



# Integrative Hospital Treatment in Older patients to benchmark and improve Outcome and Length of stay – the *In-HospitoOL* study

A quasi-experimental multicenter comparative effectiveness health care research trial

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## Introduction

Health care costs are high and rising also due to an aging, polymorbid population (Fig. 1). In view of this demographic evolution, resource allocation becomes a priority. There is lack of evidence-based tools and benchmarks namely for elderly, polymorbid patients to improve integrative in-hospital care and transition process in real-life of an acute care hospital setting. We propose the *In-HospitoOL* study to investigate the effect of improved inter-professional collaboration and discharge planning on length of hospital stay and other patient-centered outcomes.

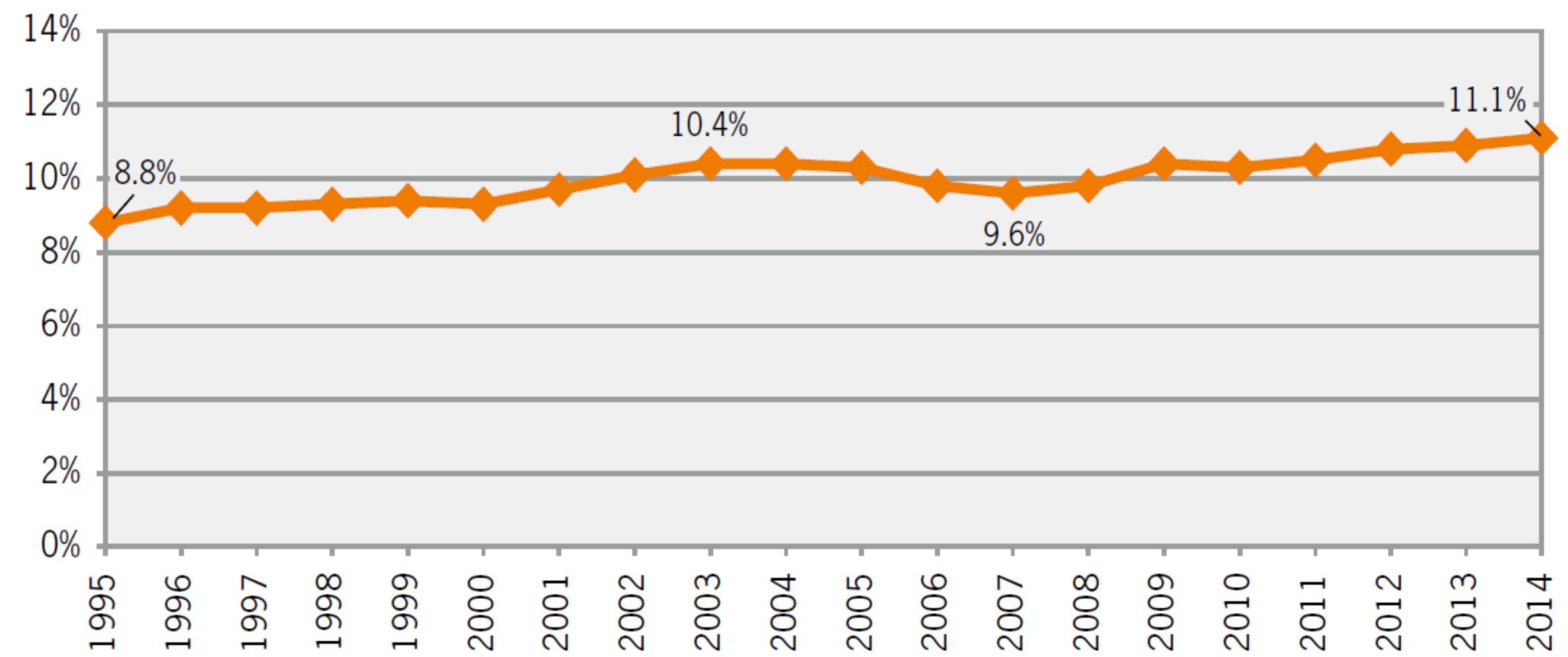


Fig. 1 Health expenditure Switzerland in relation to gross domestic product (GDP)<sup>1</sup>

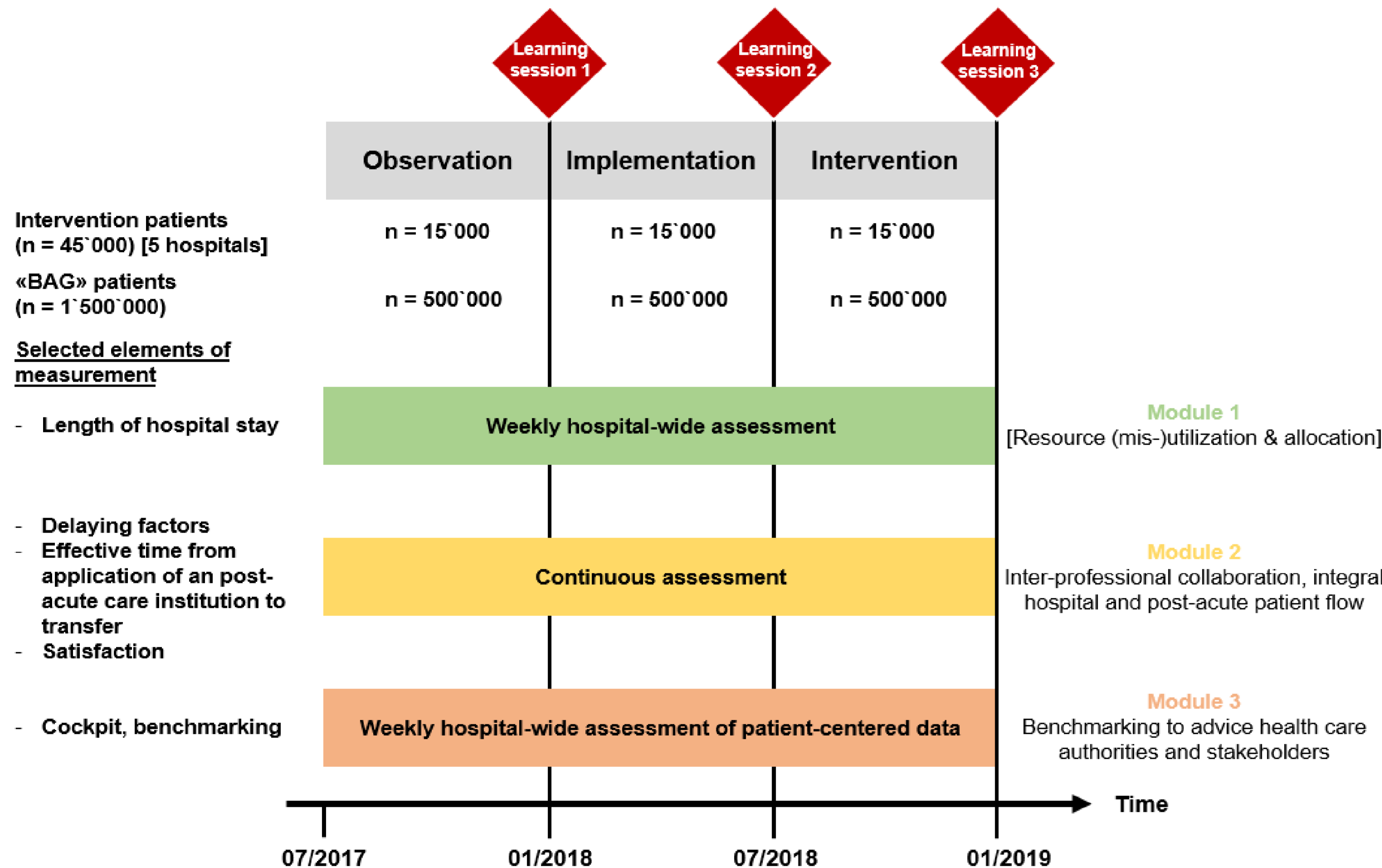


Fig. 2 Main study timeline<sup>2</sup>

## Methods

*In-HospitoOL* combines several patient discharge measures and was developed involving multiple professions. An electronic monitoring and reporting system enables clinical user oriented benchmarking (key element 9 of the SAMW Charta) to assess hospital processes, quality, delays in hospital transition and barriers for discharge stratified by profession (including 30-day telephone interviews). For external validation, *In-HospitoOL* will be implemented in five Swiss hospitals. We will use a quasi-experimental approach and compare length of stay before and after hospital-wide implementation of the management tool in relation to changes in length of stay in hospitals not using the tool. We target to include 45'000 patients over an 18-month period (Fig. 2).

