



YHEC Economic Model Example

Modelled population

- > **1,215** patients receiving indwelling urinary catheters for any length of time in a **hospital setting**
(i.e. patient receives catheter as an inpatient and remains in hospital for the duration of catheterisation)
- > **2,002** patients receiving long-term indwelling urinary catheters (i.e. for >28 days) in a **community setting**
(e.g. a nursing home or in their own home, with regular visits from district nurses)

MODEL RESULTS

Use of UroShield in patients with long-term indwelling catheters is predicted to lead to the following clinical outcomes in your organisation:

- > **96% reduction** in the number of courses of antibiotics prescribed for CAUTI
- > **19,238** hospital bed days freed for use by other patients over 12 month period
- > **210 hours** of district nurse time freed (assuming an average visit time of 20 min)
- > **61% reduction** in gram negative bloodstream infections resulting from CAUTI

Clinical outcomes over 12 months

CAUTI	Standard care	UroShield	Difference
Total episodes of CAUTI	8,389	336	-8,053

CAUTI resource use - hospital setting	Standard care	UroShield	Difference
Associated antibiotic use (number of courses)	2,624	105	-2,519
Additional bed days	19,551	313	-19,238

CAUTI resource use - community setting	Standard care	UroShield	Difference
Associated antibiotic use (number of courses)	6,599	264	-6,335
GP visits	5,257	210	-5,047
District nurse visits	657	26	-631
Outpatient visits	0	0	0
A&E visits	576	23	-553
CAUTI hospitalisations	346	14	-332

Other outcomes	Standard care	UroShield	Difference
Episodes of sepsis	302	5	-297
Mortality resulting from sepsis	38	1	-38
Hospitalisations due to catheter blockage	1,261	672	-589
Patients with catheter-associated pain	740	296	-444

INNOVATIVE EXCELLENCE

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Adopting UroShield could generate potential cost savings for your organisation:

	Total costs	Total costs per patient
Standard care	£32,561,979	£10,123
UroShield	£7,597,552	£2,362
Difference	-£24,964,427	-£7,761

- > **£7761** of cost savings predicted per patient
- > **646.8%** return on investment predicted over 12 months

Total costs over 12 months

Costs over model time horizon	Standard care	UroShield	Difference
Cost of UroShield	£0	£3,859,878	£3,859,878
Cost of CAUTI treatment	£26,563,748	£454,441	-£26,109,307
Cost of catheter maintenance	£3,080,710	£2,334,255	-£746,455
Cost of catheter blockages	£1,878,783	£920,322	-£958,461
Cost of sepsis treatment	£1,007,393	£16,118	-£991,275
Cost of pain medication	£31,345	£12,538	-£18,807
Total costs	£32,561,979	£7,597,552	-£24,964,427
Total costs per patient	£10,123.21	£2,362.01	-£7,761

Return on investment

Net benefit over 12 months	£28,824,305	7.5 to 1 ratio
Cost of intervention over 12 months	£3,859,878	
ROI (%)	647%	

Summary of costs over 12 months:

