WENNBERG INTERNATIONAL COLLABORATIVE SPRING POLICY MEETING 2018

Variation in the role of general practitioners in trauma care

Quelle: SUVA

Marc Höglinger*, Fabio Knöfler*, Klaus Eichler*, Stefan Scholz**

*Zurich University of Applied Sciences, Winterthur Institute of Health Economics
**SUVA – Swiss National Accident Insurance Fund

WIC WENNBERG INTERNATIONAL COLLABORATIVE

74 NRP Smarter Health Care National Research Programme

SSPH+ SWISS SCHOOL OF PUBLIC HEALTH

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Essential role of general practitioners (GPs) in Switzerland

- **General practitioners (GPs)** include physicians in private practice certified as general practitioners, specialists in general internal medicine, pediatricians and physicians without a specialty qualification.
- GPs play an **essential role in the Swiss health system, and also in the care of trauma patients**. Approx. 15% of all GP consultations are related to accidents (Tschudi & Rosemann, 2010).
- **55% of patients first turn to a GP** after an accident, and in 42% of the accidents the GP is the exclusive care provider (own calculations).
- **GPs provide emergency services at lower costs** than emergency departments (EDs) (Chmiel et al., 2011; Eichler et al., 2014; Eichler et al., 2010; Fritschi & Ballmer, 2014; Hugentobler, 2006).

Challenges in primary care provision

- There is **criticism** regarding the **low priority of primary care in medical education and training**, on the **relatively low earnings for GPs** and on their **undervalued status** in general (Djalali et al. 2015; Tschudi & Rosemann 2010).
- **Low and decreasing number of GPs in rural areas**, a problem that will accentuate in the near future due to a lack of young GPs that could replace an ageing GP population (Mercay 2015).
- **GPs perform less and less trauma-related care** – with large regional variations, however (Cohidon, Cornuz, & Senn, 2015).
- **GPs are no longer required to cover accident surgery in their medical education**.
- **Patients increasingly search assistance directly at emergency departments (EDs)** – even if a GP could provide suitable care (Chmiel et al. 2011; Eichler et al. 2010, Eichler et al. 2013; Flaig et al. 2002; Meer et al. 2003)

Research questions

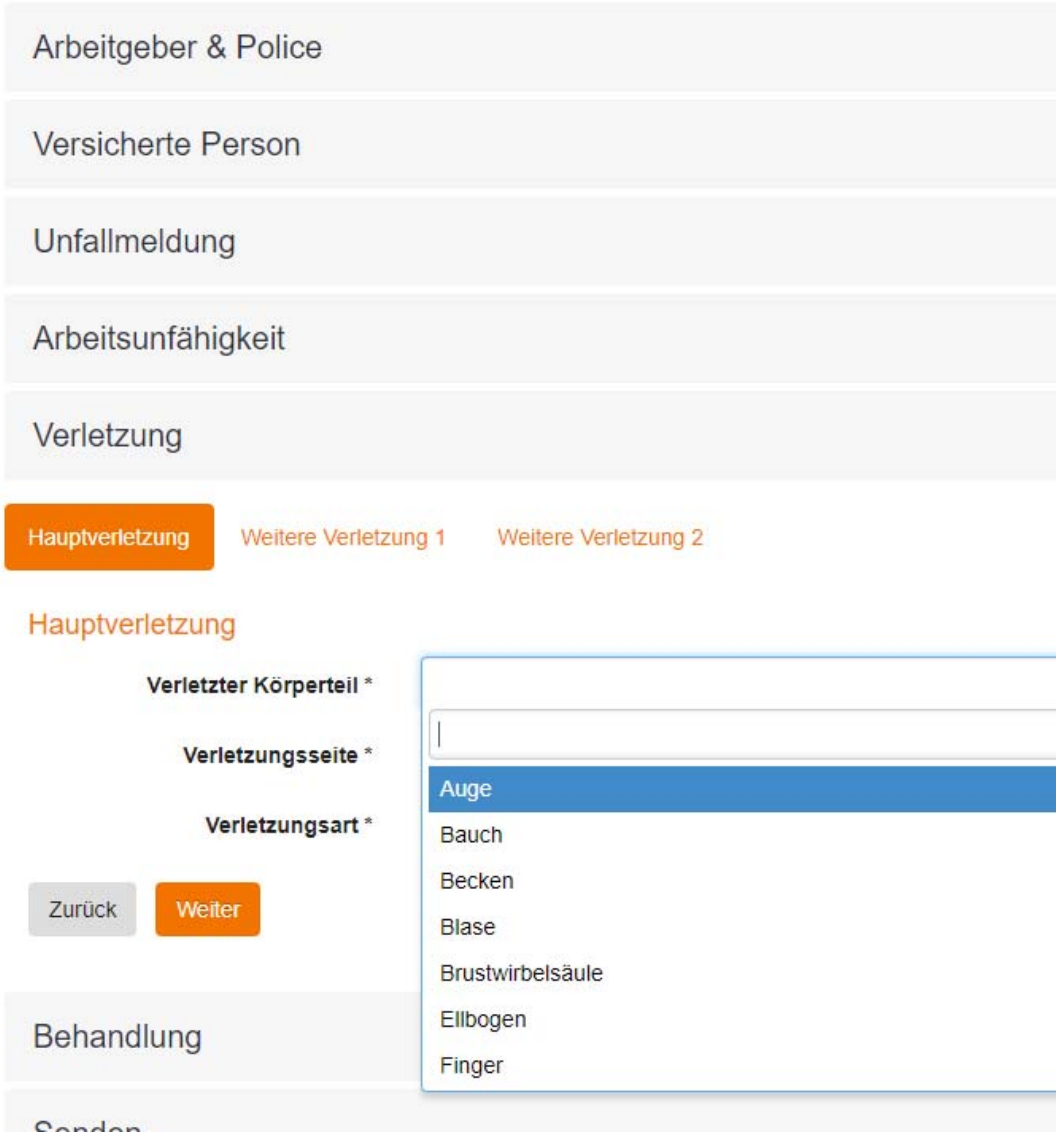
- **What role do GPs play in trauma care?**
- What type of injuries are GPs mainly confronted with?
- Are there regional variations?
- Is there a change over time?
- What factors account for differences in the use of trauma care providers?

