

Methodology of economic appraisal of palliative care in the absence of a national cost database

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Background

Switzerland and many other countries are lacking the necessary health care costs data to perform representative economic analyses on palliative care. Nevertheless, to help politicians make decisions on how to divide their health care budget in 2020, **we want to estimate the effect that mobile specialist palliative care teams (MSPCT) will have on health care costs** (especially on hospital costs).

Goal

The goal is to demonstrate a methodology to estimate the affordability of MSPCT for regional governments with limited information on palliative care costs - and inspire others to try **to find alternative cost analyses in palliative care** when established economic analyses (cost-effectiveness, cost-minimisation, etc.) are not possible.

Methods

Our methodology has five steps:

1. Define and prepare the sample

- Identify best available data: anonymized Swiss health insurance claim database of 56% (N=105'370) of all deceased patients in Switzerland from 2008 to 2010.
- Probabilistically link these anonymized data to cause-of-death statistics of the Federal Statistical Office (FSO) to add missing data.
- Inclusion: all deceased insurants who are 20 years of age or older (exclusion of external cause of death such as a car accident) (N=94'310).
- Total costs of the sample in the last three months of life: sum all invoices paid by health insurers in the 90 days before death.

2. From sample to total Swiss population data

- First calculate average hospital costs in the last three months of life for each canton for both sexes and for all age groups in ten years bands in the sample.
- To estimate hospital costs, calculate from the sample the probability of being hospitalized in the last three months of life by canton, sex, and the age groups 20-65 and >65.

https://www.plattform-palliativecare.ch/sites/default/files/page/files/181220_Schlussbericht_Report_PotentialCostsMPD_1.pdf

- Multiplication of sample costs data from the previous sub steps by the total national number of deaths per canton, sex, and age group recorded in the cause of death statistics in 2010 (again exclusion of external causes of death).
- 3. Extrapolate total population costs into the future**
 - Extrapolate the costs for the year 2020 by using the reference scenario for Swiss demographic development (expected deaths), as described by the FSO.
 - This step provides the expected end of life health care (hospital) cost per Canton in 2020.
- 4. Define minimum and maximum cost saving scenario**
 - Perform systematic literature review (to be published): calculate the interquartile range for reduction of the number of hospital admissions due to MSPCT providing a low (16%) and high (48%) hospital cost saving scenarios.
- 5. Estimate cantonal expense of MSPCT**
 - Estimated SPCMT average cost by collecting annual services cost via a survey of sample of MSPCT.

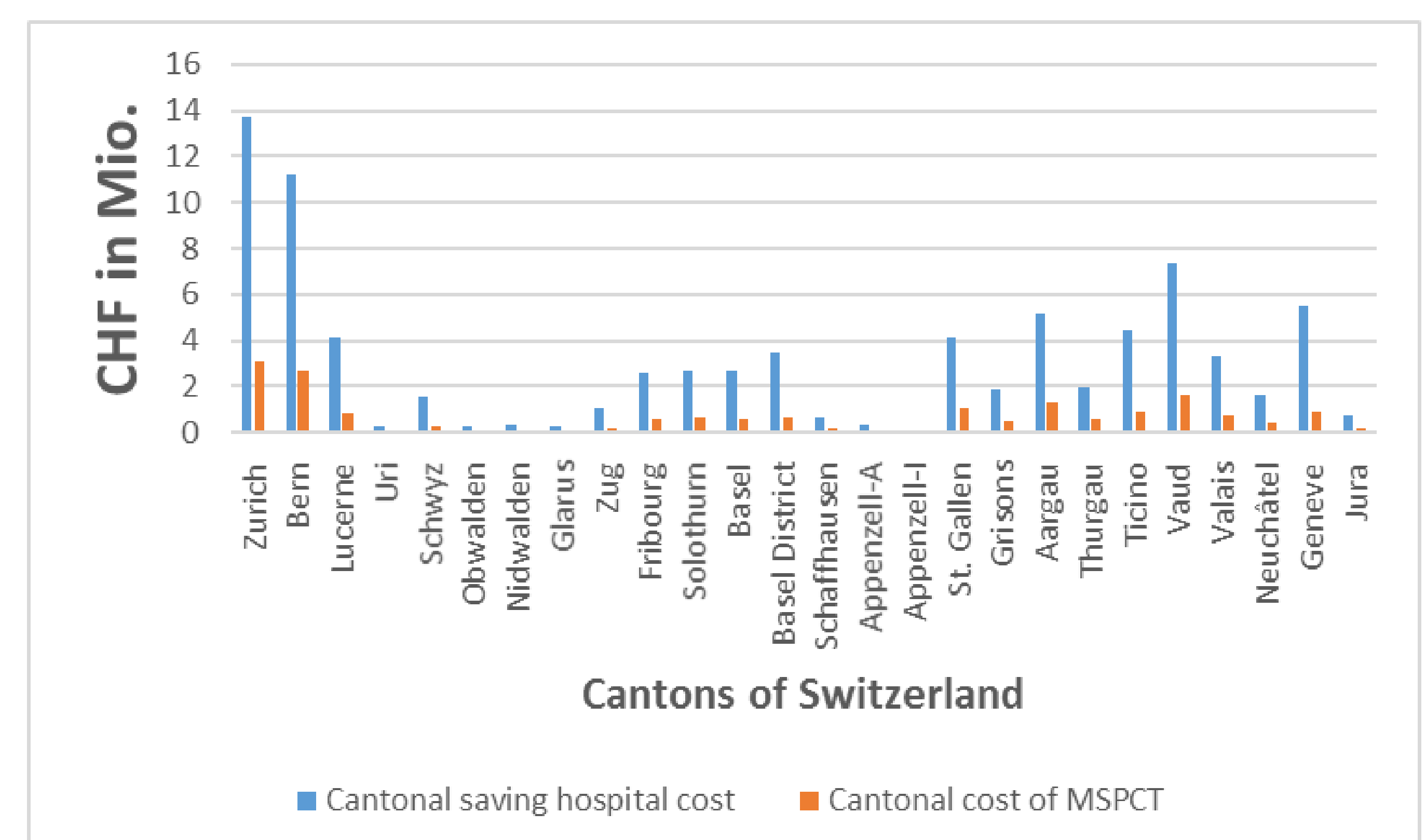


Figure 1 Cantonal costs and saving with 16% scenario
1 CHF = 0.99 US-dollar

Results

1. This methodology allows us to calculate and estimate the effect of MSPCT on cantonal cost per canton in 2020 as shown in figure 1.
2. The potential total cost savings in 2020 for all cantons are expected to be around 81 million CHF (16% saving scenario).
3. The savings delivered by MSPCT outrange the expected costs approx. by factor 4.