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Variation in mental health care use at the end of life in Switzerland

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Overview

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- Background
- Methods
- Results
- Conclusions

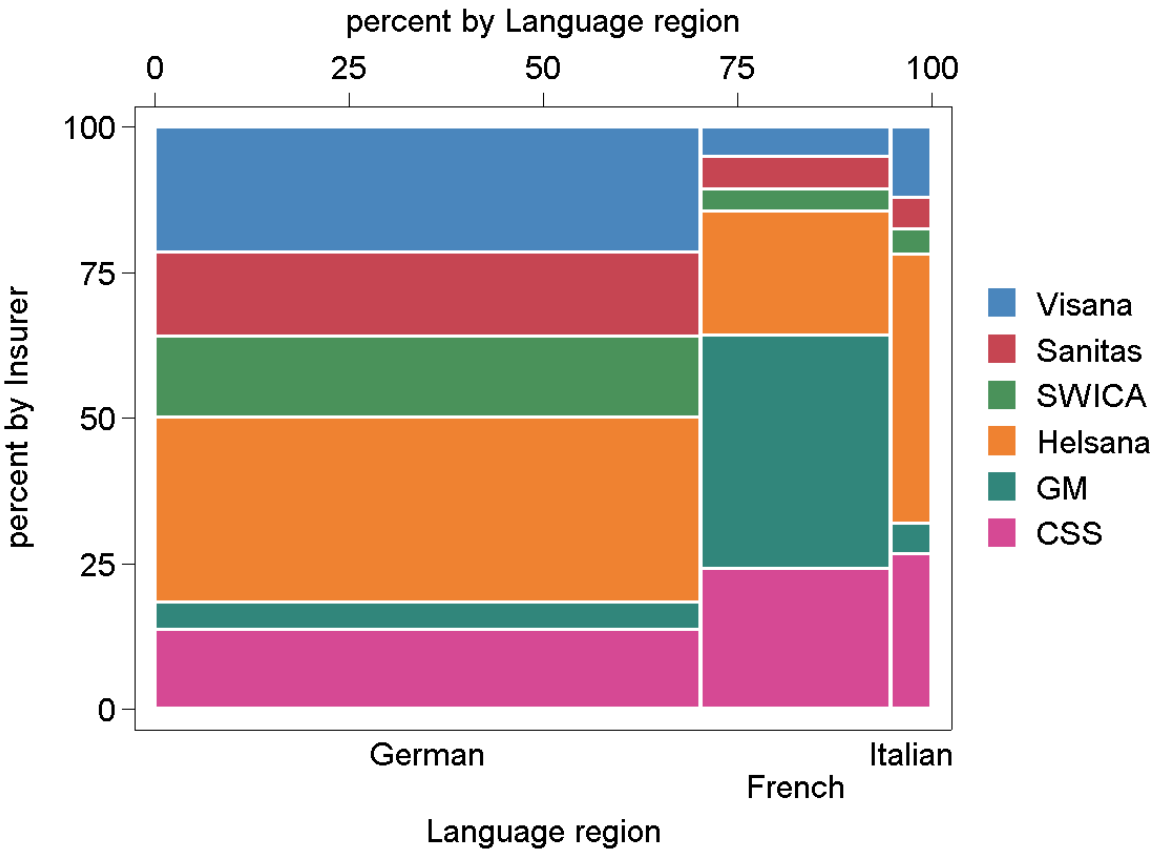
Background

- Previous studies have documented high levels of psychiatric disorders among people approaching death (Gruneir *et al*., 2006).
- Between 25 and 77% of people at the end of life experience psychiatric problems (Fine., 2001).
- Depression, anxiety, delirium, and suicides (Kelly., 2002).
- Mental health are associated with a reduced quality of life and increased costs to the health care system (Kelley., 2011).
- There is a lack of information about use of mental health care services (MHS) at the end of life in Switzerland.
- Understanding patterns of MHS use at the end of life will provide evidence to planning decisions.

Aim

- To examine use of mental health services (MHS) among Swiss residents during the end of life (EOL).

Methods: The data



Methods: Study population

- 118,718 Swiss residents who died between 2008-2010 (63% of the deceased).
- 6,511 persons who used MHS in their last 12 months of life.
- 8,389,405 health care claims.
- 62,487 mental health claims (MHC).
- Health service providers: primary care, specialists and hospital ambulatory care.

