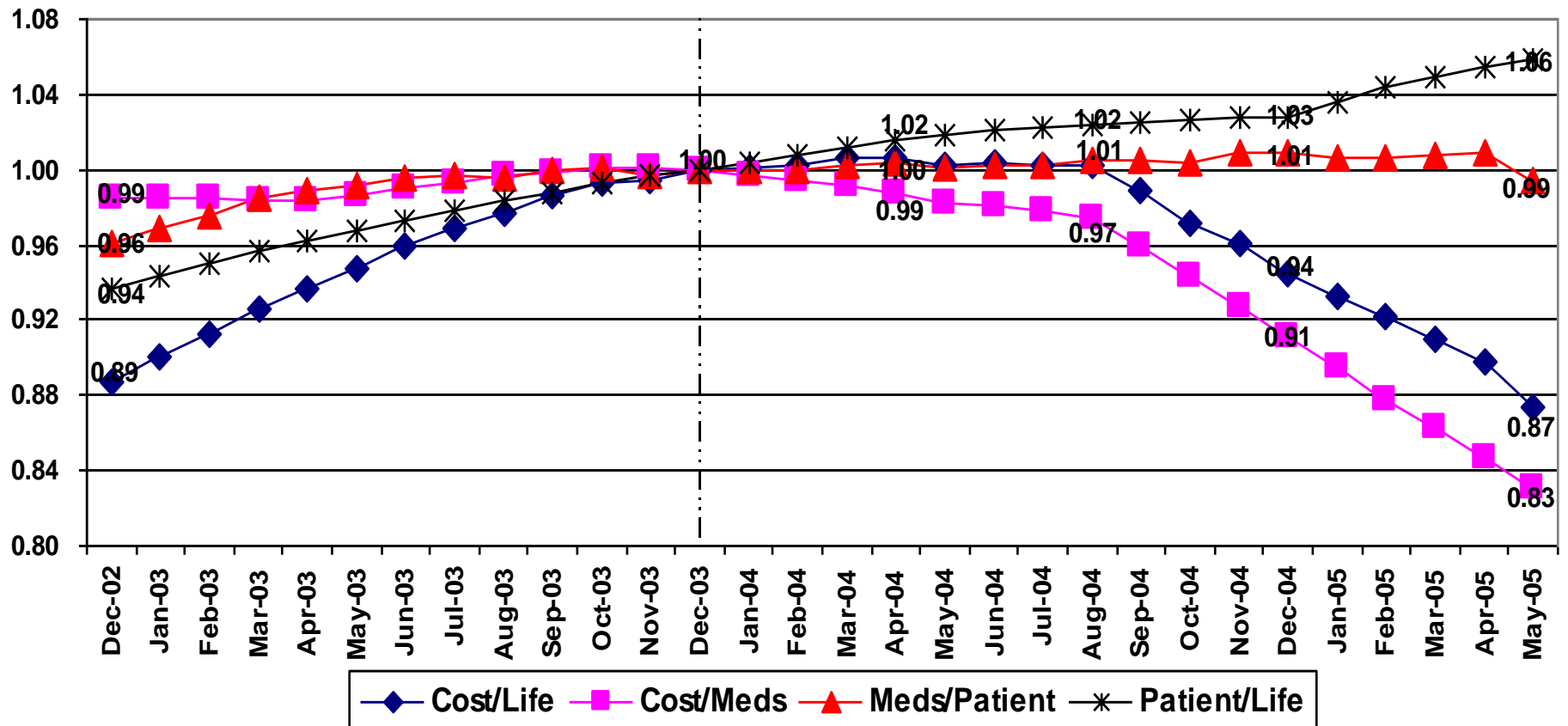
- Removal of bonuses, rebates & discounts – manufacturers and retailers

Repealed:

- Price regulations
- Awaiting decision by constitutional court

Impact of pricing method - trends

12-month Moving Average Trend from 2003



Medicine Claims - chronic

February - April 2004 versus February – April 2005

Schemes	Expenditure (%)	Cost per life (%)	Cost per participant (%)
A	↓ 25.28	↓ 15.14	↓ 18.46
B	↓ 5.47	↓ 1.00	↓ 8.06
C	↓ 20.86	↓ 23.53	↓ 22.62
D	↓ 24.28	↓ 25.51	↓ 22.21
E	↓ 13.89	↓ 8.88	↓ 1.20
F	↓ 19.42	↓ 23.23	↓ 23.82
G	↓ 21.88	↓ 20.25	↓ 23.11
H	↑ 1.00	↑ 4.27	↓ 27.08

Acute Medicine Claims

February - April 2004 versus February – April 2005

Schemes	Expenditure (%)	Cost per life (%)
A	↓ 21.31	↓ 10.61
B	↓ 2.45	↑ 2.20
C	↓ 14.35	↓ 17.24
D	↓ 27.11	↓ 28.30
E	↓ 21.65	↓ 17.08
F	↓ 22.01	↓ 25.71
G	↓ 15.98	↓ 16.67
H	↓ 19.58	↓ 22.53
I	↓ 21.51	↓ 19.87

Analysis of change in medicine prices

**Compared BBC (14 Jan 2004) with SEP
(26 July 2005)**

Data set:

All claimed medicines - 2004

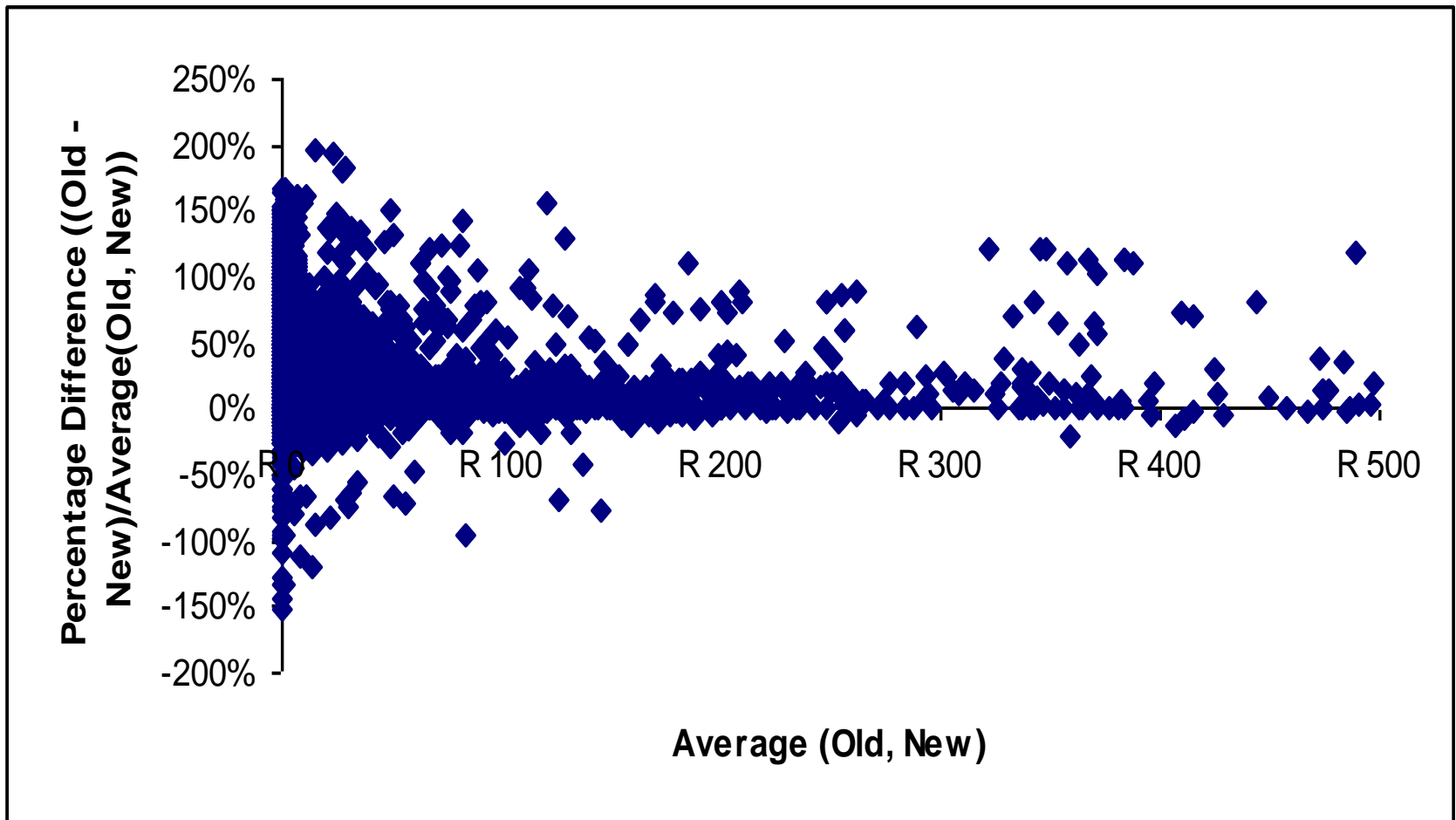
Change in medicine prices

Claimed Medicine		
Group	No. of Nappis	Percentage
Decreased	3990	66,4
Increased	743	12,4
No change	1276	21,2

Change in medicine prices

Claimed Medicine Nappis		
Group	No. of Nappis	Average Percentage Difference
Overall	6009	-14,31
Generic	2159	-24,7
Original	1037	-9.0
Branded	2539	-9,5

Change in medicine prices



Impact of pharmacy administration fee

Data set:

Claimed medicines:

Nov - Dec 2004

Jan – May 2005

$(SEP - Vat) < R\ 100$ then R10 admin fee charged

or

$(SEP - Vat) \geq R\ 100$ then $((SEP - Vat) + 6\%) + Vat$ with maximum of R 50

Cost-neutrality

Period	Benefit	Admin fees	Total	SEP + 36%	% Var.
November - December 2004	R 2 758 042	R 505 802	R 3 263 844	R 3 205 384	1,82 %
January – May 2005	R 7 606 491	R 934 357	R 10 540 848	R 11 225 603	-6.50%

Impact on doctors' claims

Feb – April 2004 vs Feb – April 2005

Schemes	Expenditure (%)	Cost per life (%)
A	↓ 62.29	↓ 57.14
B	↓ 52.75	↓ 54.34
C	↓ 62.20	↓ 62.81
D	↓ 47.79	↓ 44.72
E	↓ 58.80	↓ 60.79
F	↓ 62.23	↓ 61.44
G	↓ 55.27	↓ 56.90

Model Development

Objectives

- To determine the factors influencing the pricing model.
- To determine the impact of medicine pricing models on medicine expenditure.
- To develop new models.

Ideal Model

- Tiered model.
- Fixed professional fee – irrespective of schedule of drug or SEP.
- % mark-up to cover shelf costs, expiring of stock, credit card charges etc.
- Profitability accounted for.
- Change in SEP over time should be taken into account in the overall cost.
- Dispensing fee for doctors and a professional fee for pharmacists.

Ideal Model (continued)

- Mark-up linked to SEP.
- Benefit design taken into account.
- The fee represents the maximum allowable fee.
- The fee covers additional costs such as broken bulk, containers fee, counseling fees etc.
- PAF excluded from model

Model Development

- List the influencing factors in order of importance (empiric decision)
- Select the factors for inclusion in the model
- Develop criteria for selection of model

Factors Considered

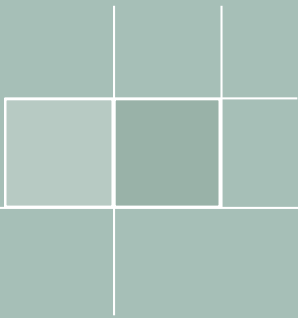
- Validation of the 'mark-up price formula'.
- Comparison of actual benefit versus calculated benefit.
- Variable Pharmacy Network discounting
- Validation of the broken bulk formula.
- Evaluation of break-points for SEP
- Identification of outliers.
- Stratification of data set: doctors and pharmacists' claims, EDI or paper claims.

Factors Considered (Continued)

- The Oncology medication was separately categorized - high costs.
- Developed a discount matrix per scheme option to determine average discounts.
- Using 6 models determined the impact of acute, chronic, self-medication – taking one factor into account at a time – trend analysis.
- Product mix per scheme option.

Model Selection Criteria

- Old pricing method as benchmark
- Smooth break points
- Decrease in medicines expenditure
- Gross Profit margin %



Model Selection

- Compare total costs obtained for the basket of products to select model.
- Compare gross profit margin (%) for each model.
- Select the comparator model.
- GP margin across the range of SEPs should be continuous - where break-points have been included in the model.

Break points

Break point	Lines	%
0,00 – 29,99	4907497	43,6
30,00 – 49,99	1746316	15,5
50,00 – 69,99	928246	8,24
70,00 – 89,99	805205	7,15
90,00 – 99,99	282734	2,51
100,00 – 119,99	598910	5,32
120,00 – 139,99	319737	2,84

Model 1: Mark-up pricing method

Pharmacists' claims

Quantity dispensed = original pack size

Quantity dispensed = multiples of the original pack size

Selling Price =

*[(Cost of original pack x no. of original packs dispensed x 1.5)
dispensing fee + 26c copy fee] - % discount*

Mark-up pricing method (contd)

Quantity dispensed < original pack size

$$\begin{aligned} \text{Selling Price} = & [1.1 \times (\text{cost of number dispensed} \times 1.5) \\ & + \\ & \text{dispensing fee} + \text{container fee} + 26\text{c copy fee}] - \% \\ & \text{discount} \end{aligned}$$

Mark-up pricing method (contd)

Quantity dispensed > original pack size

*Selling Price = {[1.5 x (number of original packs dispensed)
x (cost price of original pack) + [1.1 x (cost price of **z** x 1.5)]
+ dispensing fee + container fee + 26c copy fee} - % discount*

z = quantity dispensed – original pack size

z = number dispensed – (original pack size x number of original
packs)

Mark-up pricing method (contd)

Doctors' claims

**Chronic medication = (cost of number dispensed X 1.5) –
20%**

All other medication = cost of number dispensed X 1.5

Current pricing method

Pharmacies

Prescription:

< R100

{[SEP – (vat on SEP)] + (26% of SEP)} + vat}

≥ R100

{[SEP – (vat on SEP)] + R26 + vat}

Self-medication:

< R100

{[SEP – (vat on SEP)] + (16% of SEP)} + vat}

≥ R100.

{[SEP – (vat on SEP)] + R16 + vat}

Current pricing method

Doctors

< R100

{[(SEP – (vat on SEP)) + (16% of SEP)] + vat}

≥ R100

{[SEP – (vat on SEP)] + R16 + vat}

COMPARISON OF MODELS

Data:

- Claimed medicines for 2004
- BBC at 14 January 2004 – for mark-up pricing model only
- SEP at 26 July 2005

Gross Profit Margin (Old pricing)

Realistic scenario

22% discount - chronic meds

9% discount - acute meds

10% wholesaler discount

37% GP

Worst scenario

30% discount - chronic medicines

9% discount - acute meds

10% wholesalers discount

28% GP

Results

Model selection

Model Number	Expenditure	% GP	Continuity	Selection
1	R 1 209 777 476	(24) 38	N/A	
2	R 1 104 633 392	36	Yes -fixed	
3	R 960 445 381	17	Acceptable	
4	R 1 203 892 432	46	Yes	
5	R 1 039 769 265	28	No	
6	R 967 499 261	18	No	
7	R 1 220 769 532	50	Acceptable	
8	R 989 583 785	20	No	
9	R 1 160 078 270	43	Yes - fixed	

Results (Continued)

