

Establishment of a Clinical Pharmacy department at the University Medical Centre Ljubljana



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Background and Objectives.

Certain clinical pharmacy services have already been introduced at the University Medical Centre Ljubljana (UMCL) in 2010. However, roles and responsibilities of clinical pharmacists have been unclear and not used to their full potential. Therefore, reorganisation of the clinical pharmacy work was needed, and implementation process has started.

Objective of the background study was to make a realistic financial and feasibility assessment of establishing a Clinical Pharmacy Department (CPD) and to implement possible changes. Objective of setting up a CPD was to promote safe, appropriate and cost-effective use of medicines for the patients by continuously providing a wider range of improved quality Clinical pharmacy services.

Methods.

Based on a proposed model that included structure/organisation, financial, marketing and quality assurance plan and assessment, a CPD was created. Establishment of CPD included logistic and organisational changes.

Results and discussion.

Theoretical CPD model:

In a theoretical CPD model, number of allocated clinical pharmacists to clinical departments was based on the number of admitted patients per working day (Table 1). Structure included a senior clinical pharmacist as a quality and clinical pharmacy manager. Yearly direct cost savings from additional services were estimated to be initially 300,000 € (achieved by optimising medication treatments) and start-up costs were assessed to be repaid in 23 months (Figure 1). Stakeholders, included in the marketing plan, are presented in Figure 2. Quality assessment was planned for the structure (i.e. documentation keeping check-up), process (i.e. rate of patients that receive clinical pharmacy services) and outcomes (rate of pharmacists' interventions, direct cost savings, cost avoidance).

Actual CPD establishment:

A CPD, based at the UMCL Pharmacy, was formally established. Implemented changes included:

- expansion of pharmacy staff (increase from 29 pharmacists in January 2010 to 46 pharmacists in September 2013),
- provision of additional training and education (3 pharmacists newly specialised, 10 undergoing specialisation programme),
- stronger information technology support (additional equipment; new computer programme for clinical pharmacy work currently under development),
- higher level of organisation (regular weekly meetings; individual clinical pharmacy work and prioritisation of tasks currently under assessment).
- Overall number of tasks and/or information, successfully provided by clinical pharmacists on the wards, increased from 3856 to 9059 for the same period (January-September, 2011 vs. 2013, respectively).

Conclusions.

Establishment of a CPD has been demonstrated to be a feasible and financially justified project. Further structural and organisational changes with increased pharmacy staff are required to continuously provide optimal clinical pharmacy services.

Table 1: Suggested number of clinical pharmacists for Clinical departments

Clinical Department	No. of admitted inpatients per working day	No. of allocated (trained) pharmacists
Vascular diseases	9.8	2 (3)
Gastroenterology	14	3 (4)
Nephrology	4	1 (2)
Haematology	8.6	2 (3)
Paediatric surgery	4.8	1 (2)
Infectious diseases	30.0	6 (8)
Endocrinology, diabetes and metabolic disorders	5.7	2 (3)
Neurology	7.1	2 (3)
Children haematology and oncology	3.4	1 (2)
Paediatrics	29.4	6 (8)

Figure 1: Break-even analysis for establishment of CPD

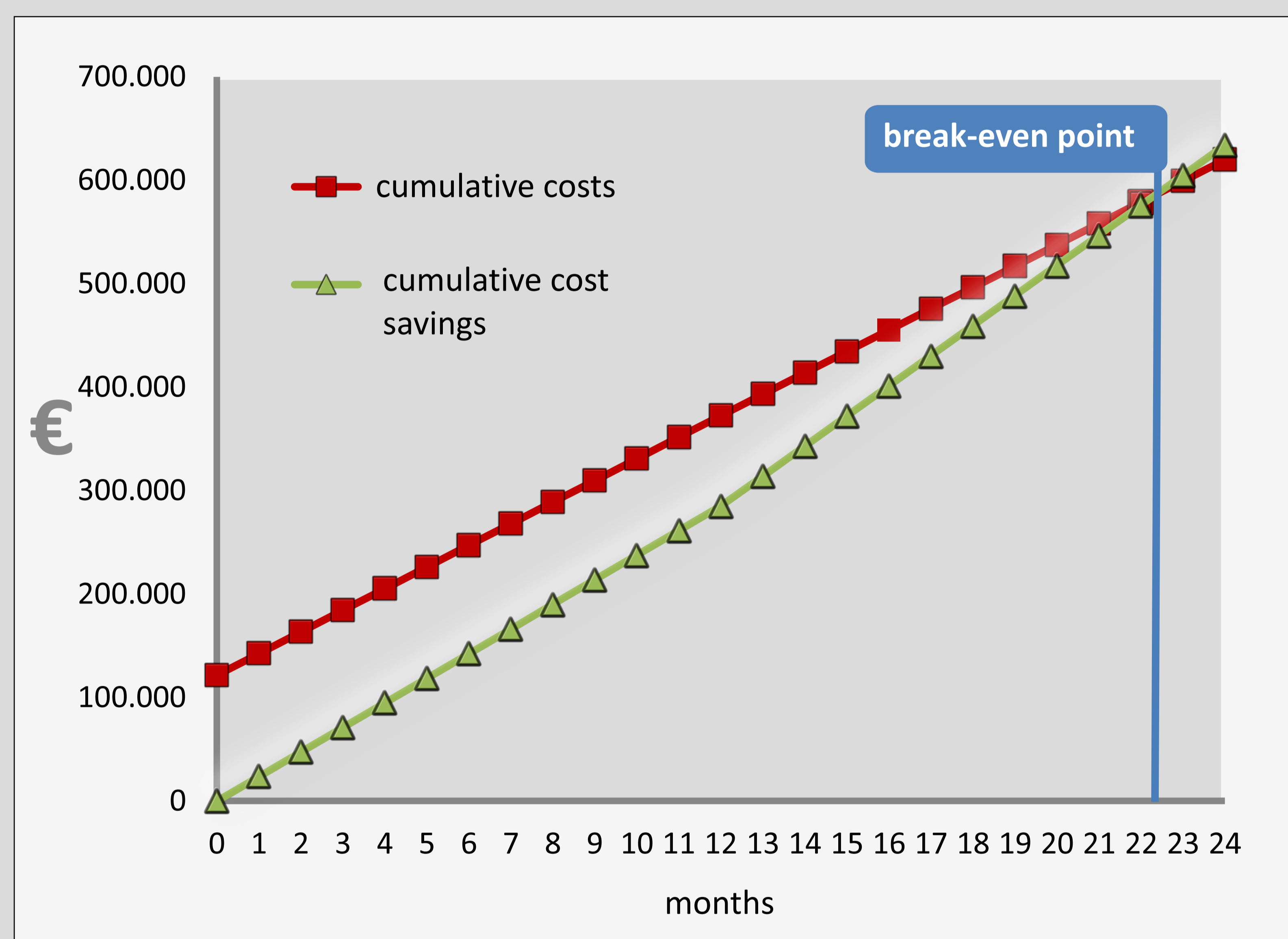


Figure 2: Stakeholder analysis