- Our research project is **financed by the SUVA research fund** and carried out in close collaboration with the **SGTV**, the Swiss Association for Traumatology and Insurance Medicine.
- Results should inform the **design of continuing training programs for GPs**, but also the **development of new payment schemes** that honor GPs efforts in trauma care, possibly with a focus on rural regions.

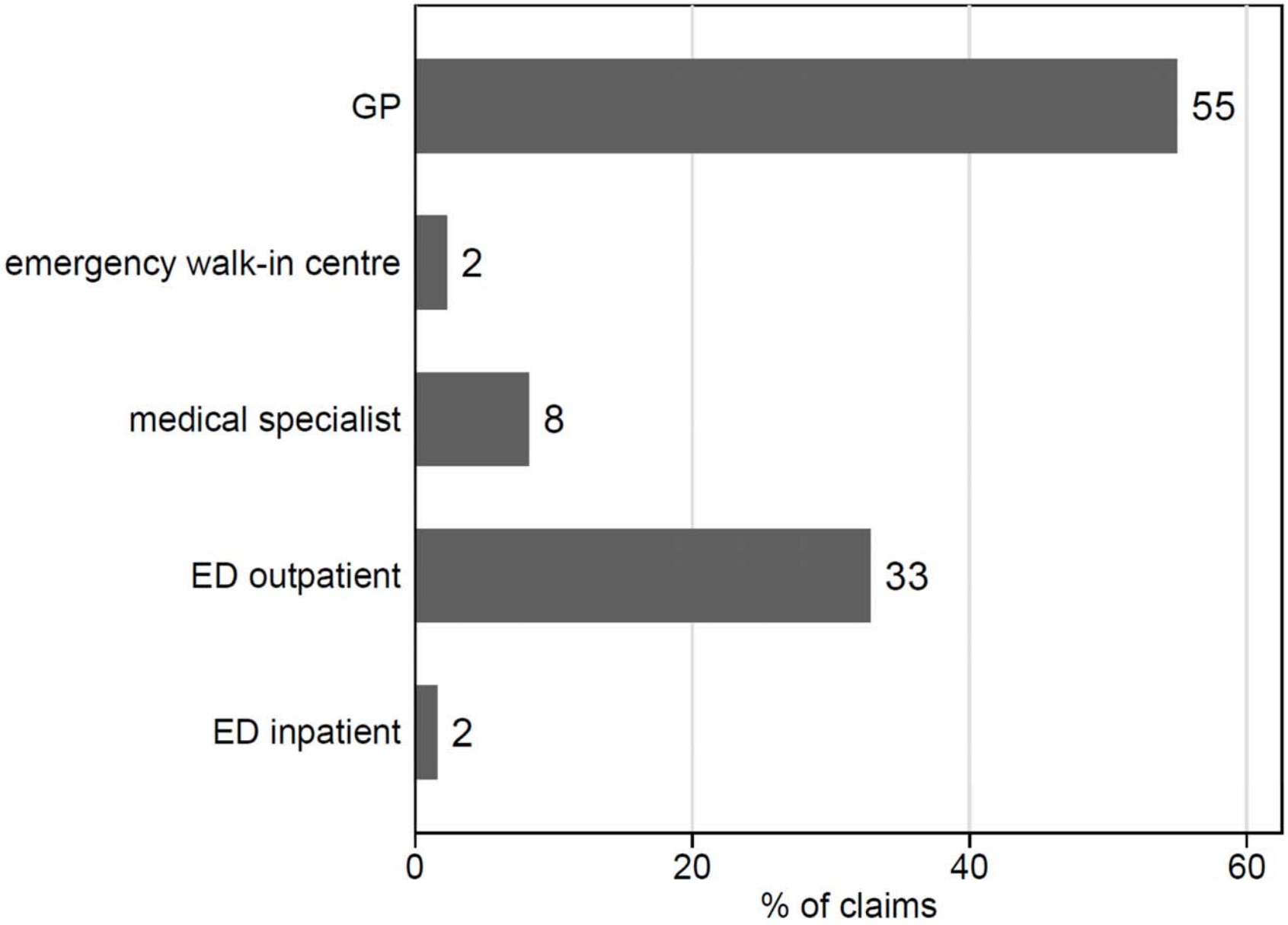
Design and data

- Retrospective analysis of **N = 2’248’449 insurance claims** data from the Swiss National Accident Insurance Fund (SUVA) from 2008 to 2014
- Outcomes
  - timing and sequencing of care provision by different providers (i.e. GP, specialists, hospital)
  - GP role:
    - GP first point of care
    - GP exclusive care provider
  - direct medical costs & work incapacity
- Explanatory variables
  - basic socio-demographics of patients
  - place of residence of patients
  - type and location of injury
  - time of accident