Model Number	Expenditure	% GP	Continuity	Selection
10	R 1 051 337 270	28	No	
11	R 1 059 504 854	29	Yes	OK
12	R 1 185 017 946	44	No	
13	R 1 061 796 741	31	No	
14	R 986 892 817	20	No	
15	R 1 138 510 994	38	Yes	
16	R 1 137 995 856	38	Yes	
17	R 1 132 184 775	38	Yes	
18	R 1 054 961 240	28	Yes	OK

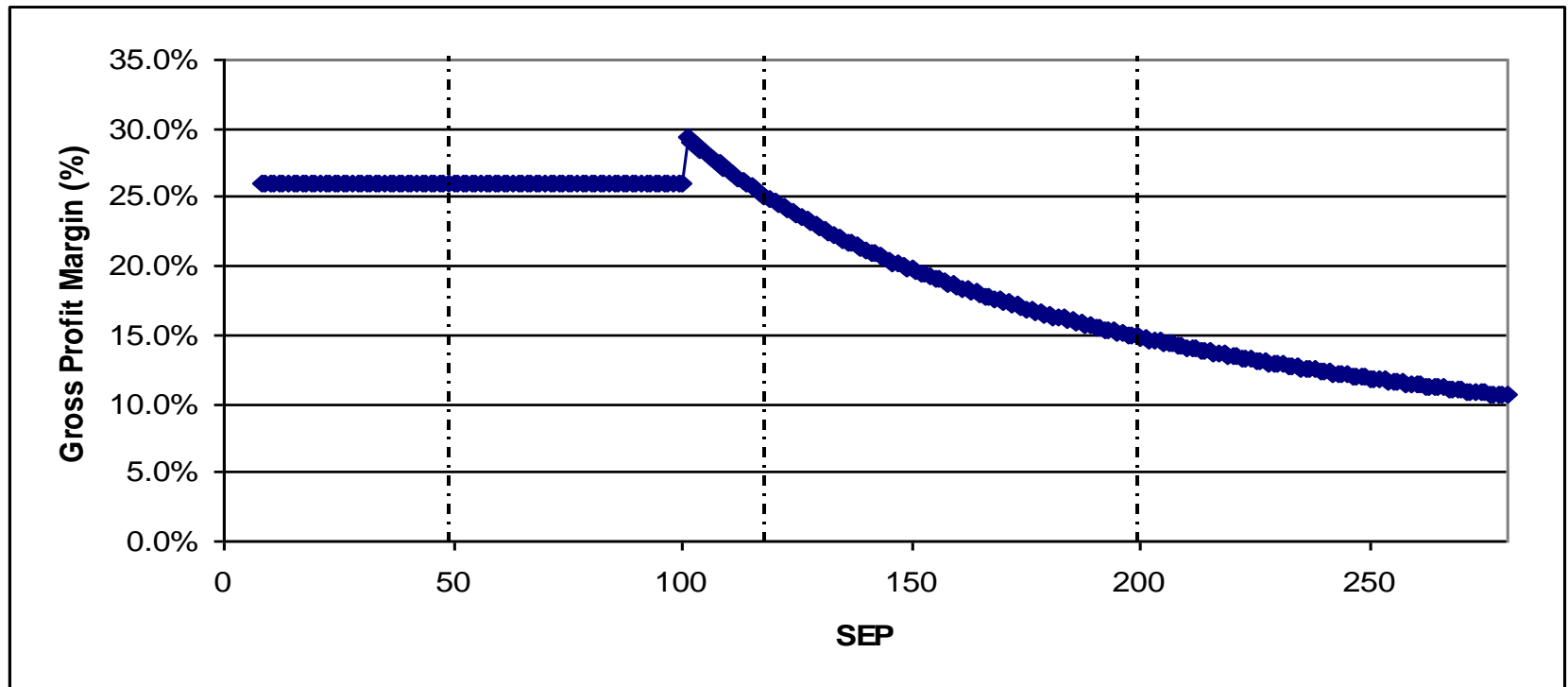
Results (Continued)

Model Number	Expenditure	% GP	Continuity	Selection
19	R 1 139 255 424	39	NO	
20	R 1 032 061 117	25	YES	OK
21	R 1 048 039 116	27	YES	OK
22	R 993 706 163	21	YES	
23	R 1 023 579 322	24	NO	
24	R 1 013 539 707	23	YES	OK
25	R 1 051 355 201	28	YES	OK
26	R 1 301 998 535	49	YES	
27	R 1 148 420 252	29	YES	OK

Model 3

(GP margin = 17%)

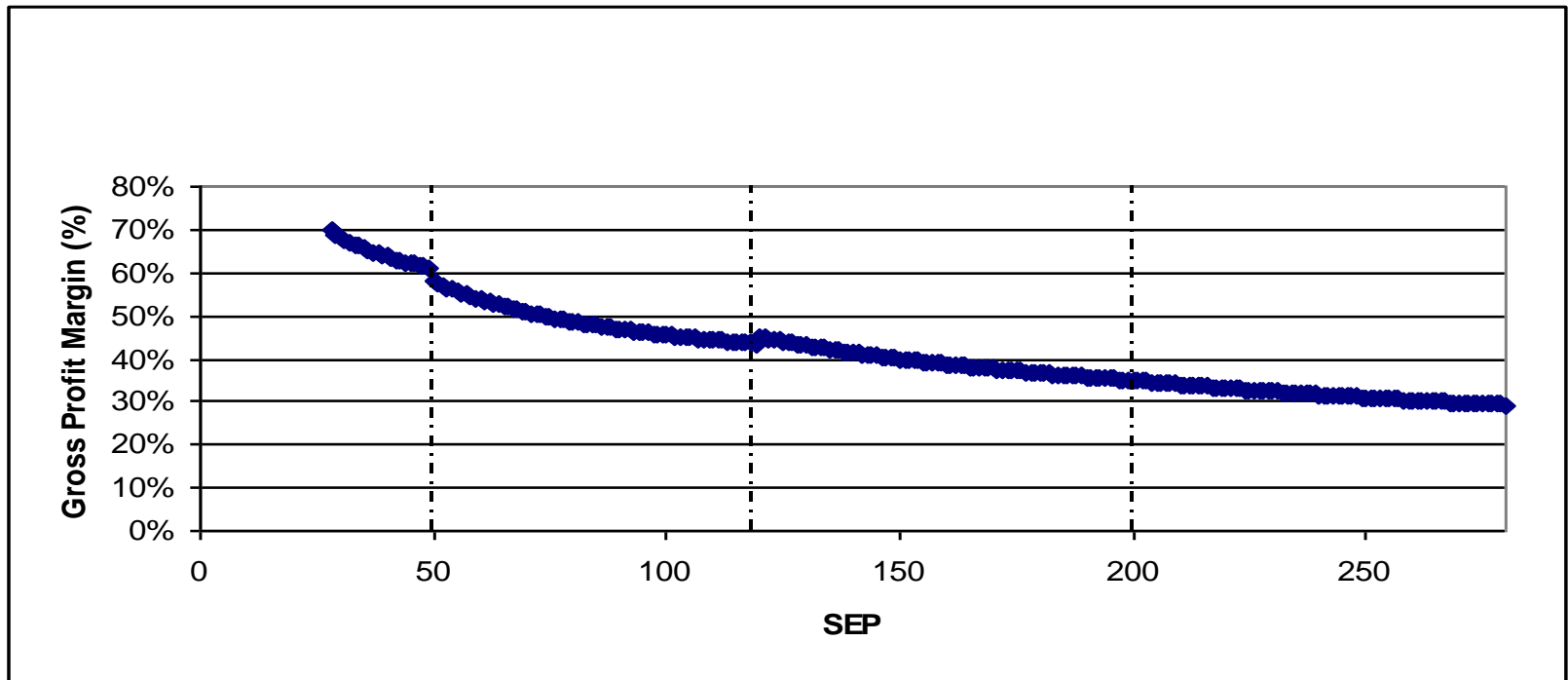
SEP	< R100	> R100
Pharmacists	26%	R 26
Doctors	16%	R16



Model 4

(GP margin = 46%)