Methods: Types of MHS (TARMED)

- **Active therapy**
  - Diagnostics and psychiatric therapy
  - Psychological and psychiatric tests conducted by a medical specialist

- **Phone consultations**
  - Consultations with the specialists (psychiatrist, psychologist)
  - Consultations with parents/relatives of patients

- **Treatment of psychiatric crisis**
  - Provided in the psychiatric clinics for both children and adults

- **Ambulatory psychiatric services**
  - Provided in the ambulatory care (individual, couple, family and group sessions)

Methods: Data structure

ID	Sex	DOT	DOD	MBD	TARMED code	Provider type	Invoice	TP	Type of psychiatric treatment
117979	Female	24sep2010	26nov2010	2-5 months	00.0060	Primary care	15.27	17.76	.
117979	Female	24sep2010	26nov2010	2-5 months	00.0070	Primary care	15.27	17.76	.
117979	Female	24sep2010	26nov2010	2-5 months	00.0080	Primary care	7.64	8.88	.
117979	Female	24sep2010	26nov2010	2-5 months	00.0095	Primary care	30.55	17.76	.
117979	Female	24nov2010	26nov2010	0-1 month	02.0350	Hospital ambulatory care	16.28	8.94	Treatment of psych. crisis
117979	Female	24nov2010	26nov2010	0-1 month	02.0350	Hospital ambulatory care	16.28	8.94	Treatment of psych. crisis
117979	Female	24nov2010	26nov2010	0-1 month	02.0360	Hospital ambulatory care	32.56	8.94	Active therapy
117979	Female	24nov2010	26nov2010	0-1 month	02.0360	Hospital ambulatory care	32.56	8.94	Active therapy
117979	Female	25nov2010	26nov2010	0-1 month	02.0310	Hospital ambulatory care	97.68	8.94	Phone consultation
117979	Female	25nov2010	26nov2010	0-1 month	02.0310	Hospital ambulatory care	97.68	8.94	Phone consultation
117979	Female	25nov2010	26nov2010	0-1 month	02.0360	Hospital ambulatory care	24.42	8.94	Active therapy
117979	Female	25nov2010	26nov2010	0-1 month	02.0360	Hospital ambulatory care	24.42	8.94	Active therapy
117979	Female	01oct2010	26nov2010	0-1 month	00.0060	Primary care	15.27	17.76	.
117979	Female	01oct2010	26nov2010	0-1 month	00.0065	Primary care	34.4	40	.
117979	Female	01oct2010	26nov2010	0-1 month	00.0070	Primary care	15.27	17.76	.
117979	Female	01oct2010	26nov2010	0-1 month	00.0080	Primary care	7.64	8.88	.
117979	Female	01oct2010	26nov2010	0-1 month	00.0095	Primary care	30.55	17.76	.

DOT (date of treatment), **DOD** (date of death), **MBD** (months before death), **TP** (TARMED points)

Methods: Statistical analysis

- We calculated means in the case of continuous variables and percentages in case of categorical variables.
- We modelled total cost of mental health claims (MHC) using multiple linear regression.
- We adjusted for sex, age, language region, urbanicity and neighborhood socioeconomic position (Swiss–SEP).