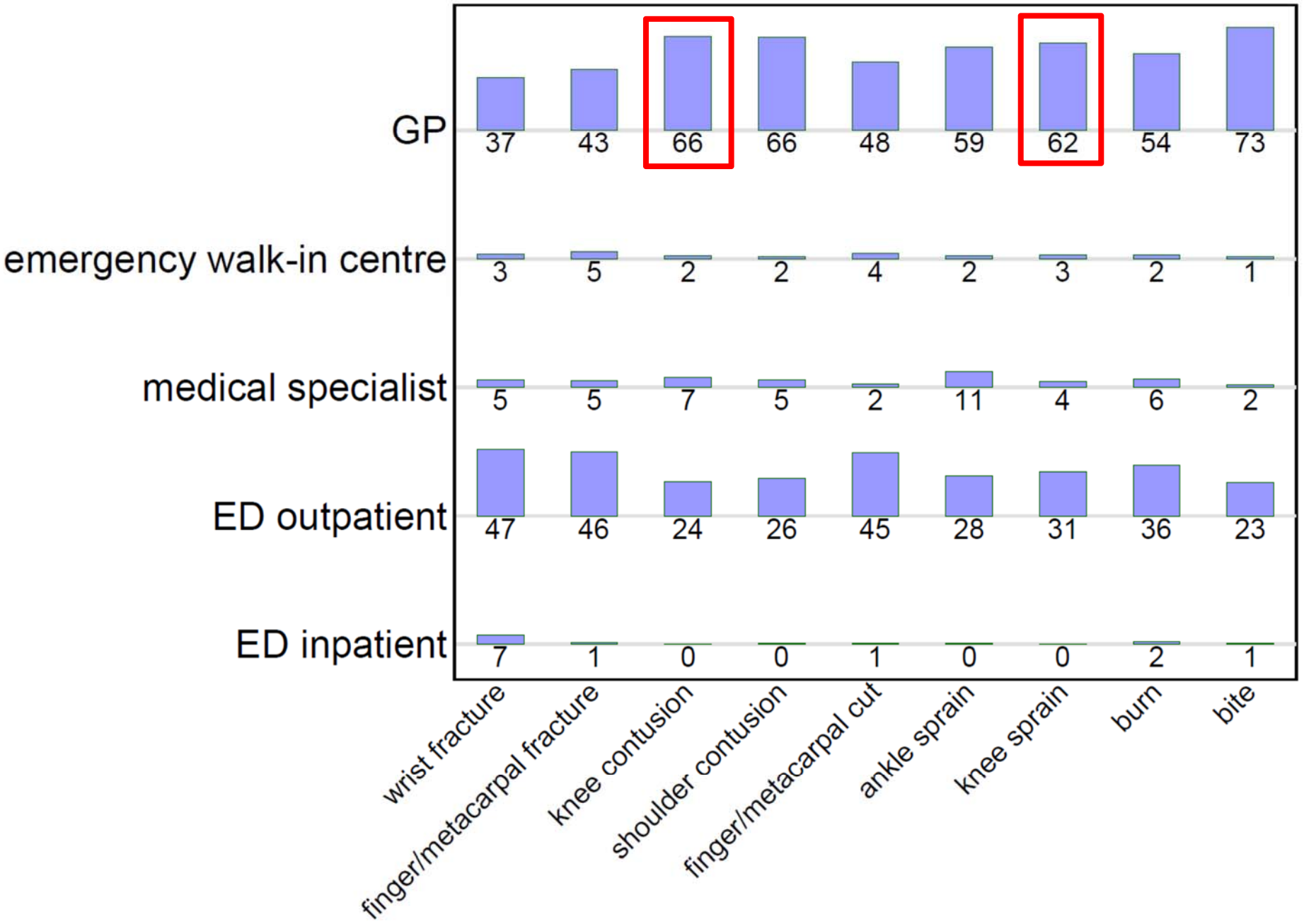
- Data source: **accident report form**



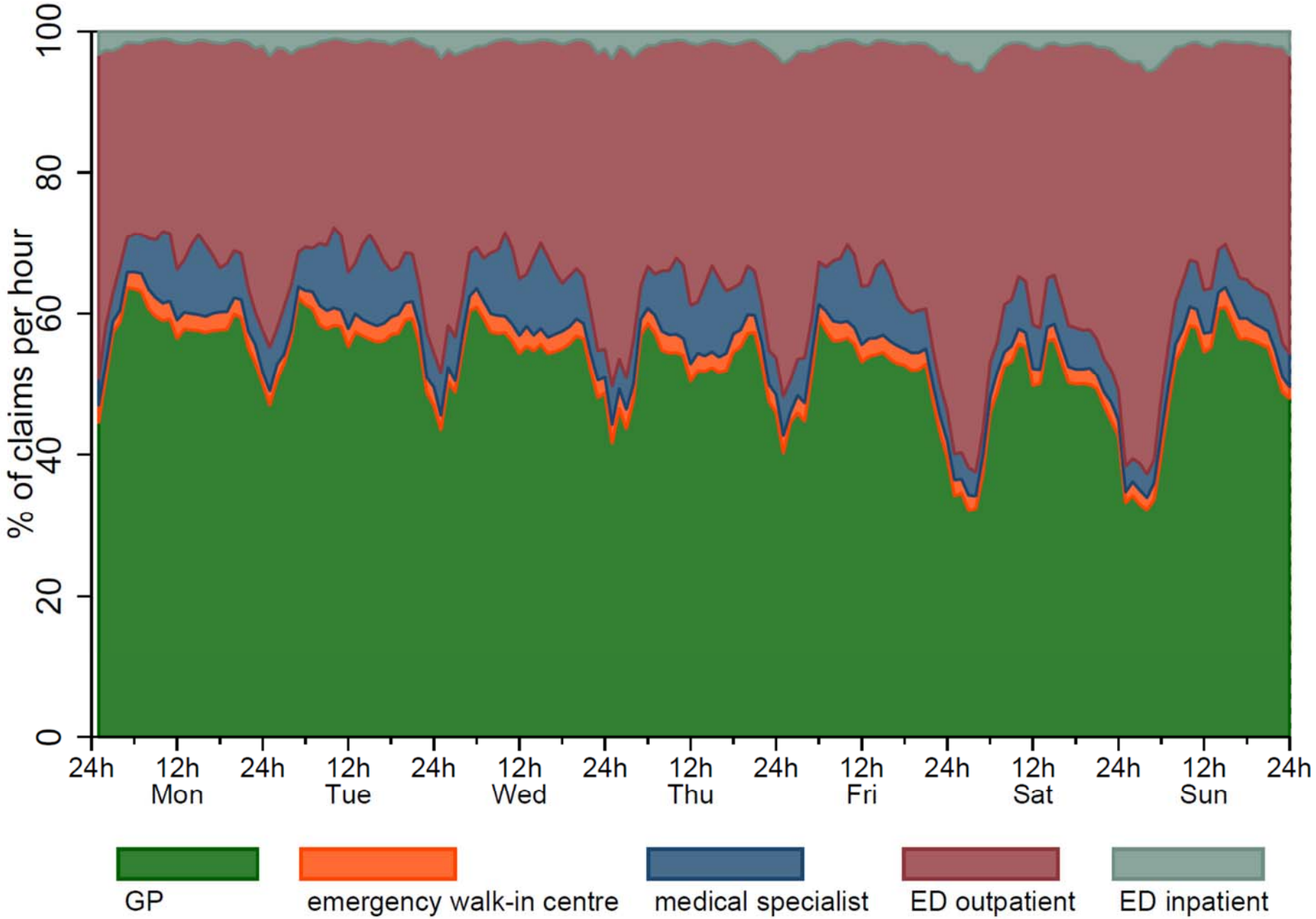
Results: First point of care after accident