### Current situation

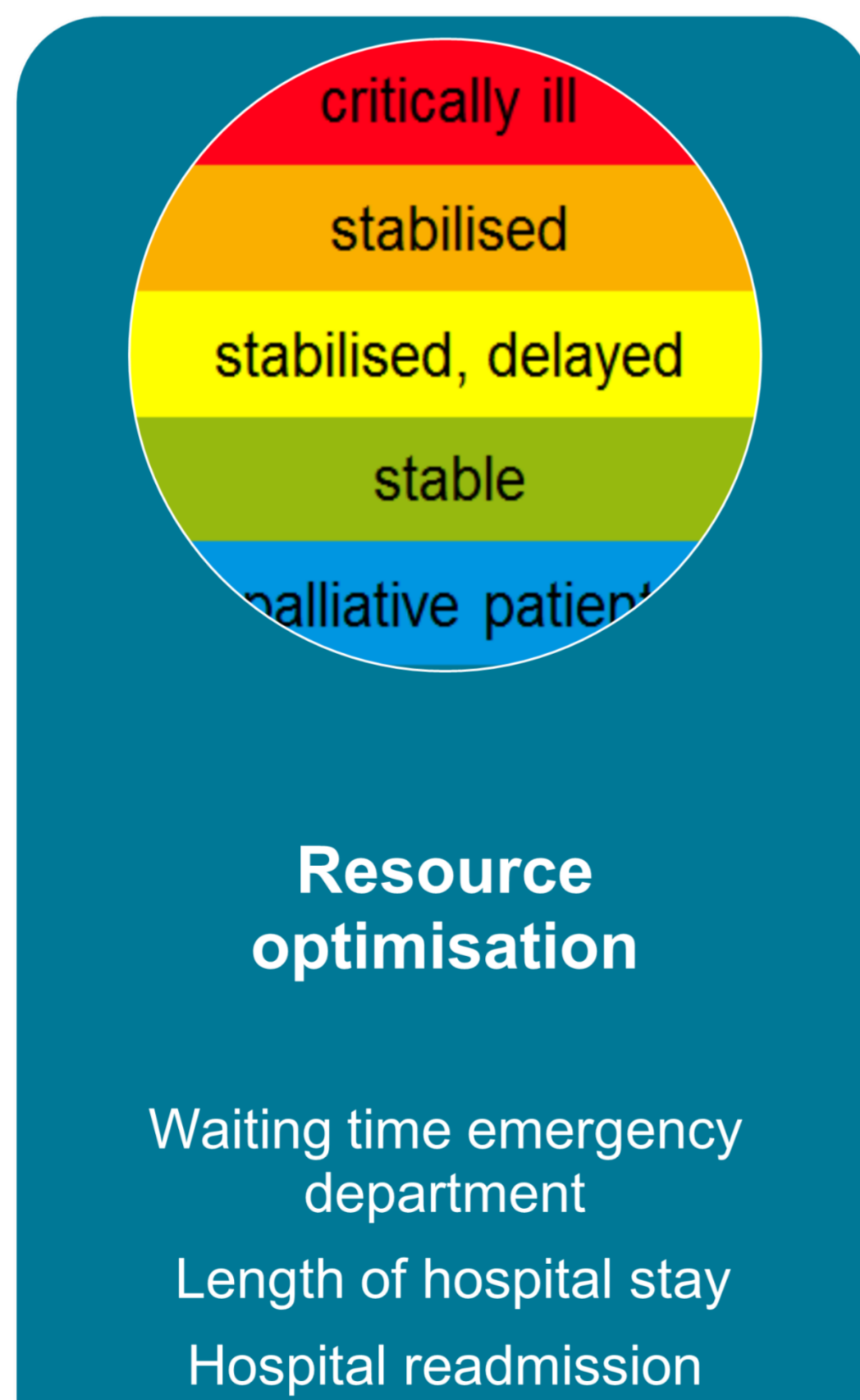
Ageing population ↑  
Multimorbidity/  
Chronicity ↑  
Diagnosis related groups  
Length of hospital stay

Innovative diagnostics  
and therapeutics

Health care costs ↑



**Missing Link**  
Evidence-based  
instrument leading to  
improved patient care



### Resource optimisation

Waiting time emergency  
department  
Length of hospital stay  
Hospital readmission



### Inter-professional collaboration

Discharge planning  
Days spent in hospital after  
application to post-acute care  
institution  
Discharge delays  
Patient satisfaction

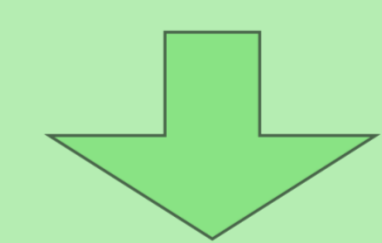
	2014	2015	2016
32 Min.	142 Min.	121 Min.	-
91%	89%	89%	-
88%	86%	85%	-
88%	89%	87%	-
90%	90%	-	-
98%	85%	-	-
	84%	-	-

### Quality & Transparency (Benchmarking)

Patient outcome  
Objective and transparent  
quality measurement  
Care processes

### Expected results

Inter-professional  
collaboration ↑  
&  
Quality data for process  
optimisation



### Quality optimisation

Emergency consultation ↓  
Hospital readmission ↓  
Mortality ↓  
Waiting time ↓  
Patient satisfaction ↑  
**Profitability**  
Length of hospital stay ↓  
Treatment costs ↓

Fig. 3 Study content

## Conclusion

The trial will yield concise information on whether and how *In-HospitoOL* improves inter-professional team work and thereby reduces length of stay without negatively impacting subjective and objective markers of patient outcomes. The large amount of collected patient data will enable comparison of transition processes within different hospitals and establish a benchmarking for patient care quality (Fig. 3).

<sup>1</sup> BFS (2016). Statistics on Health Care Costs and Funding (COU). Neuchâtel.

<sup>2</sup> Mueller, B., Kutz, A., Schuetz, P., de Geest, S. (2016). Full Proposal: Research Plan NRP 74 «Smarter Health Care»