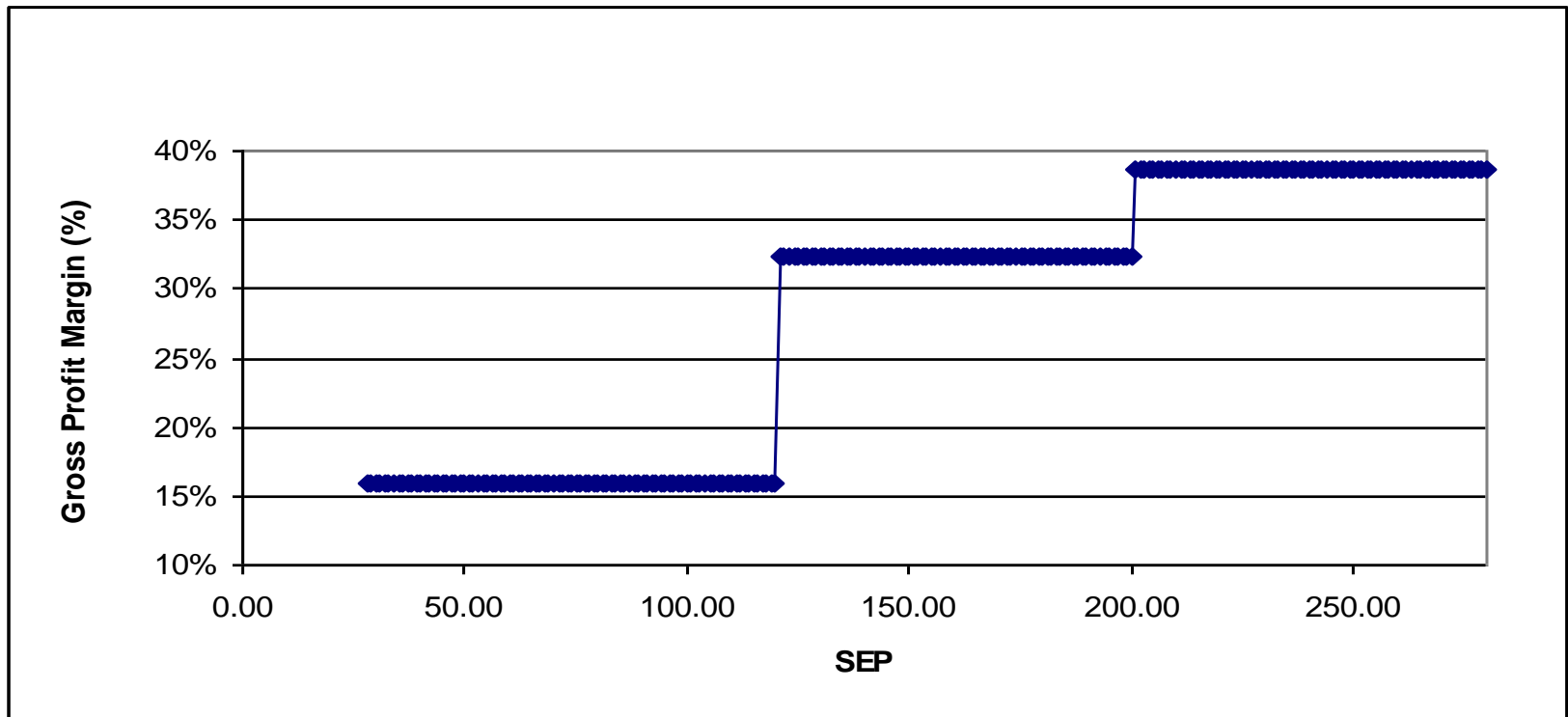
SEP	< R 50	R50.01 - R120	R120.01 - R200	> R 200
ADD	R5.5	R12.5	R30	R40
Mark-up%	50%	33.3%	20%	15%



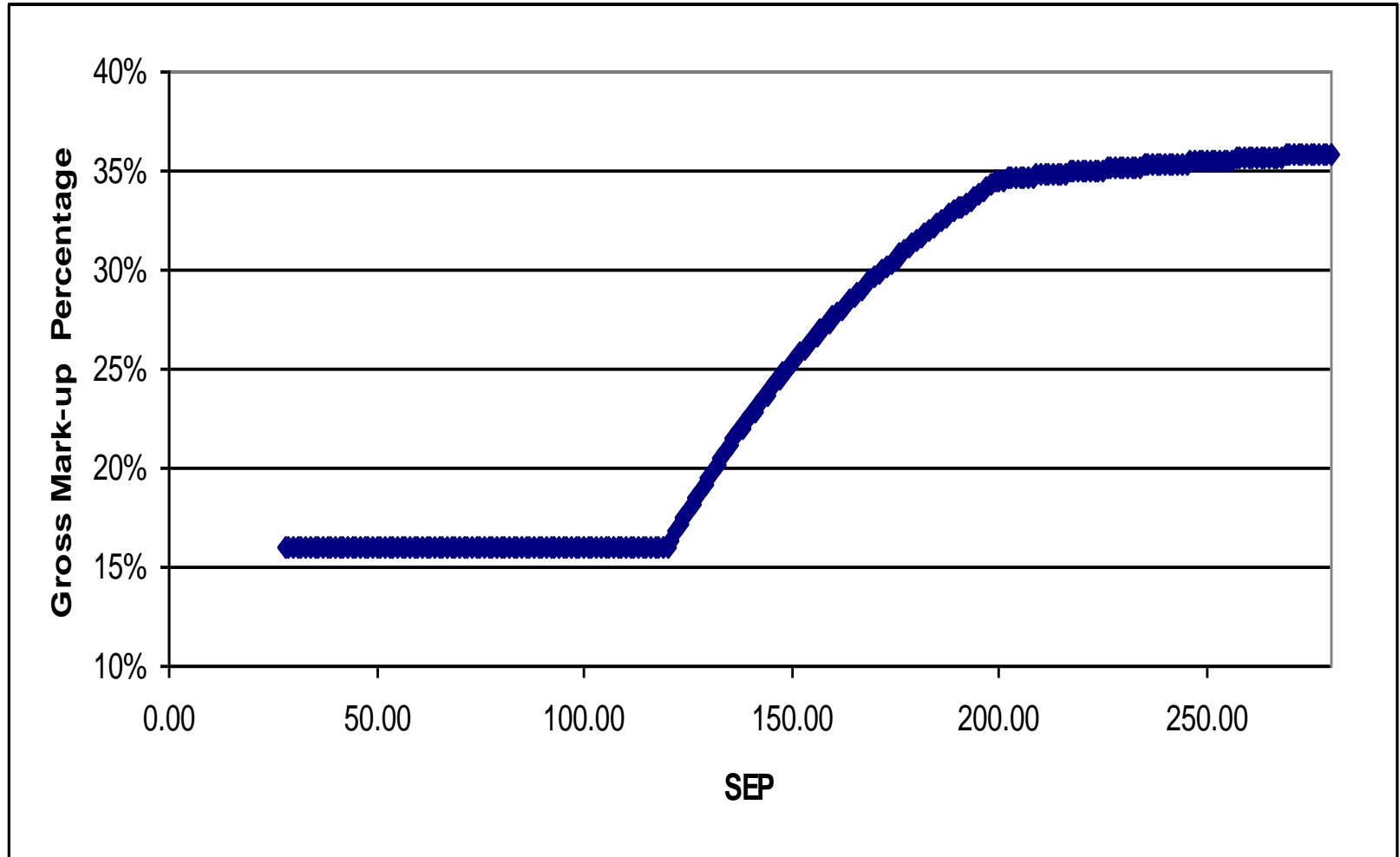
Model 5

(GP margin = 28%)

SEP	< R 50	R50.01 - R120	R120.01 - R200	> R 200
% Mark-up	0	0	5%	10%
Fixed fee	16%	16%	26%	26%



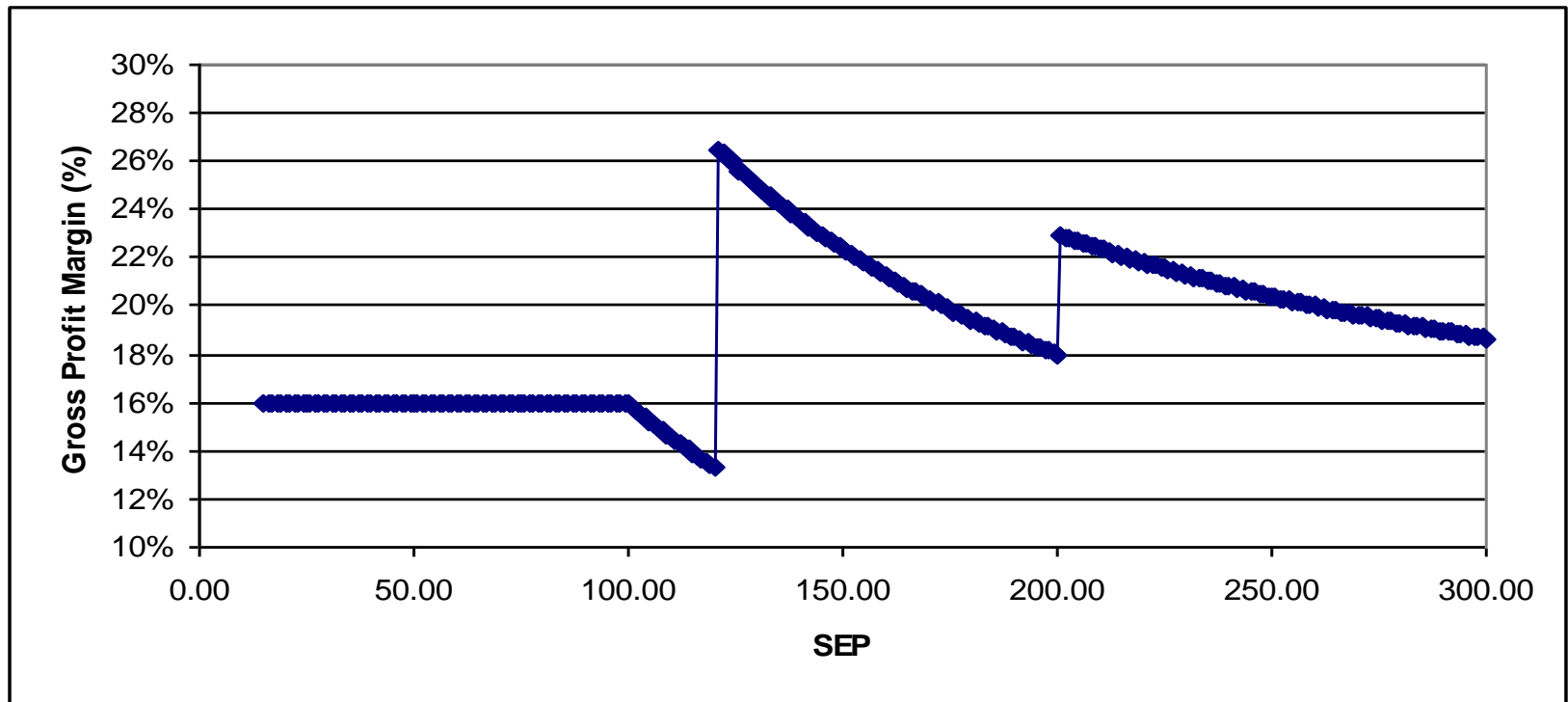
Model 5



Model 6

(GP margin = 18%)

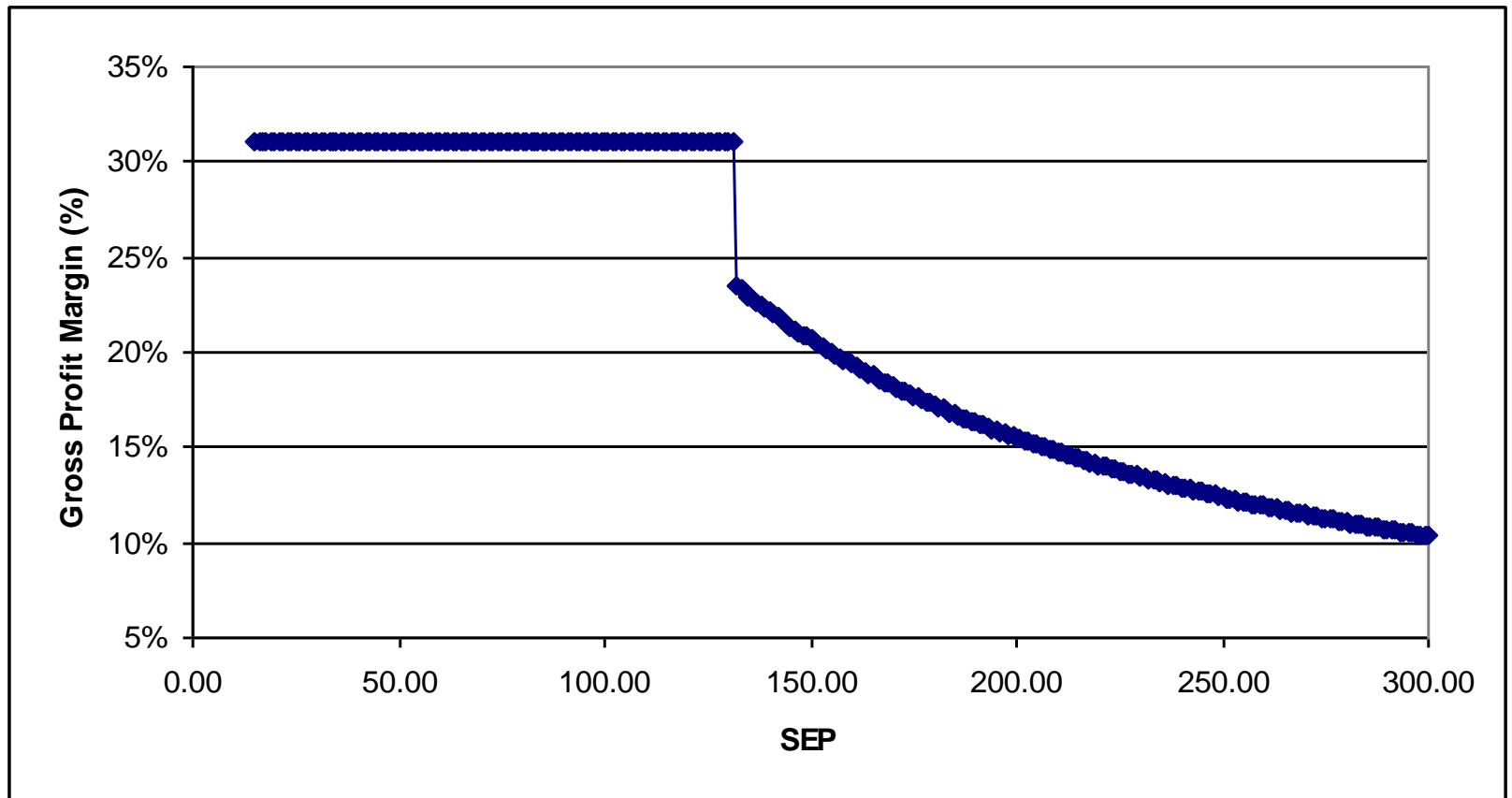
SEP	< R 50	R50.01 - R120	R120.01 - R200	> R 200
% Mark-up	0	0	5%	10%
Fixed fee	16%	16% capped at R16	26% capped at R26	26% capped at R26