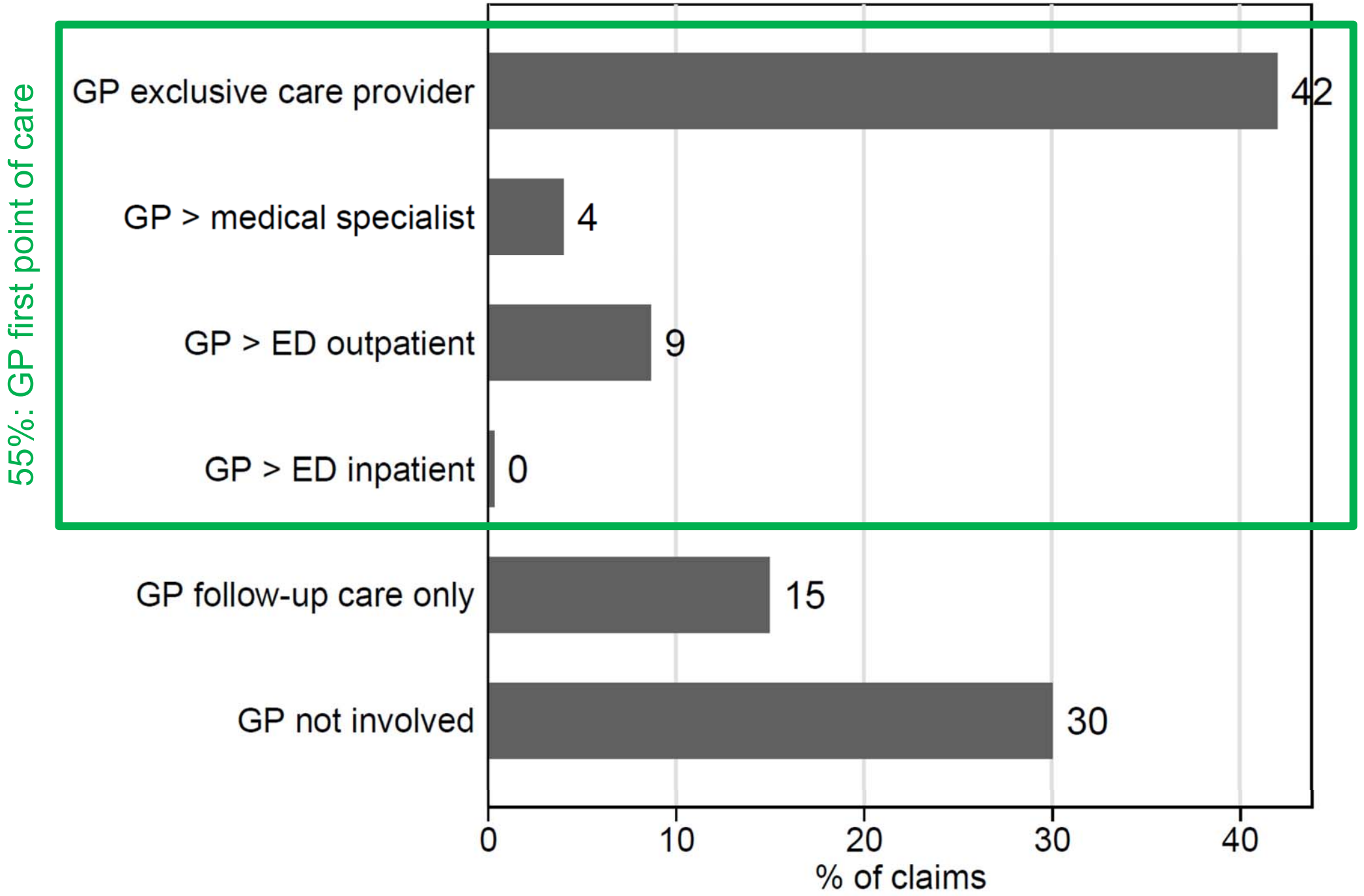
First point of care by selected injuries



