

*From national to local
guidelines: prophylaxis in
surgery*

The Belgian experience



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Topics

- Hospitals and pharmaceuticals
- Guidelines
- Quality of prophylaxis in the 1990
- Evidence based study, 1996
- Budget control
- Results and conclusion

Financial aspects of public health services in Belgium

- fee for service
- budgets on historical basis
- corrections
- DRG related budgets
- pharmaceuticals: 100 % reimbursement

Guidelines (1)



- National Guidelines 1989, 2nd ed 1997
- International Guidelines
- Many local Guidelines

Guidelines (2)

- clean contaminated and contaminated surgery; clean surgery if necessary
- high dose during intervention
- product choice
- administration just before incision (NEJM)
- single dose or maximum 24 hours

Use of prophylactic antibiotics in Belgium (1)

	1986 (%)	1992 – 1995 (%)
Advised and administered	92,8	89,8
Not advised but administered	50,7	60,3
Day (s) before surgery	6,8	1,5
Day of surgery	91,5	97,7
After surgery	1,7	0,8
2 days or longer	76,5	27,6

Use of prophylactic antibiotics in Belgium (2)

	1986 (%)	1992 – 1995 (%)
Cephalosporins 1st gen	27,7	52,1
Cephalosporins 2nd gen	17,0	23,8
Metronidazole	7,2	8,2
Cephalosporins 3th gen	2,1	3,4
Betalactam + clavul.acid	0,1	3,1
Aminosides	6,8	2,8
Broad spectrum penicillins	6,7	2,2
Quinolones	1,1	0,6

Evidence based use of prophylactic antibiotics



Observed cost
(US\$)

12 127 960

Optimal use
(US\$)

6 047 974

Potential savings
(US\$)

6 079 986

Journal of Antimicrobial Chemotherapy (1998)
41,267-272

Politics



Control of prophylactic use of antibiotics in surgery will reduce the expenditures with 5 million Euro each year.

The Ministry of Social Affairs should propose a strategy.

