

**Bern, 1st March 2017**

# Swiss Health Atlas

## Variations in Hospitalisation Rates

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## Question

Where do we observe over- and undersupply?

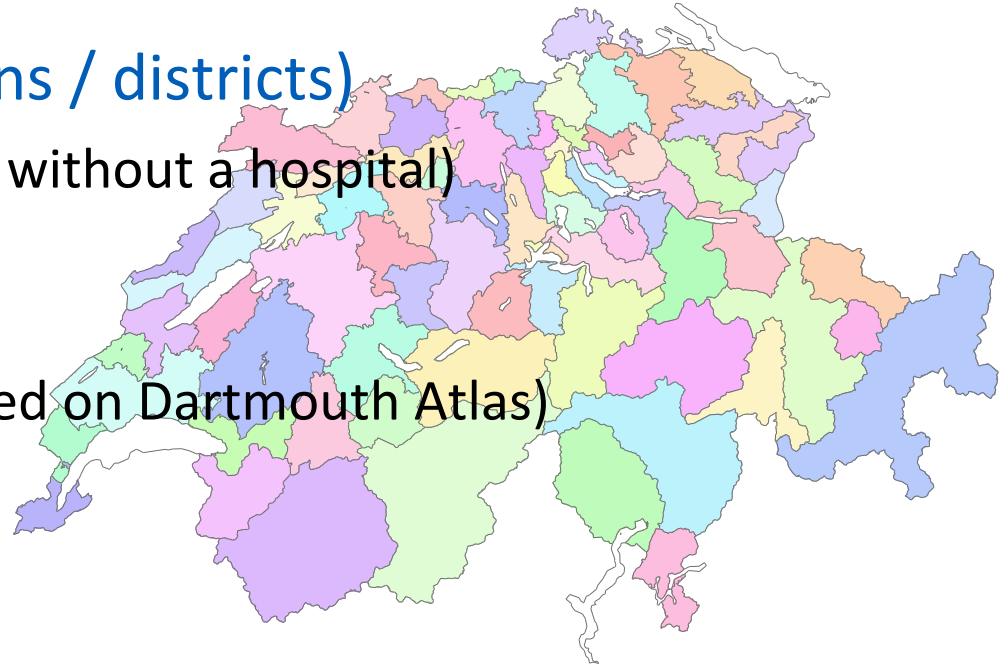
## Aim

Systematic presentation of unwarranted practice variation in a web-based health care atlas

## Approach

Analysing hospitalisation rates within Hospital Service Areas (HSA)

- **Administrative regions (cantons / districts)**
  - Independent of supply (e.g. areas without a hospital)
- **Hospital Service Areas (HSA)**
  - Method: Small Area Analysis (based on Dartmouth Atlas)
  - At least one hospital per area
  - Utilisation depends on supply
- **Geographic (unwarranted) variation refers to differences that**
  - «... cannot be explained with the disease or preferences of patients»
  - «... cannot be explained by the performance of the health care system»(David Goodman)





## Nervensystem und Sinnesorgane

Dermatologie

Hals-Nasen-Ohren

Neurochirurgie

Neurologie

Ophthalmologie

## Innere Organe

Endokrinologie

Gastroenterologie

**Viszeralchirurgie**

Hämatologie

Gefässe

Herz

Nephrologie

Urologie

Pneumologie

Thoraxchirurgie

Transplantationen

## Bewegungsapparat

**Chirurgie des  
Bewegungsapparates**

Rheumatologie

## Querschnittsbereiche

Kindermedizin

Kinderchirurgie

Akutgeriatrie

Palliativmedizin

## Gynäkologie und Geburtshilfe

Gynäkologie

**Geburtshilfe**

Neugeborene

## Übrige

Radio-Onkologie

Schwere Verletzungen

definitions: CHOP-Codes (81.51)

