

Supplementary Table 1. Worksheet for per procedure cost of ERCP using disposable duodenoscopes at 0.4% infection rate

Total no. of ERCPs performed per year	1752
Total number of duodenoscopes	9
Estimated number of ERCP performed per reusable duodenoscope	200
Annual leasing & maintenance costs for all duodenoscopes (sum of annual leasing cost and annual maintenance cost per scope) x total no. of duodenoscopes (US \$)	118,061
Leasing cost of one reusable duodenoscope (US \$)	35,000
Lifespan of a duodenoscope (years)	3
Therefore, annual leasing cost per duodenoscope (US \$)	11,667
Annual maintenance cost of all duodenoscopes (US \$)	13,061
Therefore, annual maintenance cost per duodenoscope (US \$)	1,451
Annual cost of all duodenoscope cleaning machines & maintenance (US \$)	8,000
Annual cleaning supplies cost (US \$)	9,440
Annual filter cost (US \$)	984
Annual labor cost for duodenoscope cleaning (US \$)	60,230
Annual infection costs at 0.4% infection rate	875,000
Cost of treating one case of infection (US \$)*	125,000
Annual total cost of reusable duodenoscopes including costs of treating infections (at 0.4% infection rate) (US \$)	1,071,715
Mean cost of duodenoscopes per procedure (at 0.4% infection rate) (US \$) (annual total cost 1,071,715/total no. of ERCPs performed per year 1752)	612

* Average treatment cost for cholangitis that required a two-night stay in the intensive care unit (inclusive of admission, anesthesia, laboratory, pharmacy, radiology, physical therapy, respiratory therapy and sterile supplies) was \$125,000. Average treatment cost of cholangitis in a non-critical care bed for a two-night stay was \$50,000 with consumption of similar resources.

Supplementary Table 2. Worksheet for per procedure cost of ERCP using disposable duodenoscopes not factoring in infection costs

Total no. of ERCPs performed per year	1752
Total number of duodenoscopes	9
Estimated number of ERCP performed per reusable duodenoscope	200
Annual leasing & maintenance costs for all duodenoscopes (sum of annual leasing cost and annual maintenance cost per scope) x total no. of duodenoscopes (US \$)	118,061
Leasing cost of one reusable duodenoscope (US \$)	35,000
Lifespan of a duodenoscope (years)	3
Therefore, annual leasing cost per duodenoscope (US \$)	11,667
Annual maintenance cost of all duodenoscopes (US \$)	13,061
Therefore, annual maintenance cost per scope (US \$)	1,451
Annual cost of all duodenoscope cleaning machines & maintenance (US \$)	8,000
Annual cleaning supplies cost (US \$)	9,440
Annual filter cost (US \$)	984
Annual labor cost for duodenoscope cleaning (US \$)	60,230
Annual total cost of reusable duodenoscopes not factoring in infection costs (US \$)	196,715
Mean cost of duodenoscopes per procedure (US \$) (annual total cost 196,715/total no. of ERCPs performed per year 1,752)	112