Results: Study population by MHS users and non-users

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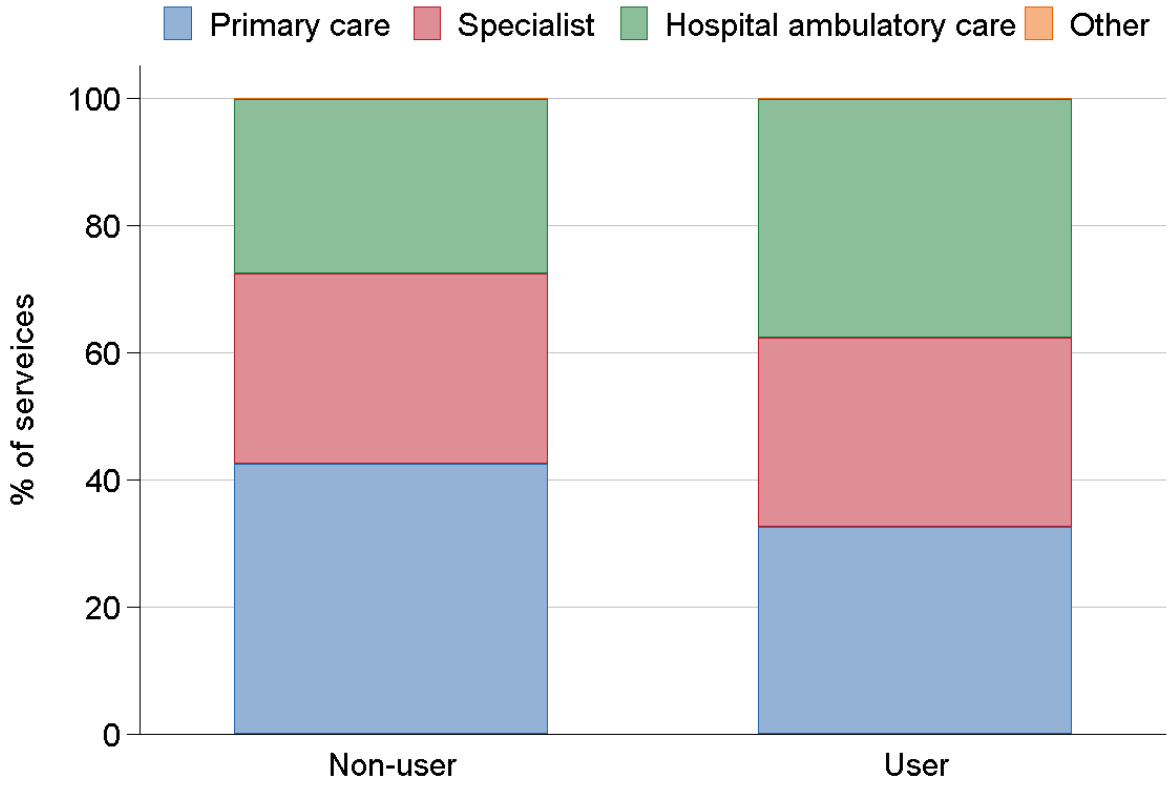
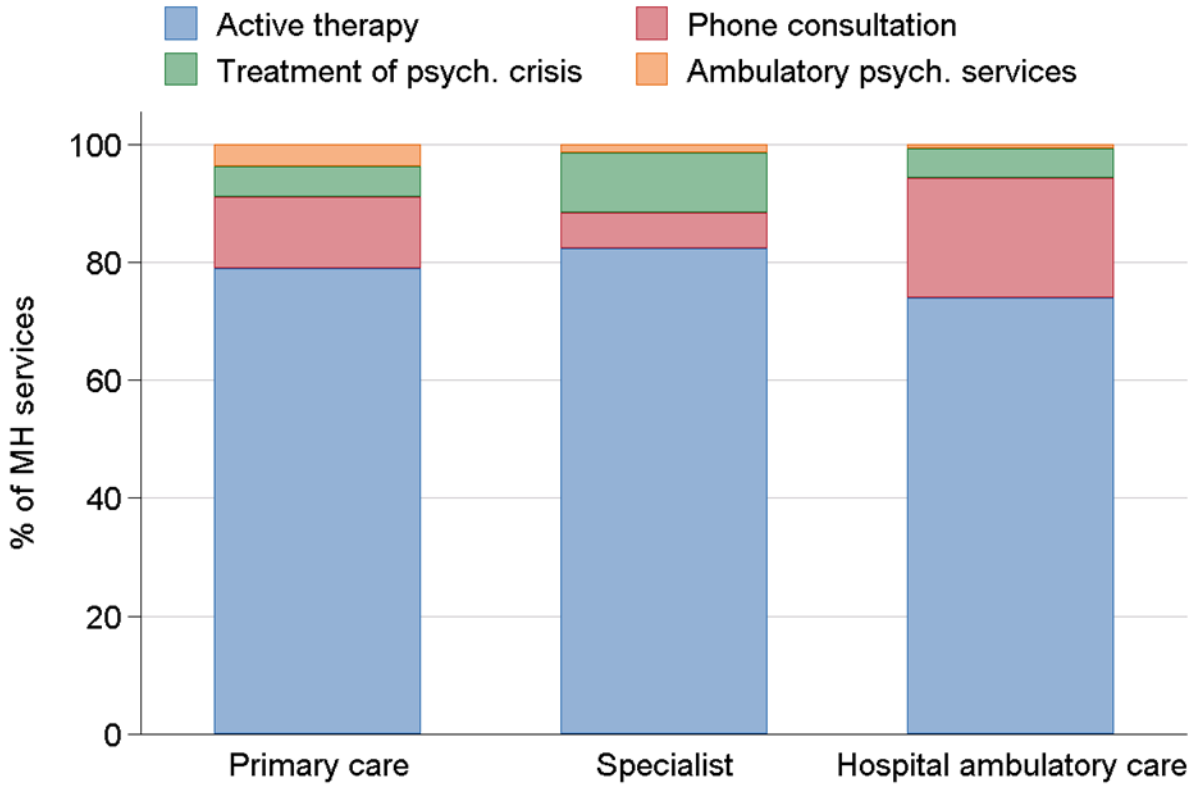
Characteristic	MH Users N=6,511 N (%) or Mean (SD)	Population Non-Users N=111,520 N (%) or Mean (SD)	Total Study N=118, 031 N (%) or Mean (SD)
Sex			
Male	3,020 (46%)	52,513(47%)	55,533 (47%)
Female	3,491 (54%)	59,007 (53%)	62,498 (53%)
Age Group			
19-65	2,670 (41%)	16,148 (15 %)	18,818 (16%)
66-75	1,012 (16 %)	17,293 (16%)	18,305 (16%)
76-85	1,524 (23%)	35,457 (32 %)	36,981 (31%)
85+	1,305 (20%)	42,622 (38%)	43,927 (37%)
Urbanicity			
Urban	2,424 (37%)	35,235 (32%)	37,659 (32%)
Peri-urban	2,780 (43%)	46,937 (42%)	49,717 (42%)
Rural	1,307 (20%)	29,348 (26%)	30,655 (26%)
Language Region			
German	4,211 (65%)	78,735 (71%)	82,946 (70%)
French	1,897 (29 %)	26,961 (24%)	28,858 (24%)
Italian	403 (6%)	5,824 (5%)	6,227 (5%)
Costs			
MH care costs in last year	899 (1,357)	---	-
Non-MH healthcare costs in last year	4,223 (5,684)	3,118 (4,574)	3,187 (4,659)