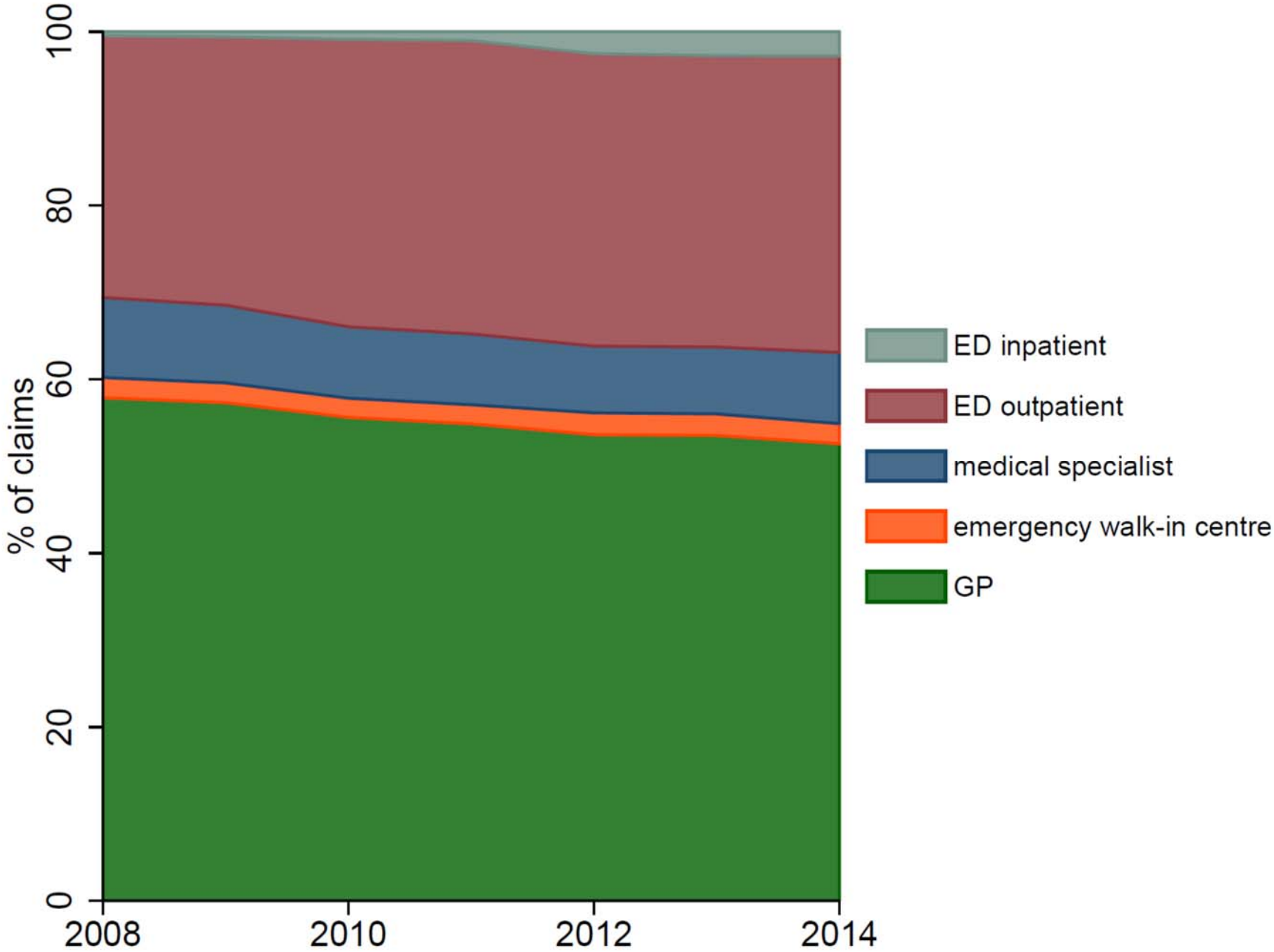
First point of care by time of accident



Role of GPs in trauma care

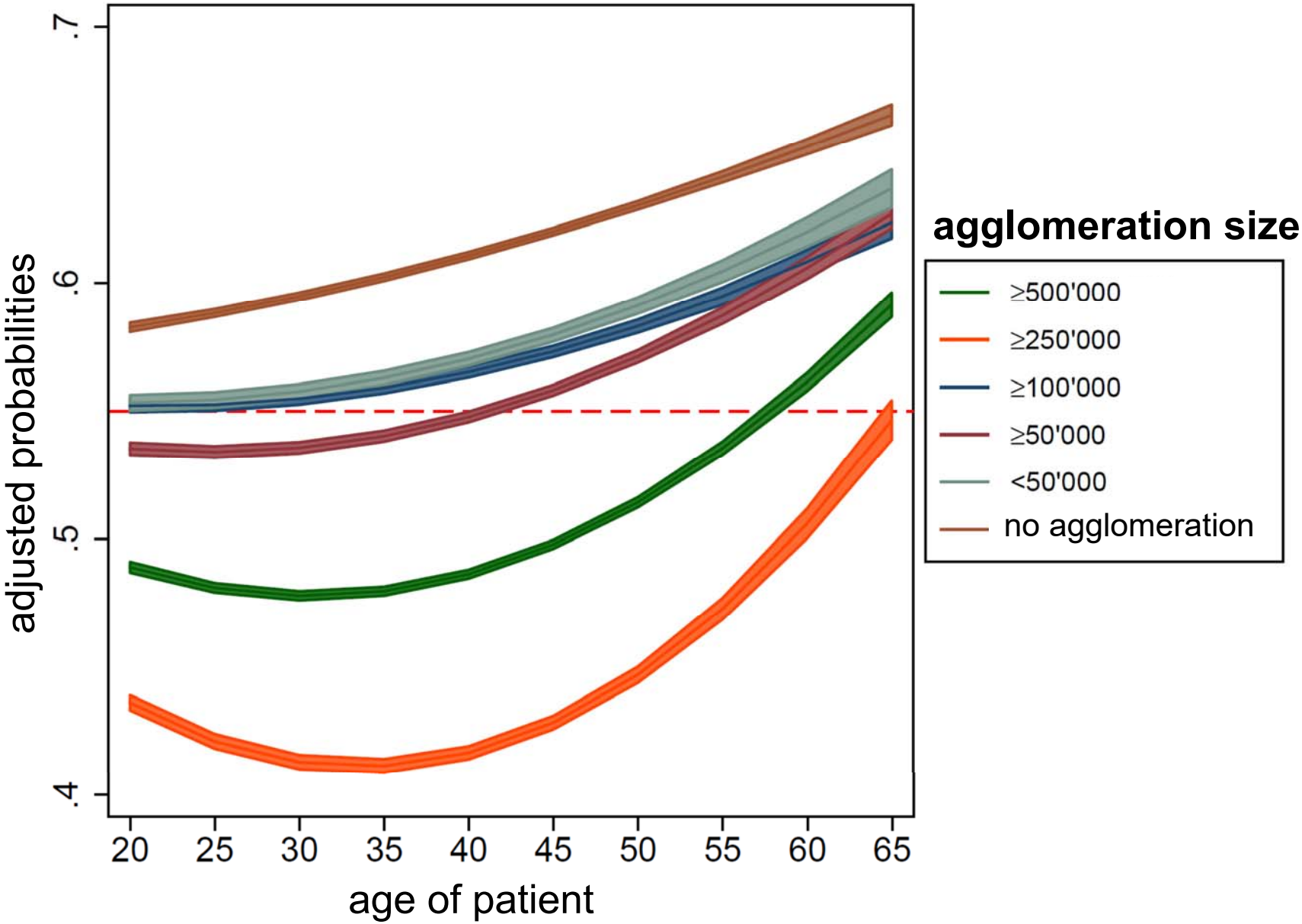


First point of care 2008-2014: decreasing GP importance