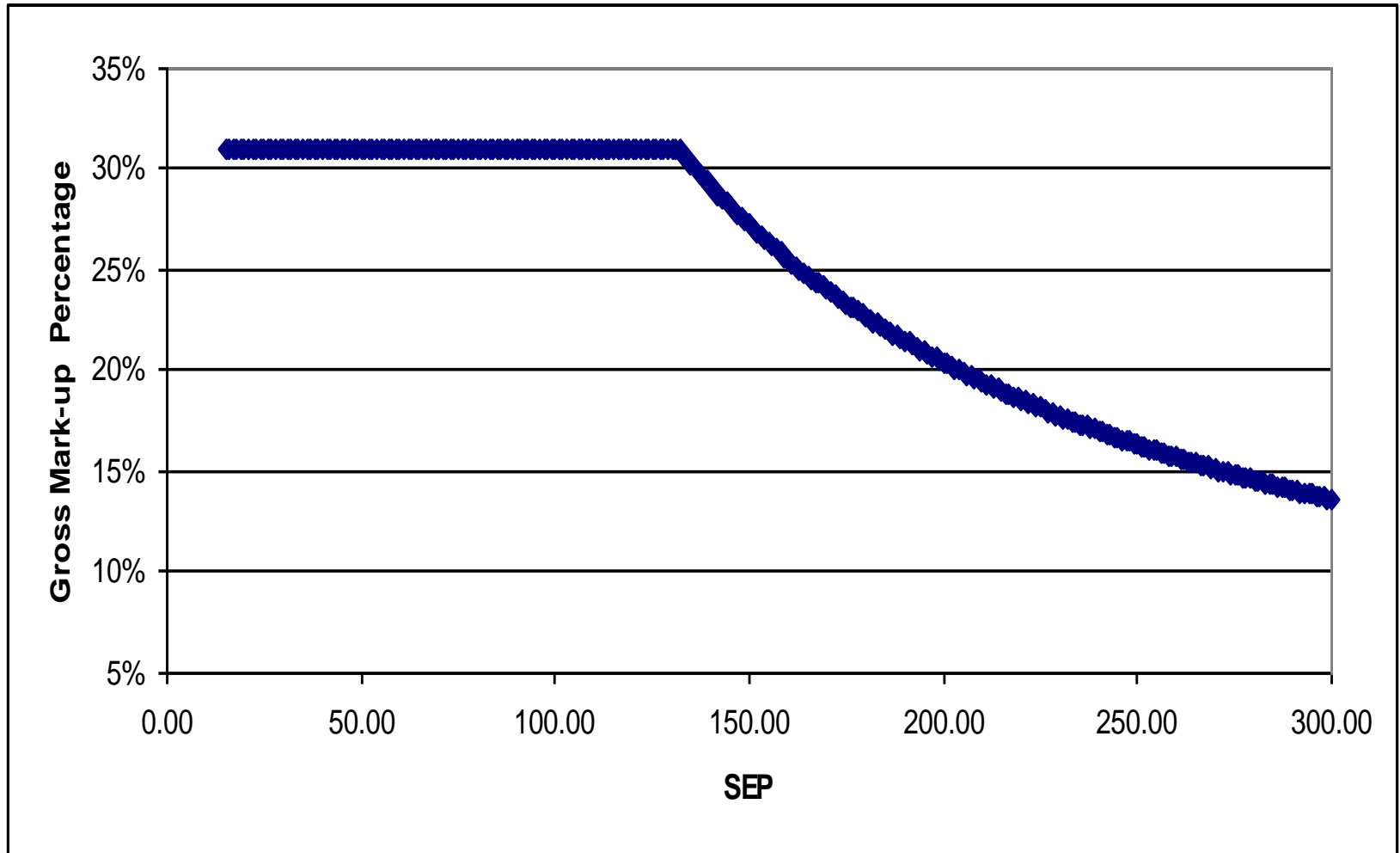
Model 8

(GP margin % = 20%)

SEP	< R 131.99	> R 132
Dispensing fee	31%	R 31



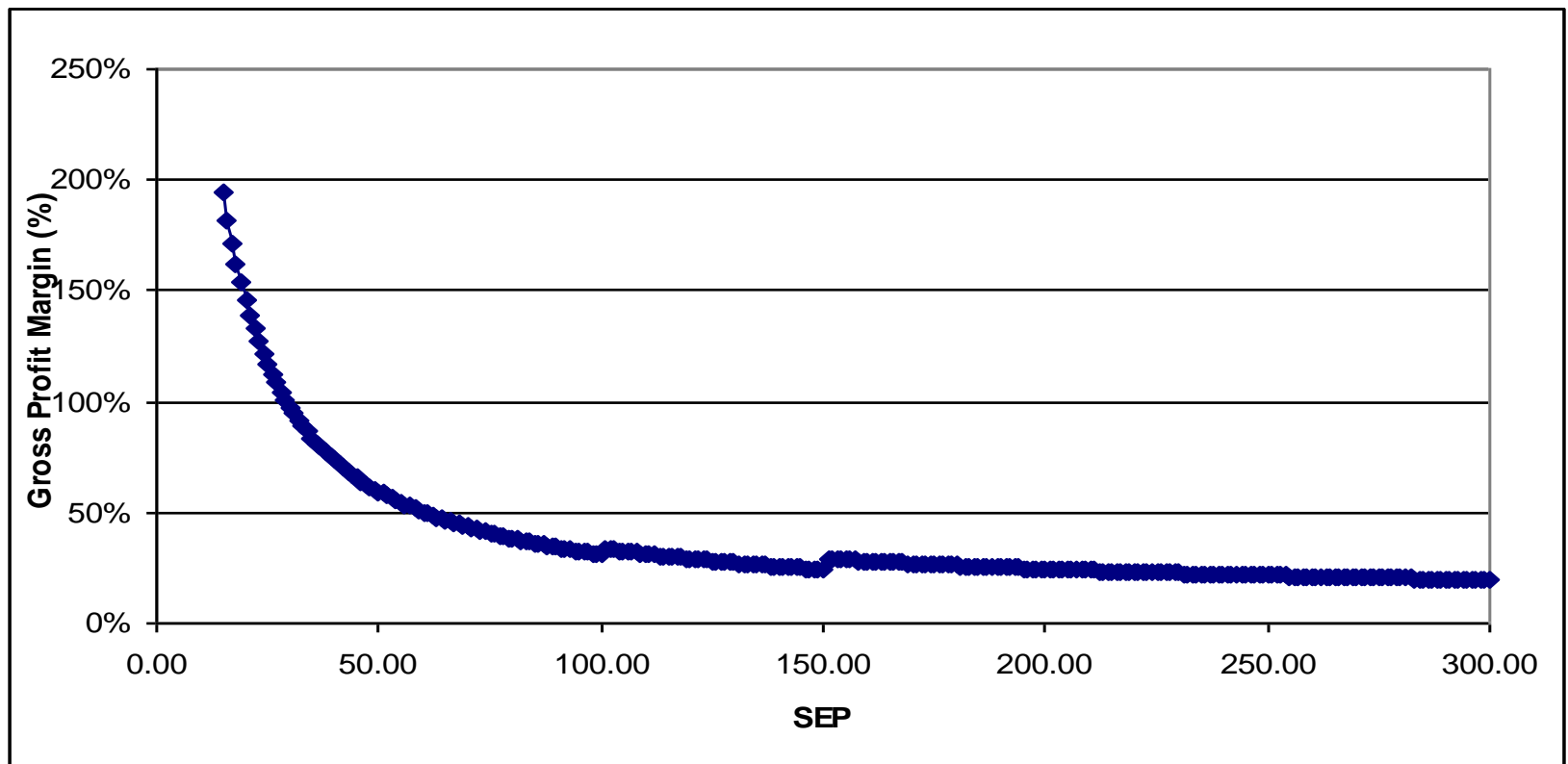
Model 8



Model 12

(GP margin = 44%)

SEP	R 0.01 – R 50	R 50.01 – R 100	R 100.01 – R 150	> R 150
% Mark-up	1%	2%	5%	10%
Fixed fee	R 29	R 29	R 29	R 29