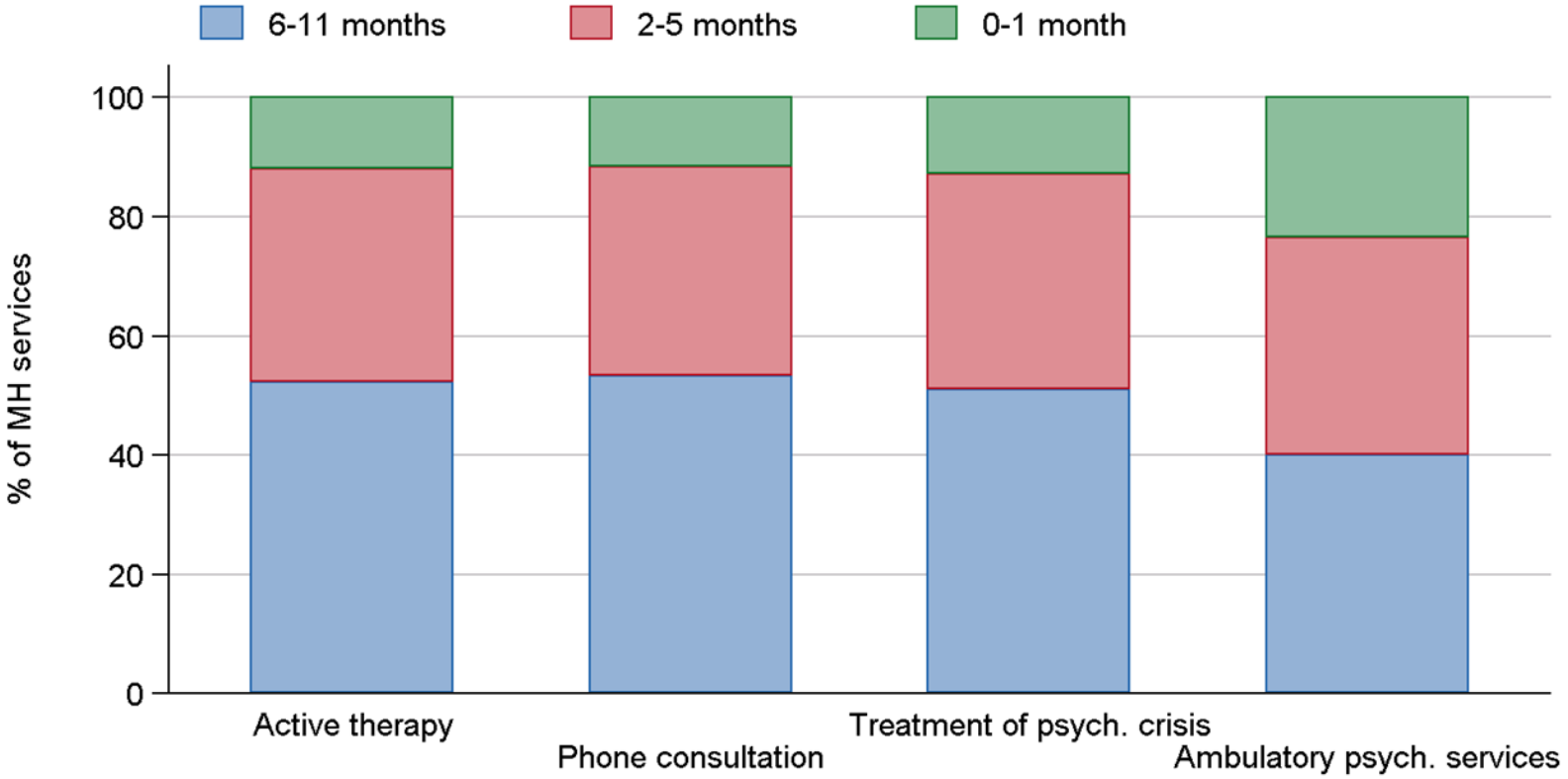
Results: Provider by MHS use



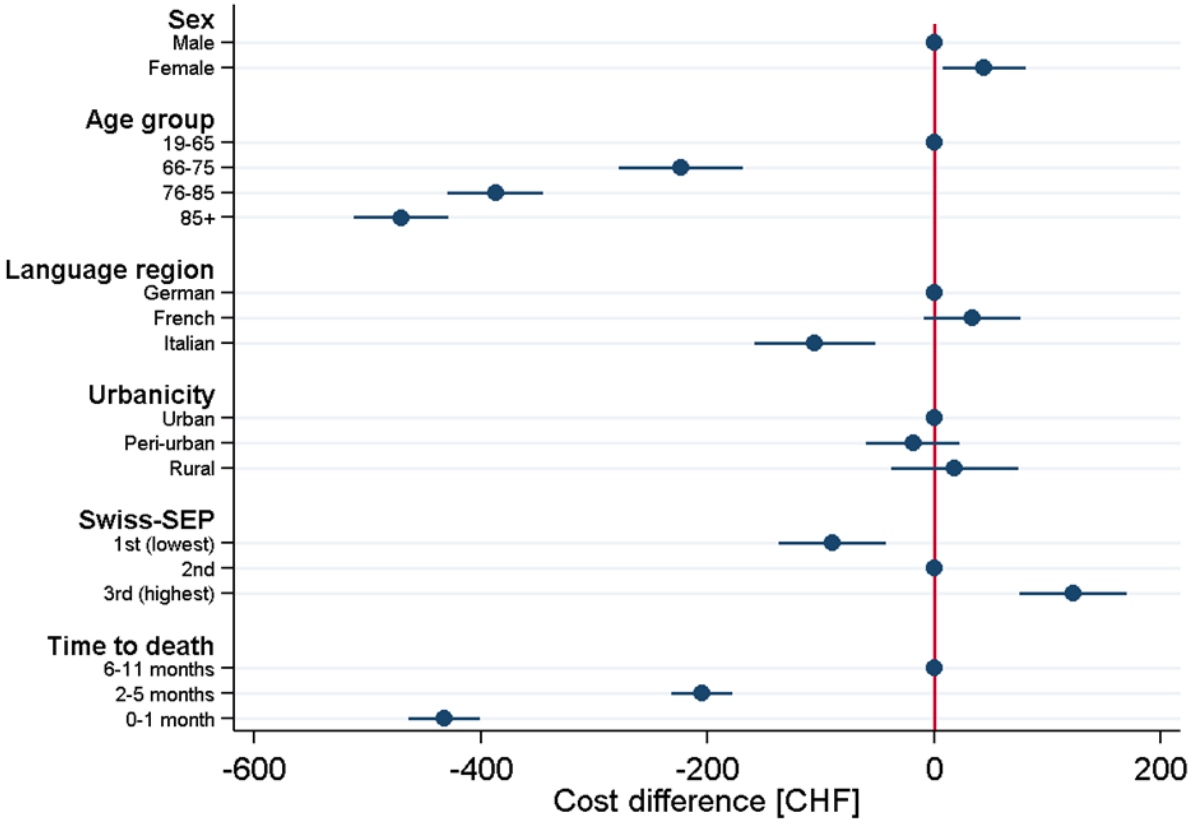
Results: MHS by provider



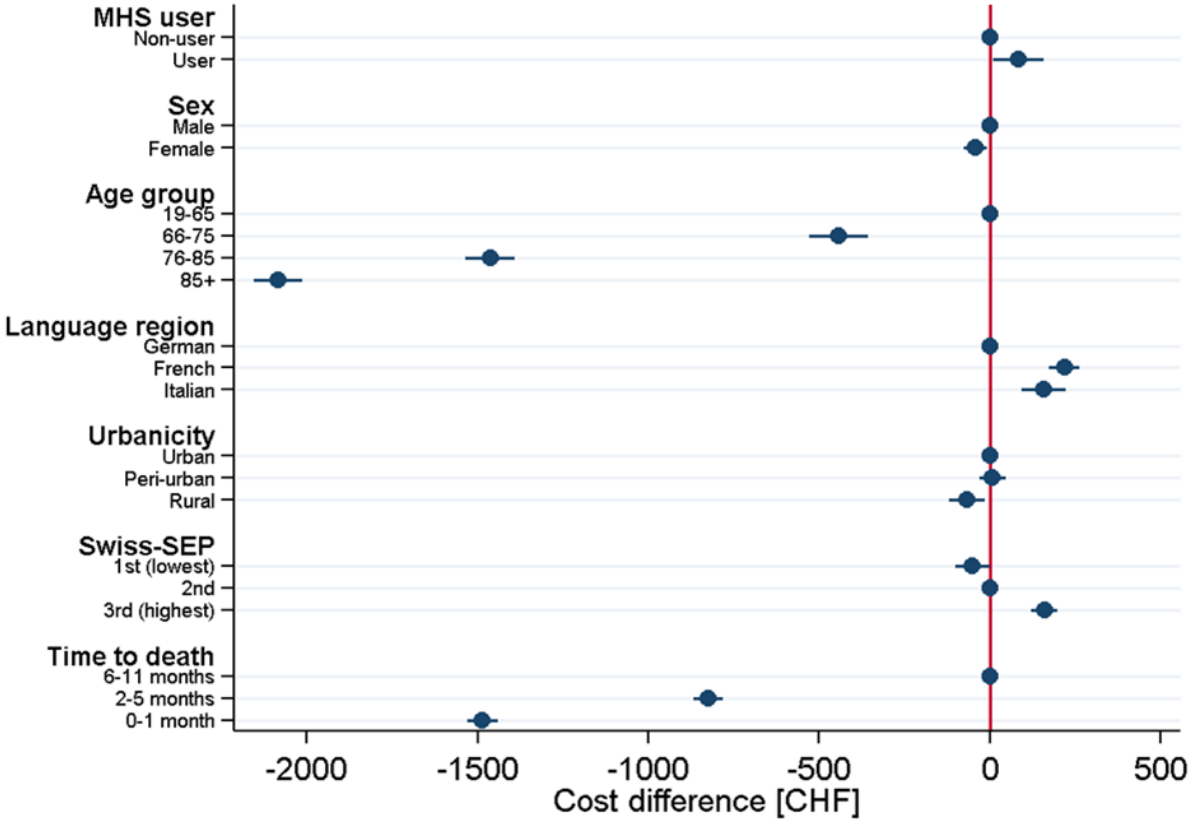
Results: MHS use by type of care according to time to death



Results: Differences in MHS costs among users



Results: Differences in non- MHS costs among users and non-users



Conclusions

- Socio-demographic factors such as age, language region and Swiss SEP contribute to the variation in MHS at the EOL in Switzerland.

- MHS users were younger and had higher overall health care costs.

- MHS use appears to decrease during the final month of life.

- Possible next steps:
  - Include cause of death
  - Include in-patient mental health care

References

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