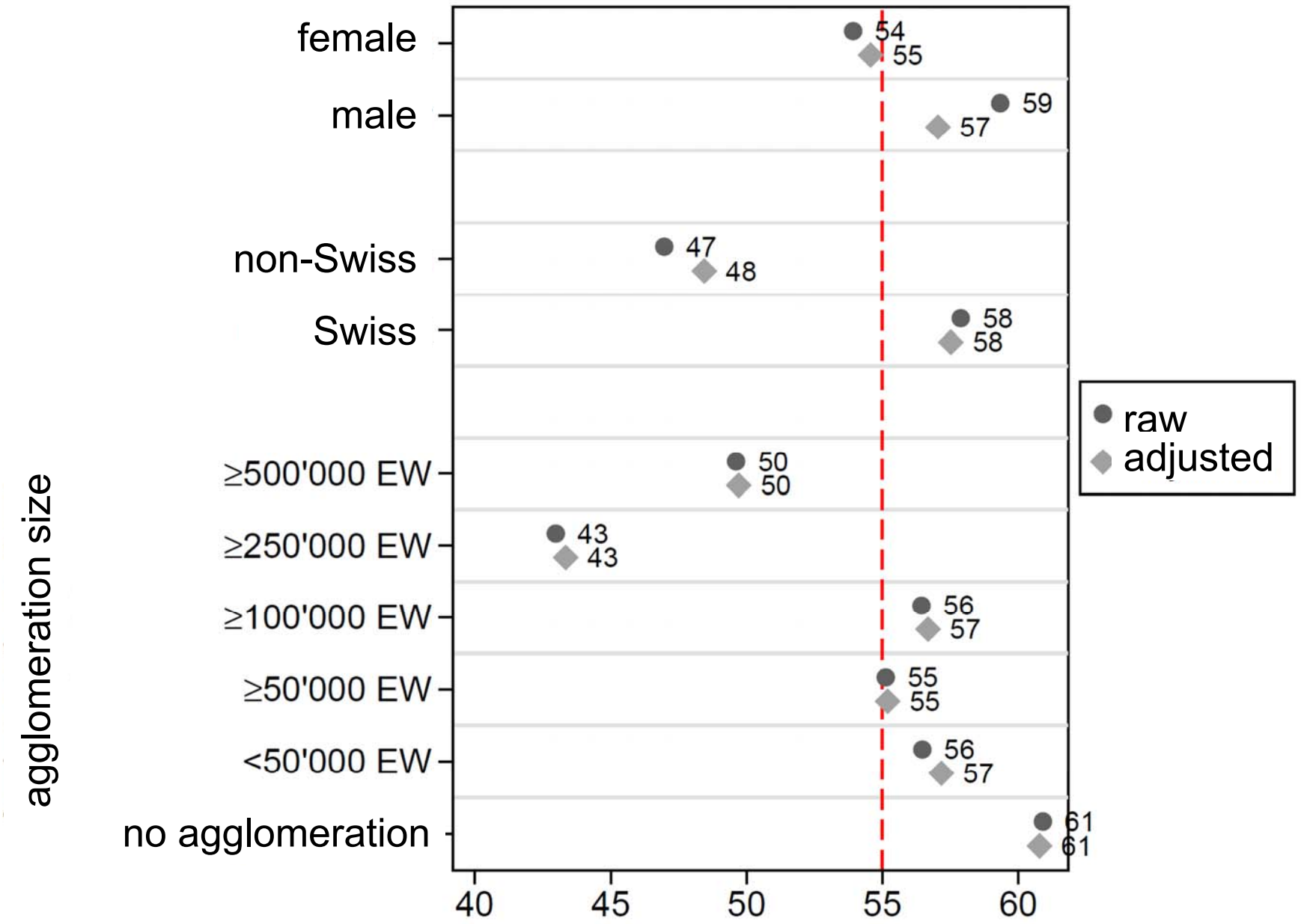
Regional variations: Probability of **GP as first point of care** by **agglomeration size** and **age of patient**

Adjusted probabilities controlling for various injury and patient characteristics