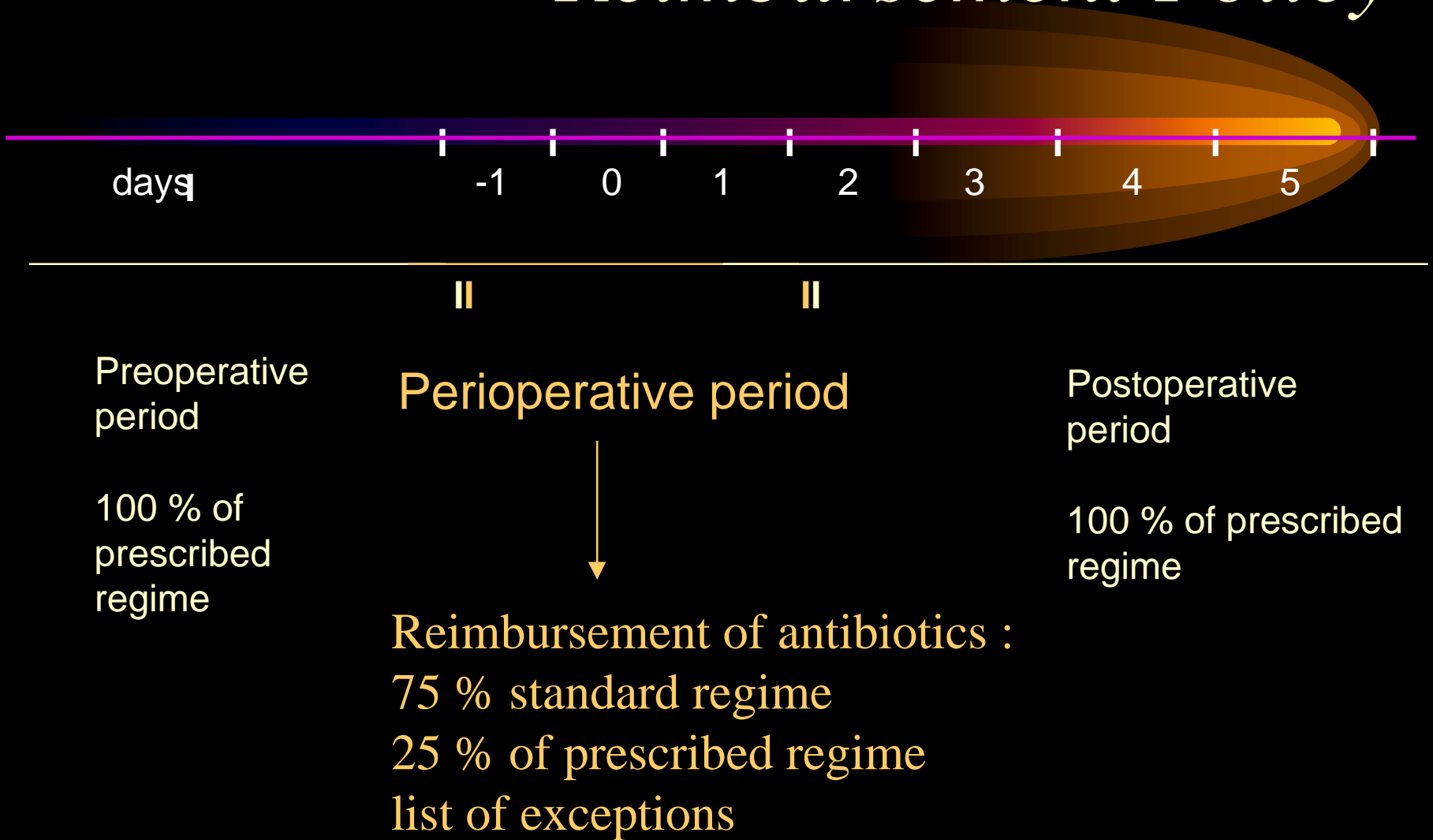
Different regimes

code	regime	description	Budget (BEF)
Z		No prophylaxis	1
A1	Single dose	Cephazolin	301
A2	Single dose	Cephazolin, 2nd dose	602
A3	24 h	Cephazolin	903
A4	24 h	Cephazolin, 2nd dose	1204
A6	48 h	Cephazolin	1806
A7	48 h	Cephazolin, 2nd dose	2107
B1	Single dose	Cephazolin + metronidazole	515
B3	24 h	Cephazolin + metronidazole	1116
B4	24 h	Cephazoline, 2nd dose + metronidazole	1417
D1	Single dose	Ofloxacin	95

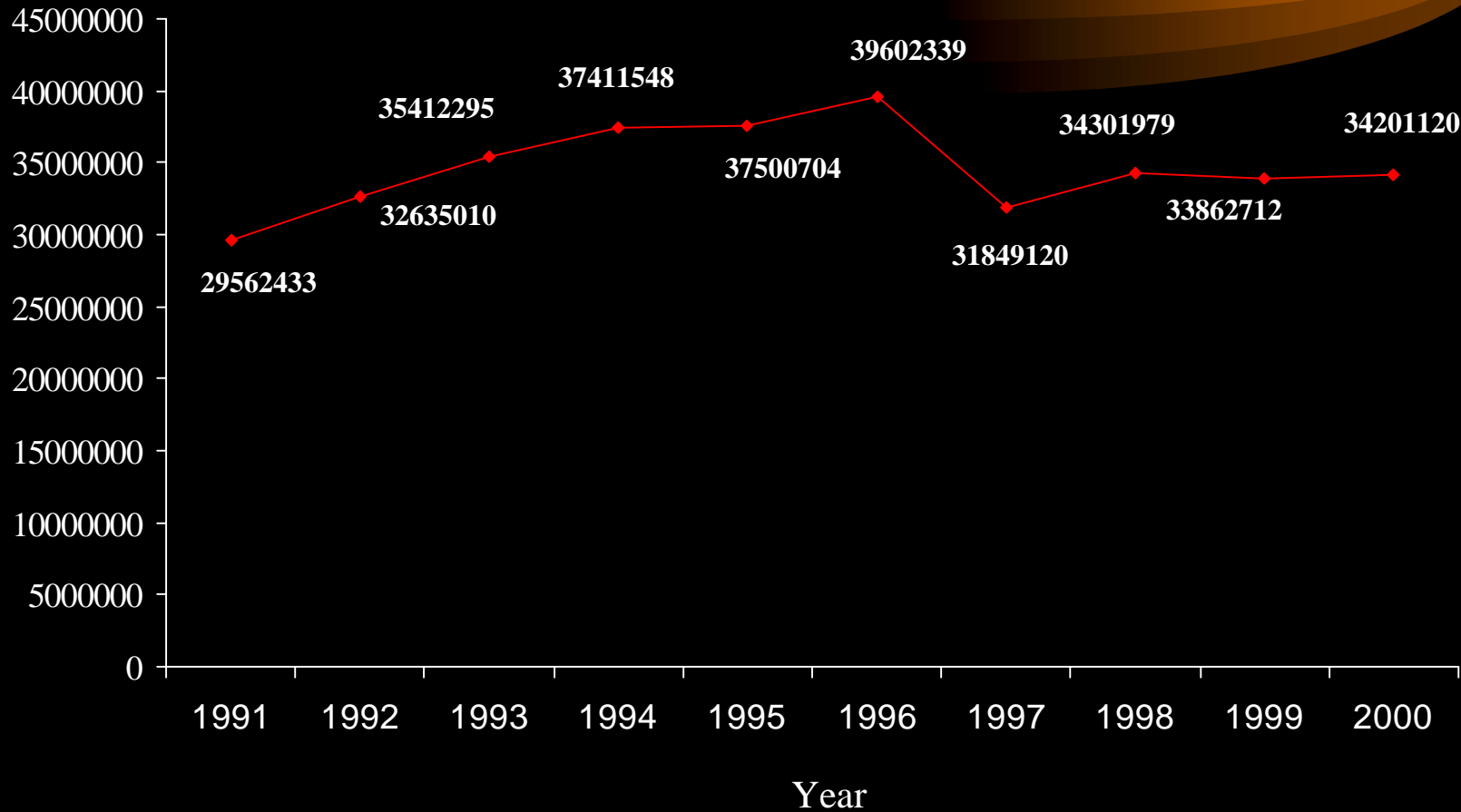
Some examples

Code	Intervention	Antibiotics	Budget (BEF)
424104	Caesarean section	Single dose cephazolin	301
242465	Cholecystectomy	Single dose cephazolin	301
229320	Resection of Aorta descendens	24 hours cephazolin	903
300285	Diagnostic arthroscopy	no prophylaxis	1

Reimbursement Policy



Evolution of Expenditures



Quality

	1986 (%) (1)	1992 – 1995 (%) (1)	1998 – 1999 (%) (2)
Advised and administered	92,8	89,8	96,3
Not advised but administered	50,7	60,3	4,7
1st gen cephalo	27,7	52,1	66,1
2 days or longer	76,5	27,6	5,3

(1) IHE, Brussels, 1996

(2) ESAP study

Conclusion



- Quality under control
- Budget under control