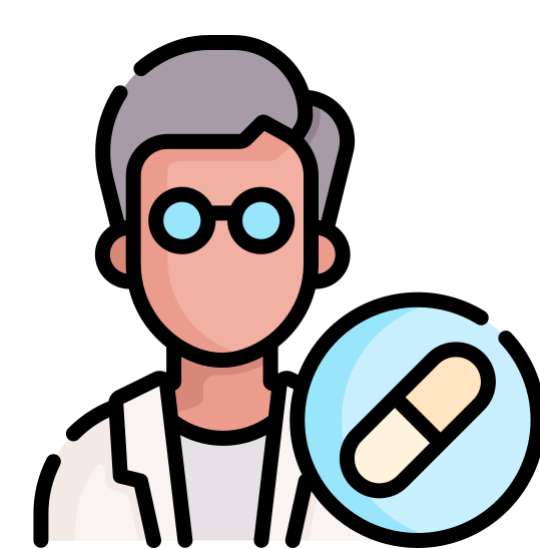


COST-EFFECTIVENESS OF PHARMACEUTICAL PREOPERATIVE CONSULTATIONS: A FIVE-YEAR ANALYSIS

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BACKGROUND AND IMPORTANCE

2.5% of operations are cancelled because of preoperative medication errors.



Pharmaceutical preoperative consultations are a possible solution.

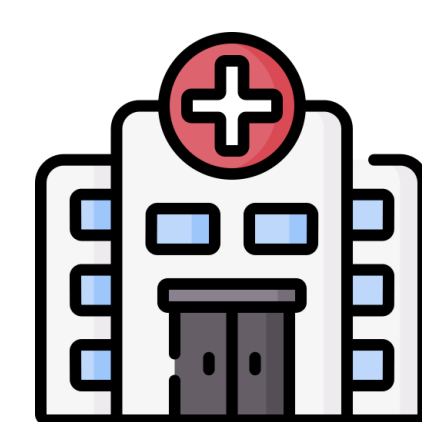
They detect and prevent these errors by review the correct medication management of patients undergoing surgery.

AIM AND OBJECTIVE

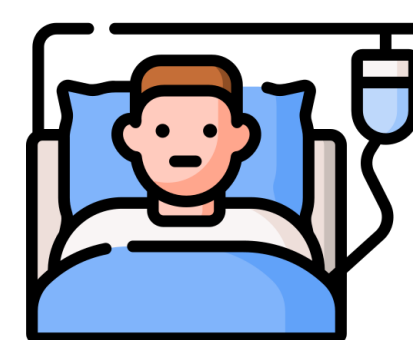
Is the implementation of pharmaceutical preoperative consultation cost-effective?



MATERIALS AND METHODS



Retrospective
Single-center study



Analysis of all medication errors prevented by a pharmacist during a preoperative care consultation



01/01/2016 – 31/12/2020

Classification of medication errors

Pharmacists + anesthesiologists assigned each error a probability of resulting in a patient-impacting adverse event (p).

Nesbit et al. methodology

p of 0, 0.01, 0.1, 0.4, or 0.6 were assigned to each error,



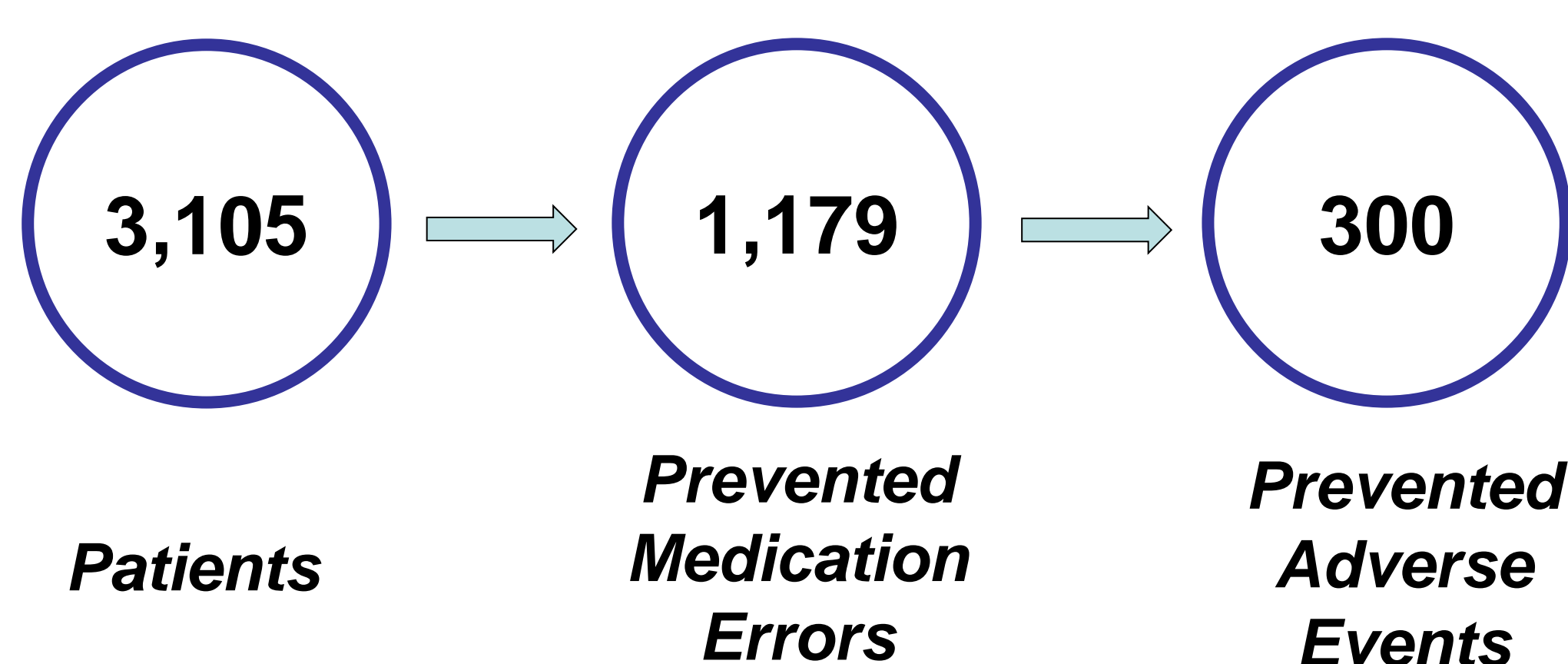
€6,924 per adverse event (Spanish Ministry of Health in 2005, adjusted for the consumer price index in 2020.)