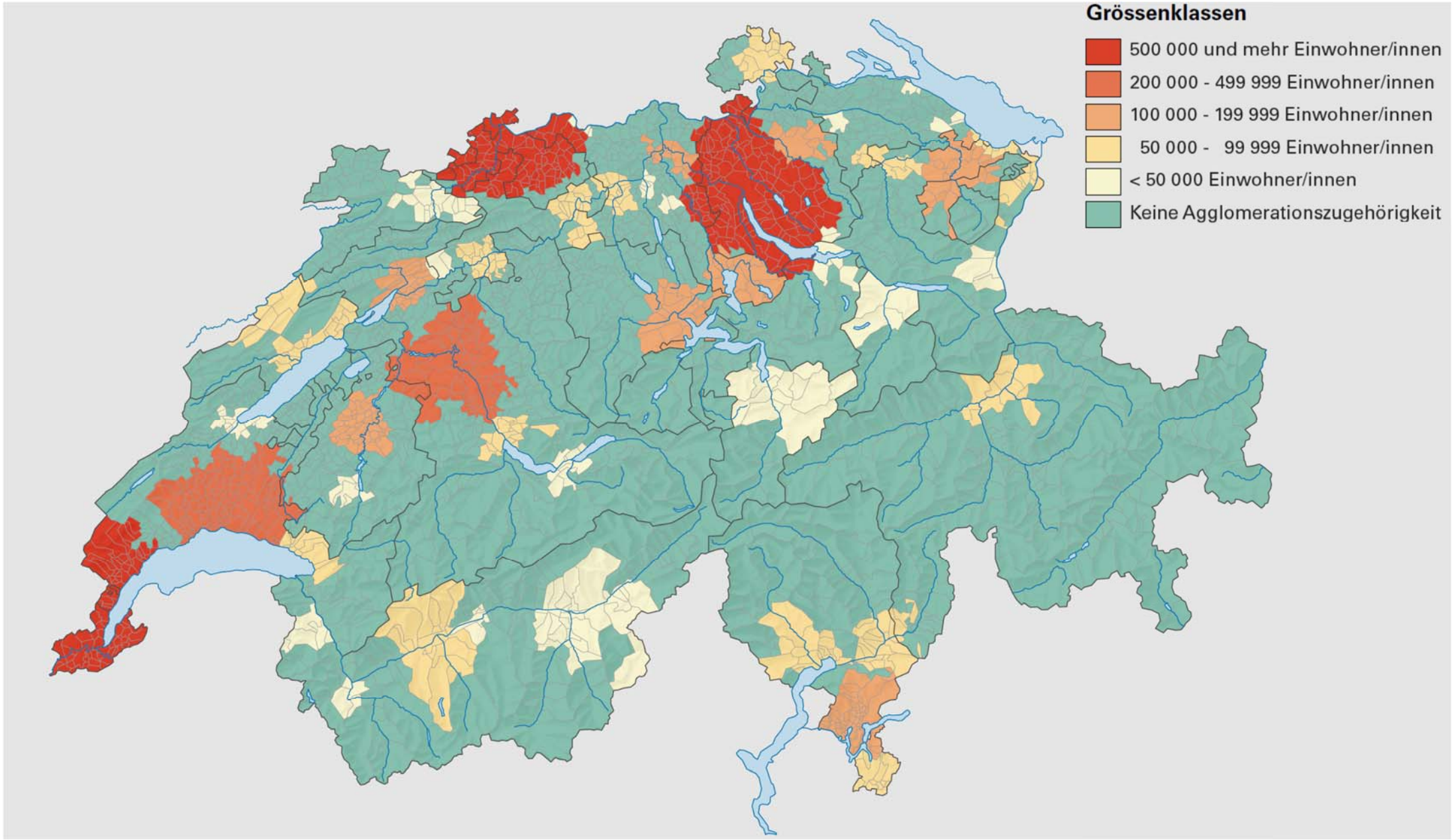


Probability of GP as first point of care by patient characteristics

Raw and adjusted estimates controlling for various injury and patient characteristics

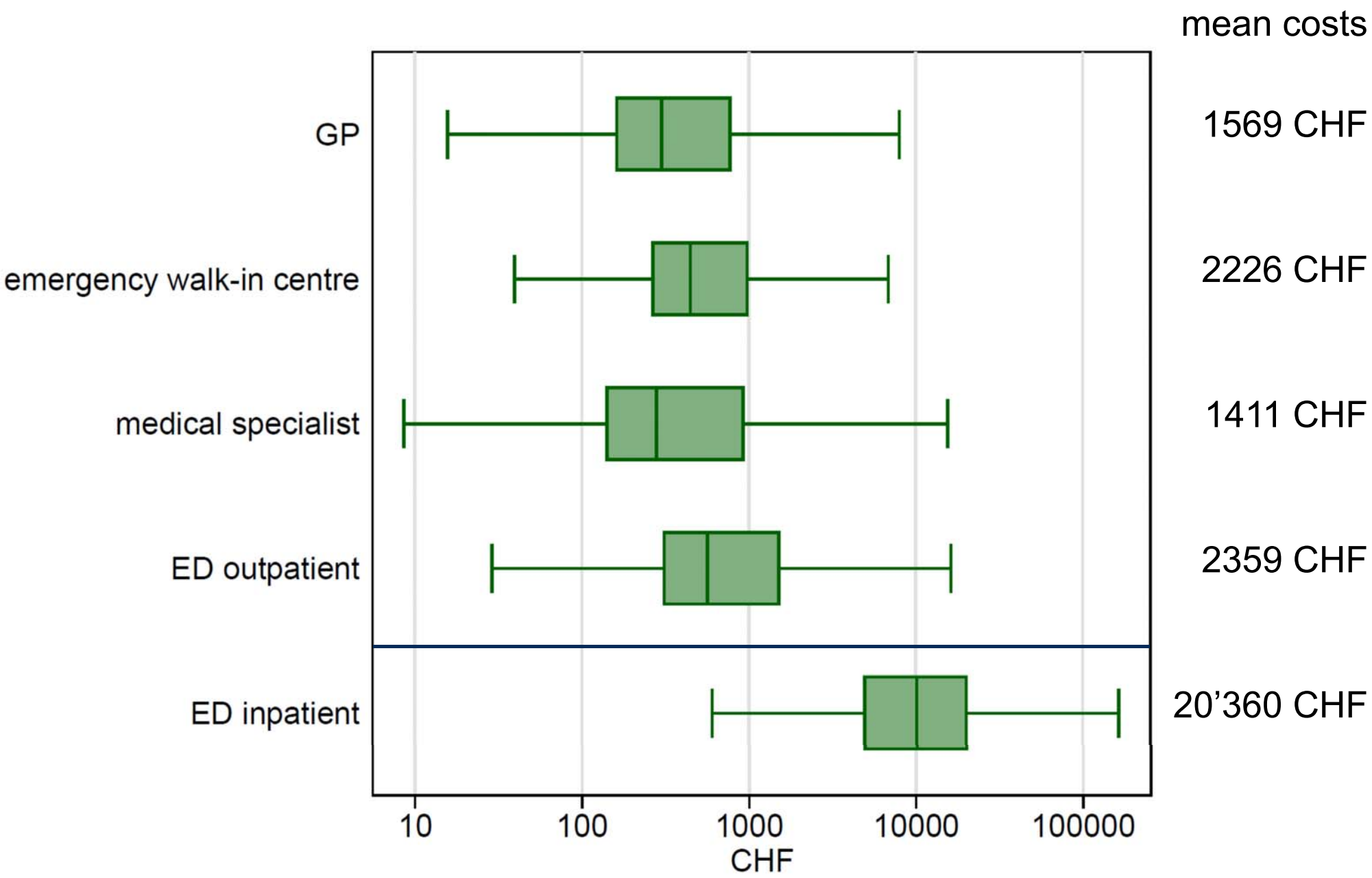


Regional variations: Agglomeration size (SFO classification)