Professional Fee Calculation

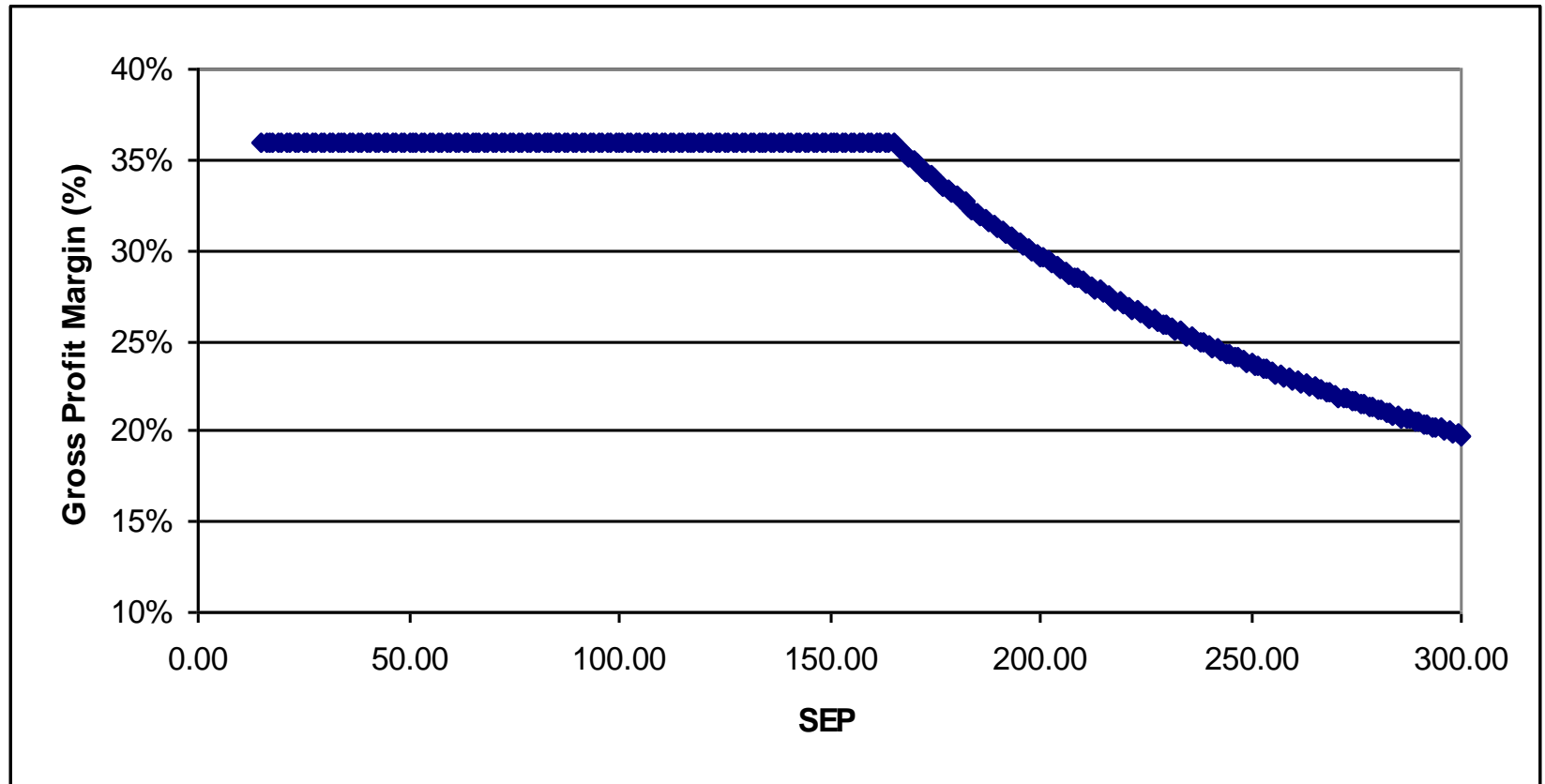
- R 350 per hour
- Dispense 6 scripts per hour (10 minutes per Rx)
- R 58 per Rx
- 2 items per Rx
- R 29 professional fee per item

Model 18

(GP margin = 28%)

Products < R 165,00 add 36%

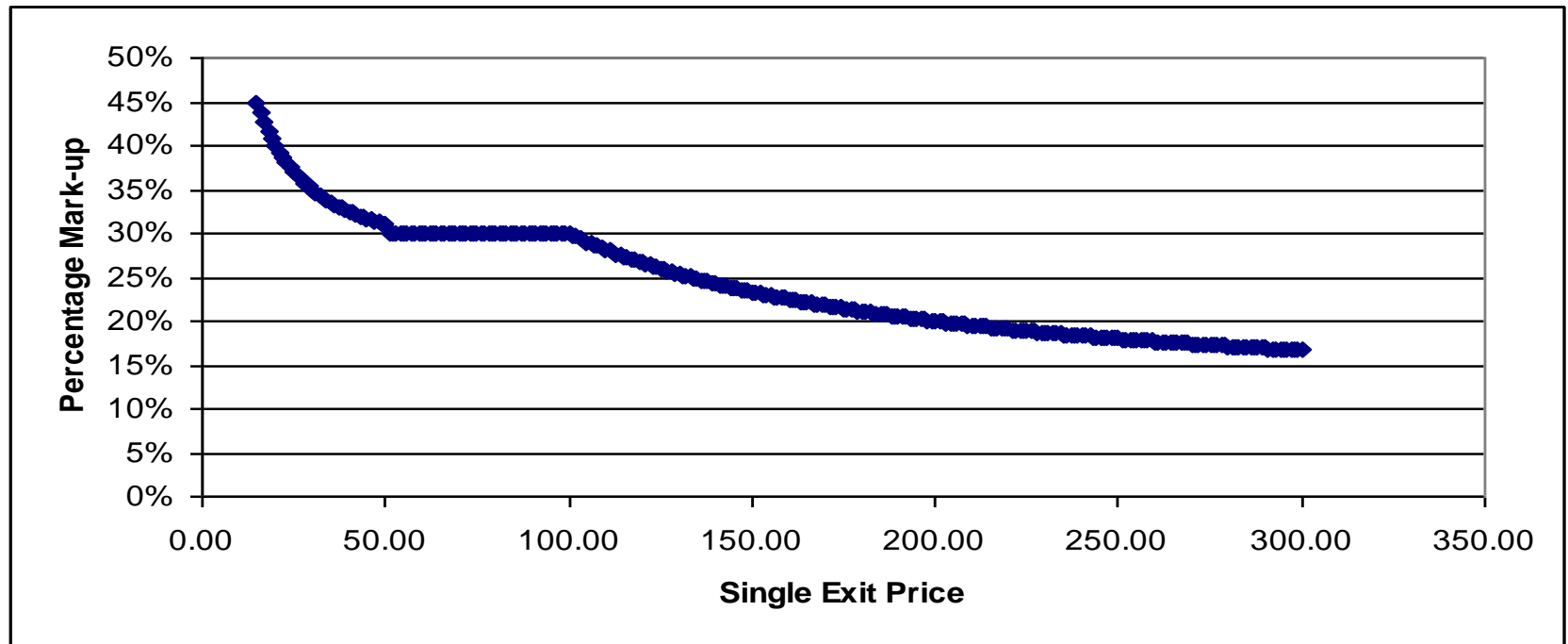
Products \geq R 165 capped at R 59,40



Model 20

(GP margin % = 25%)

