

EXPERIENCES IN DEVELOPING AND RUNNING A SUCCESSFUL PICC TEAM IN THE CZECH REPUBLIC DURING A LEAN ECONOMIC PERIOD.

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INTRODUCTION

The successful development of a Peripherally Inserted Central Catheter (PICC) Team project at the University Hospital Olomouc in October 2017 was a Nursing Department initiative, with full hospital management support.

To obtain a suitable budget it was imperative to convince the Financial Department that an investment in the PICC team would not only benefit the patient but also prove financially viable in the long term and reduce overall cost to the hospital.

METHODS

An international literature search identified the benefit of PICC's over other invasive devices for a hypothetical patient with infective endocarditis. Comparison of costs related to insertion and maintenance of differing invasive catheters in our institution also proved favorable for the PICC.

Based on this research, the Financial Department approved a 1,500 000 CZK (67,620 USD) budget for the pilot PICC project and to minimize risk, funding was spread between four departments.

Table 1: Comparison of financial impact for PICC, PIV and CVC for 62days of stay in the hospital for patient with infective endocarditis.

Device	PICC USD	PIV USD	CVC USD
Insertion	267	111	545
Dressing change	209	N/A	124
Flushing	333	333	277
Blood sampling	50	30	33
Catheter tip culture	58	N/A	194
All over cost	917 USD	474 USD*	1,173 USD

**Despite the lower cost, PIV is not considered the safest option due to risk from irritant usage and potential failure for first attempt reinsertion within a 6 weeks period.*

Table 2: Budget and number of PICC and midline insertions within 2018-2020.

Year	Budget USD	PICC	Midline
2018	67,620	248	80
2019	94,320	455	113
2020	121,600	647	125

RESULTS

During 2018, the PICC team inserted 248 PICC devices and 80 midlines. This resulted in extending the project to all hospital departments.

The PICC team received overall control of the 2019 budget 72,128 USD.

There was also a significant increase in PICC and midline catheter insertions, 455 vs.113 respectively with an overall complication rate kept below two percent. Consequently, a new approach towards catheter choice and cost calculation, front-line staff education and device utilization was implemented. Statistical data tracking was used as a financial framework for the following year.

CONCLUSION

The PICC team demonstrated that safe and cost effective care is achievable during a Lean Economic period.

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