Cost of prevented error = €6,924 x p.

Sensitivity analysis
20% higher (€8,309) or lower (€5,539).

Annual cost of a Hospital Pharmacist (2020, Spain) = €45,494

RESULTS



Over 5 years...
€2,076,785 Adverse-events costs prevented.
€227,470 Cost of employing a pharmacist

€1,849,315
Net savings

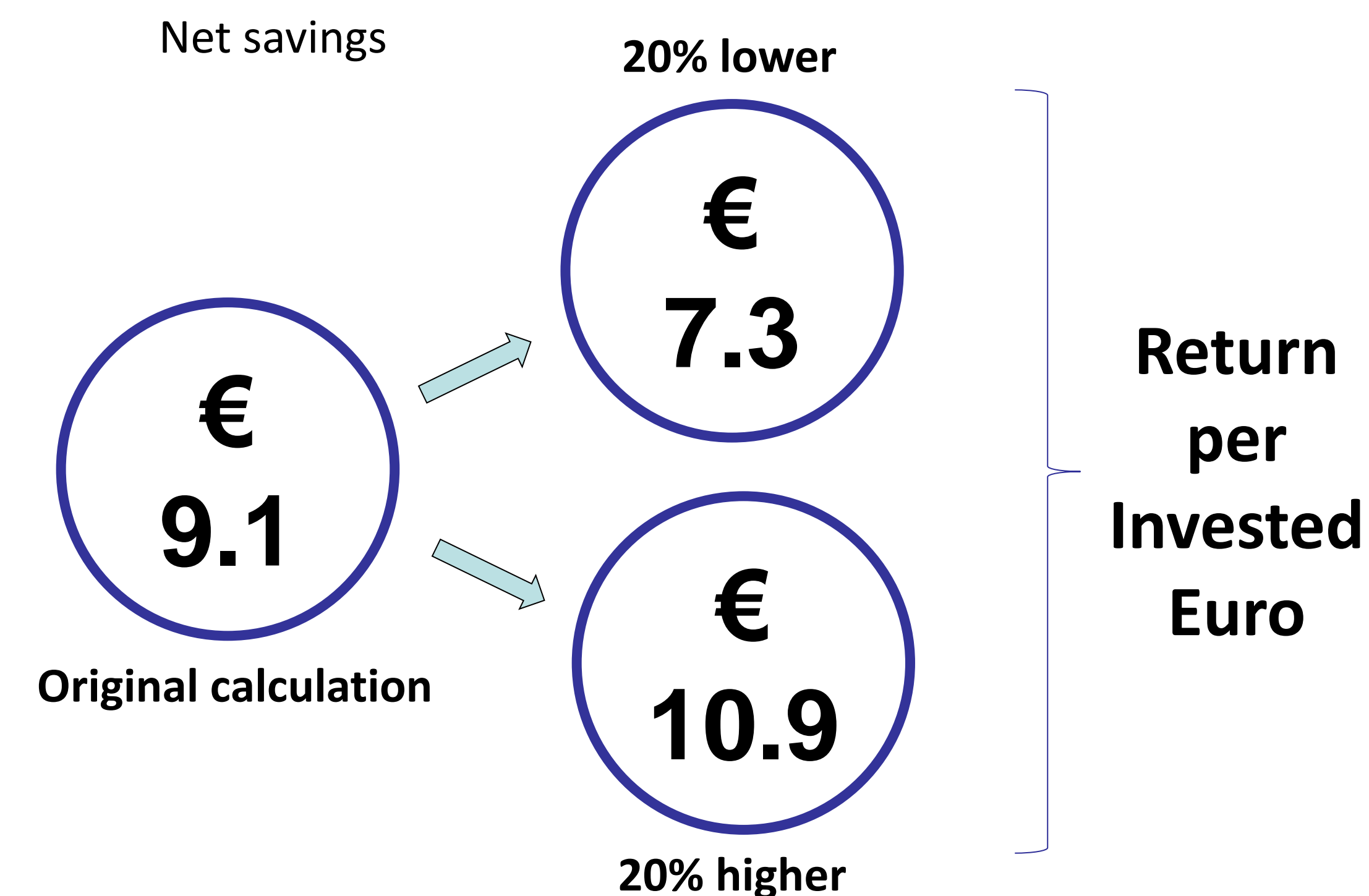


Table 1. Classification of medication errors.

Probability that a medication error will cause an adverse effect.	Frequency (%).	Avoided adverse events (p x frequency)
0	6 (0.5)	0
0.01	224 (19.0)	2
0.1	346 (29.3)	35
0.4	497 (42.2)	199
0.6	106 (9.0)	64
Total	1.179	300

CONCLUSION AND RELEVANCE

Implementation of a Pharmaceutical Preoperative Care consultation was cost-effective for the healthcare system, with a cost savings ranging from 7.3 and 10.9 euros per euro invested.