Source: SFO

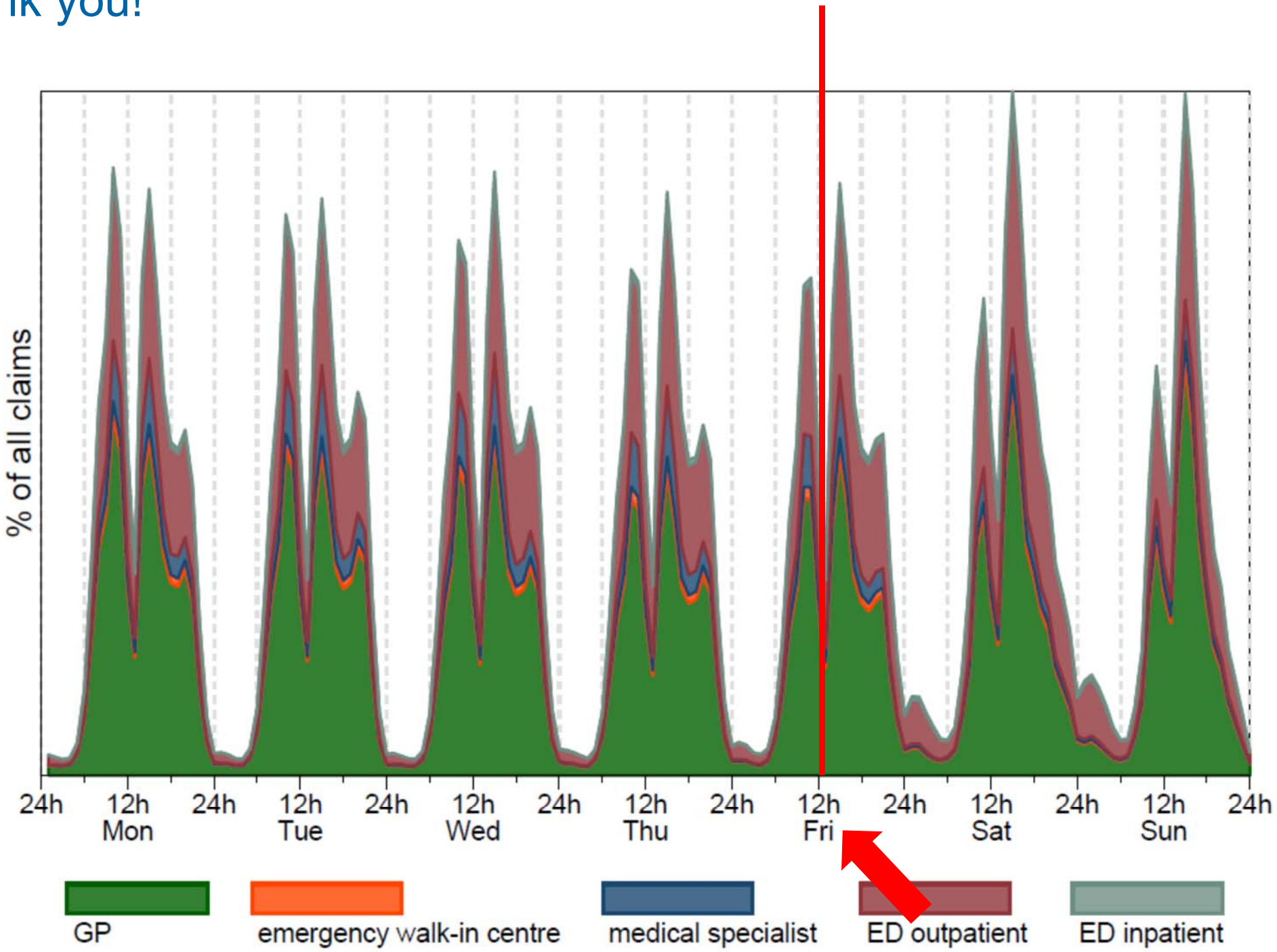
Direct medical costs by first point of care (unadjusted, log scale)



Conclusions

- **Important role of GPs in trauma care**: first point of care in 55% of accidents, exclusive care provider in 42%
- Considerable **variation in the role of GPs by patients' place of residence** and other patient characteristics.
- Slightly **decreasing rate of patients with a GP as first point of care** over time
- **Differences in direct medical costs** between different care trajectories are hard to interpret – because injuries are hardly comparable, even after adjustments.
- Identifying **causal effects on costs** is a big challenge with this type of data/design.
- Nice (big) data, but with **limitations**:
  - injury details based on self-administered accident report form, limited validity
  - care trajectories are not fully reconstructable
  - limited information on patient characteristics
  - results for SUVA insurees, not easily generalizable to general population

Thank you!


% of all claims
24h
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Tue
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Wed
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Thu
24h
12h
Fri
24h
12h
Sat
24h
12h
Sun
24h
GP
emergency walk-in centre
medical specialist
ED outpatient
ED inpatient

Chmiel, C., C. A. Huber, T. Rosemann, M. Zoller, K. Eichler, P. Sidler and O. Senn. 2011. "Walk-Ins Seeking Treatment at an Emergency Department or General Practitioner out-of-Hours Service: A Cross-Sectional Comparison." *BMC Health Serv Res 11:94. doi: 10.1186/1472-6963-11-94.*

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Hugentobler, Walter. 2006. "Kostenvergleich Der Ambulanten Notfallversorgung in Der Hausärztlichen Praxis Mit Den Notfallstationen Der Spitäler." *PrimaryCare 6(32-33):586-9.*

Flaig, C, K Zehnder, H Zürcher, P Eichenberger, C Frei, A Gegeckas, C Gschwind, P Ledergerber, A Haefeli and HR Pfister. 2002. "Selbsteinweisungen Ins Spital." *Primary care 10:280-83.*

Meer, Andreas. 2005. "Die Ambulante Notfallversorgung Im Umbruch." *PrimaryCare 5(20):459-63.*

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