

A. Wojcik, M.-H. Tywoniuk, I. Vella, M. Luyckx
Pharmacy, Centre Hospitalier Denain, France

INTRODUCTION & GOAL

- ▶ Non-autoclavable flexible bronchoscopes cleaning and disinfection are reported as complex, costly and time consuming.
- ▶ The goal of this study is to determine the global cost for our hospital of the reusable bronchoscopes and to evaluate the potential relevance of replacing these with single-use bronchoscopes.

MATERIALS ET METHODS

- ▶ Retrospective microcosting study covering the 427 bronchoscopies performed in 2014 in our general hospital.

RESULTS

- ▶ Costs are expressed for one year, VAT included (rate 20%)

SINGLE USE BRONCHOSCOPES	Costs €
427 single use bronchoscopes x € 250 (unit price)	106,750
1 reusable portable monitor : purchasing (depreciation included)*	300
TOTAL	107,050
Per bronchoscopy	251



* Calculation of annual monitor depreciation :
 = monitor unit price x (number of monitor / renewal frequency)
 = € 1,500 x (1 monitor / every 5 years)
 = € 300
 For 427 bronchoscopies: € 300 / 427 = € 0.71 per bronchoscopy

REUSABLE BRONCHOSCOPES	Costs €
8 reusable bronchoscopes : purchasing, maintenance, repairs (depreciation included)	42,216
1 endoscopy column (medical cart) : purchasing, maintenance, repairs (depreciation included)	2,854
Equipment (endoscopic module for reprocessing + stockage cabinet) : purchasing (depreciation included)	4,602
Consumables for preventive and curative reprocessing**	41,732
Bacteriological controls	959
Staff costs for the reprocessing step : 1 nurse half a day, 5 days per week	25,000
TOTAL	117,364
Per bronchoscopy	275

** includes : water, accessories (type brushes, valves, filters), special clothing, etc...
 Preventive reprocessing = daily disinfection
 Curative reprocessing = after the bronchoscopy procedure

DISCUSSION

- ▶ The annual cost of reusable bronchoscopes is underestimated because invoices of several repairs and maintenances were not correctly filed.
- ▶ The single-use bronchoscope offers the advantage of eliminating the risk of cross contamination and especially the prion risk, as it still remains present after disinfection even if all reprocessing steps have been thoroughly carried out. In case of emergency, the single-use endoscope is immediately available.
- ▶ However, the disposable model has a lower image definition (video camera technology) than the reusable (fiber optic format) : that could be a drawback for accurate diagnosis.

CONCLUSION

- ▶ Taking into consideration the number of procedures currently performed in our hospital on an annual basis, conversion to single-use bronchoscopes would represent an economic advantage of € 10,314 versus reusables. It would also reduce the risk of contamination and cross infections.
- ▶ Clinical tests will be performed to assess the quality of these innovative devices.