number of regions (HSA): 61

number of interventions: 18'746

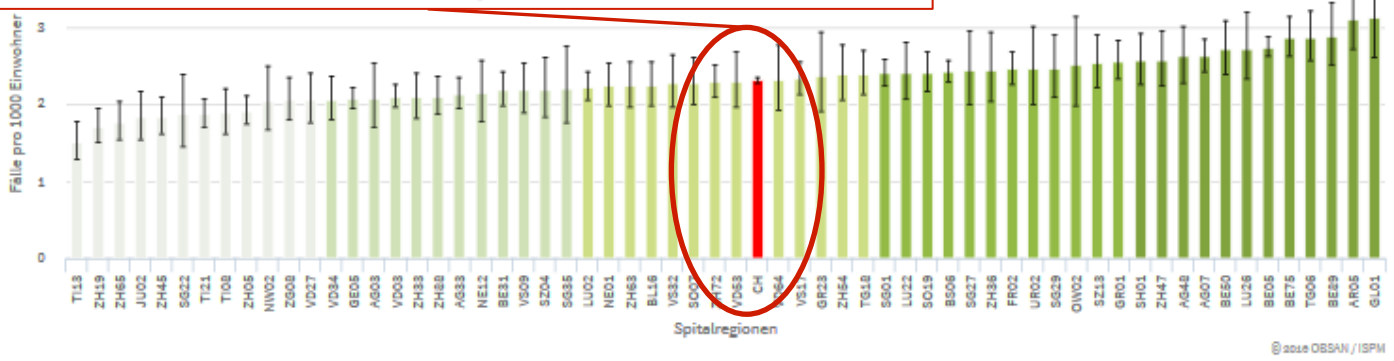
further statistical information

rate per 1000 residents (CH): 2.3  
(Min: 1.5; Max: 3.1)

Spitalregionen Kantone  
2013 2014

2.39 - 2.55  
2.55 - 3.11

Zähler	Gesamtbevölkerung der Schweiz
Zähler	alle Hospitalisierungen mit CHOP 81.51
Anzahl Regionen	61
Anzahl Interventionen	18746
Standardisierte Rate CHOP 81.51	2.3
Minimum	1.51
Maximum	3.11
Extremalquotient	2.06
Gesamtvariation	2.03
System. Komponente der Variation (SCV)	1.52
SCV an der Intervention	75%



Total hip arthroplasty (THA)

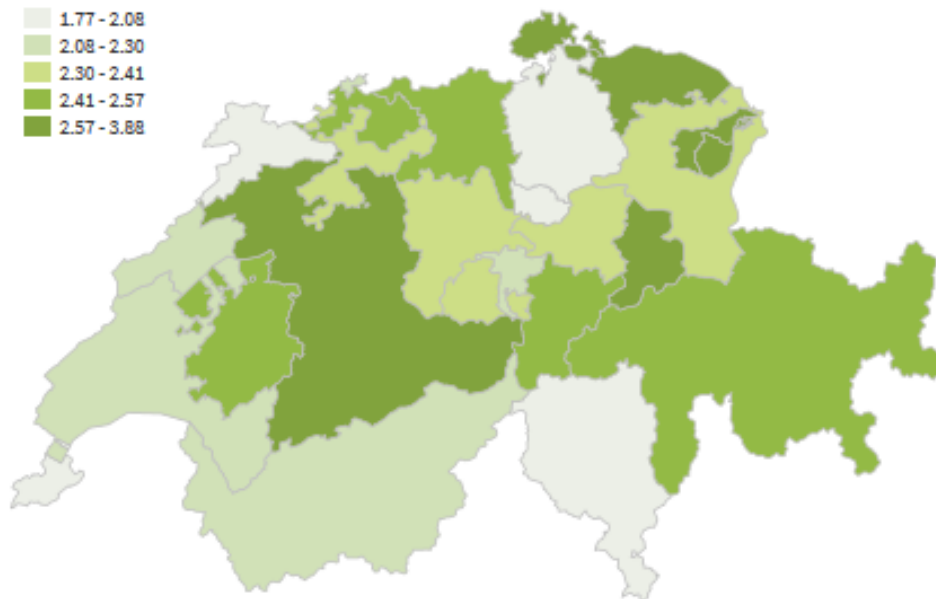
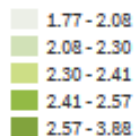
## Totalendoprothese des Hüftgelenks

### Rate

Spitalregionen | **Kantone**

2013 | **2014**

Fälle pro 1000 Einwohner



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### Kennzahlen

Nenner	Gesamtbevölkerung der Schweiz
Zähler	alle Hospitalisierungen mit CHOP 81.51
Anzahl Regionen	26
Anzahl Interventionen	18746
Standardisierte Rate CH	2.28
Minimum	1.77
Maximum	3.88
Extremalquotient	2.19
Gesamtvariation	2.5
System. Komponente der Variation (SCV)	2.05
Anteil der SCV an der Gesamtvariation	82%

- **Technical work completed:**
  - Definition of regions (HSA base model)
  - Database of health indicators
  - Website
- The **most common interventions** in the HSA base model have been analysed and implemented on the website
- **Unanticipated difficulties:**
  - Definition of interventions in collaboration with clinicians more complex than expected
  - Not going live without review by clinical experts

- Maps show relations between geographic regions
- Large variation may indicate potential over- and undersupply
- Variation offers potential for improvements
- Similar atlas exist in other European countries (DE, ES, NL,...)



- Extensive and systematic analysis of interventions and services provided, presented in the form of an atlas
- Adaptation of (number and size of) HSA depending on intervention
- Include ambulatory services in atlas
- Further analyses such as accessibility in relation with services provided by hospitals
- Ensure longevity of project (including long-term funding)



[www.versorgungsatlas.ch](http://www.versorgungsatlas.ch)

Going live: 20.06.2017