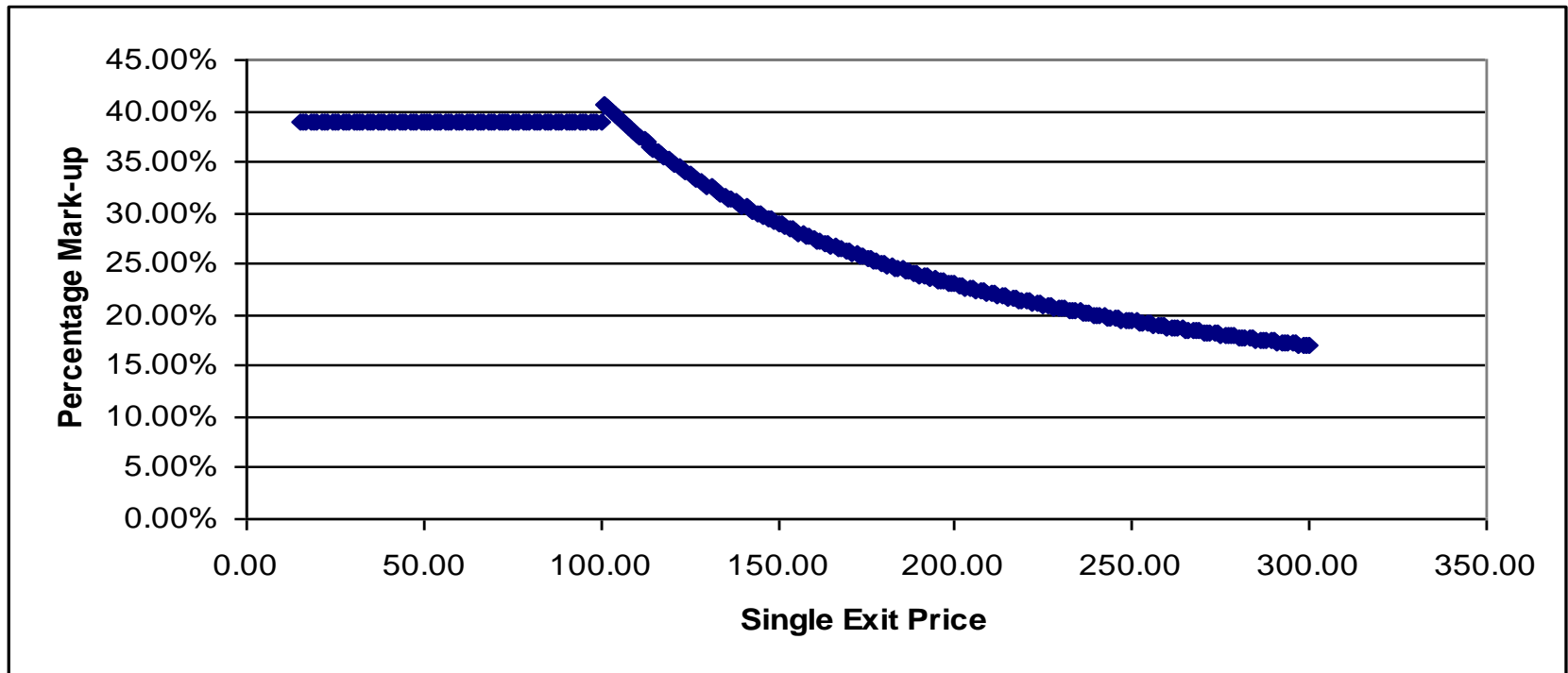
SEP	< R 50	R50.01 - R100	> R 100
% Mark-up	Add R3 then 25%	30%	Add R20 then 10%



Model 25

(GP margin = 28%)

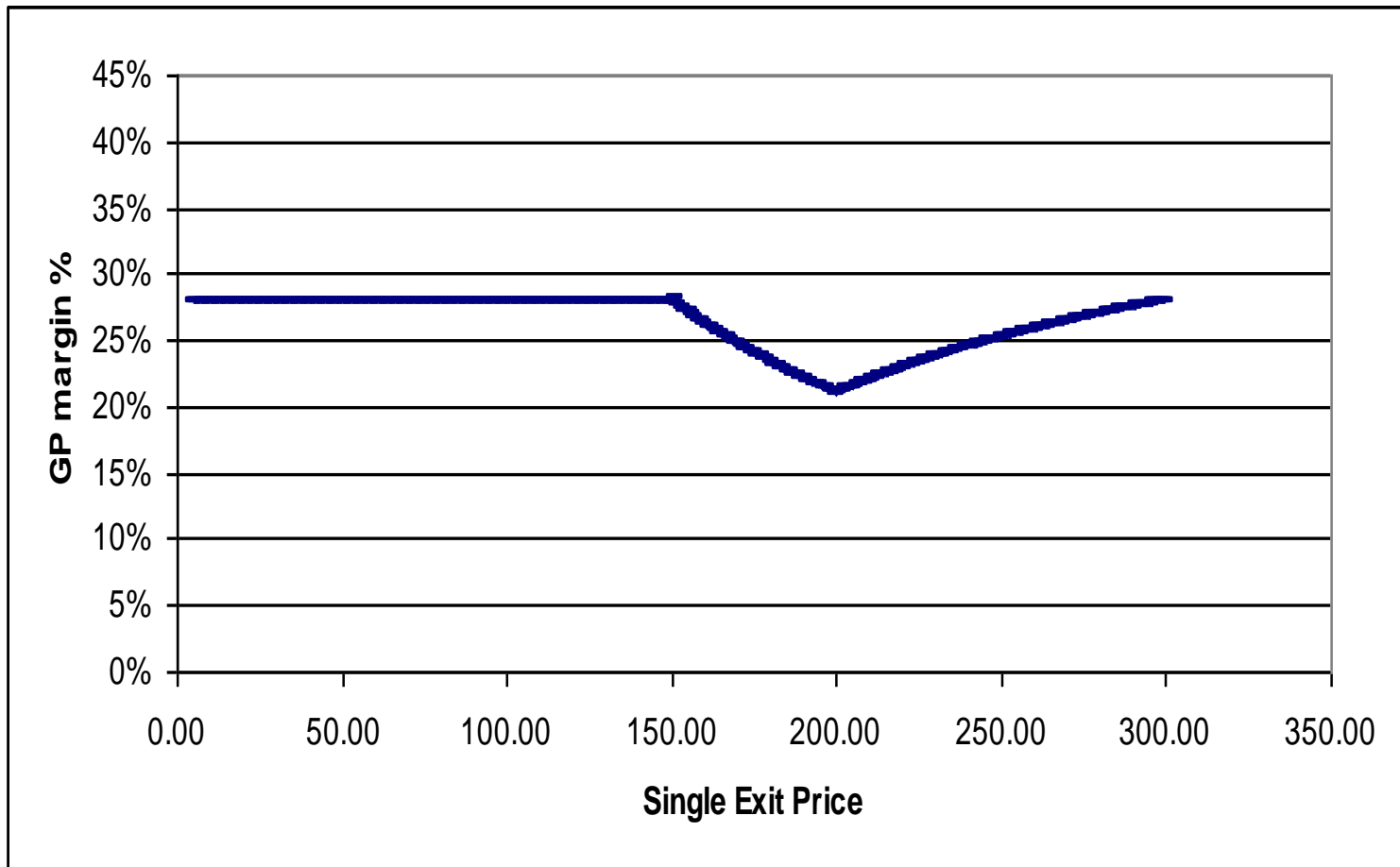
SEP	< R 100	> R 100
% Mark-up	Add 3% holding cost then 36%	Add 5% holding cost then R36



Model 27

(GP margin = 29%)

SEP	< R 150	R150.01 - R250	> R 250
Dispensing fee	28 %	28 % capped to R 42,00	42% of amount > R 250 + R 42,00



Summary

- Awaiting decision by constitutional court
- Acute and chronic medicines costs have significantly decreased.
- 66% of medicines costs have decreased.
- Overall decrease in medicine costs of 14 %.
- Doctors' claims have significantly reduced.
- A new medicine pricing model has been developed for consideration.

Way forward

- Fine tuning of the models
- Determine GP margin in small intervals by means of weighting method
- All new models should be scientifically validated
- Response from DOH required
- Discussion with stakeholders to gain buy-in
- A different approach may be required in phase 2 of benchmarking of drugs
- Develop method for ongoing monitoring

Way forward

- Implement interim pricing model
- Profitability from a pharmacy perspective should be analysed using overhead expenses etc.
- Evaluate profitability for the entire medicine supply chain
- Close loop holes e.g. disguising discounts in the logistics fee
- Implement pharmacoeconomic principles in the decision of acceptable SEPs

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management
specialists

Thank You!

