

# The use of pediatric health care services in Switzerland: a claims data analysis (preliminary results)

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# Background and Objective

- The Swiss Pediatric Society recommends 15 preventive health screenings for children and adolescents between the ages 0-14 years. The screening schedule is in line with the recommended vaccinations [1,2]. Up until school age, parents or caregivers are responsible for taking their children to the pediatrician or family physician for these health screenings (11 screenings). After the child enters kindergarten, the responsibility of the screening is transferred to the school medical services and the cantons (4 screenings).
- Data on pediatric service use is not systematically collected and, hence, very little is known about the extent to which these preventive screenings are performed.
- Our study aims to assess health care utilization during childhood and identify potential differences between socioeconomic groups in Switzerland.

# Methods

- We used claims data from a large Swiss health insurance company (SWICA).
- Study population: 0-5-year-olds who were insured at this health insurance company between 2012 and 2018.
- We used „TARMED“ tarif positions (TARMED Tarifpositionen) [3] to identify the health screenings in the claims data.
- Descriptive analyses about the frequency of these screenings and logistic regression analyses on the outcome “Screening non-take up” were conducted.

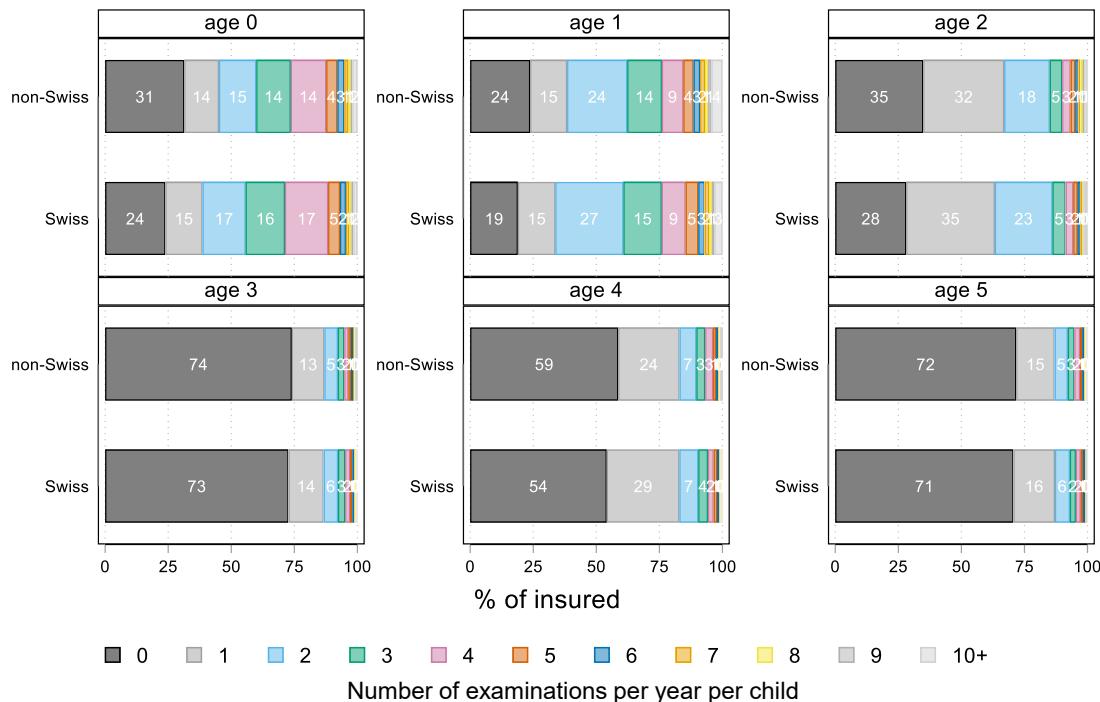
[1] Pädiatrie Schweiz. Checklisten für die Vorsorgeuntersuchungen nach den Empfehlungen der Schweizerischen Gesellschaft für Pädiatrie. Available at: [https://cdn.paediatricschweiz.ch/production/uploads/2020/05/Checklisten\\_2017\\_D\\_Office.pdf](https://cdn.paediatricschweiz.ch/production/uploads/2020/05/Checklisten_2017_D_Office.pdf)

[2] Bundesamt für Gesundheit. Durchimpfung von 2-, 8- und 16-Jährigen in der Schweiz, 2014-2016. Bull BAG 2018; Nr. 24: 13

[3] TARMED Tarif. Available at: [www.tarmed-browser.ch](http://www.tarmed-browser.ch)

# Preliminary results I

**Figure 1.** Total number of yearly examinations (any type, also non-pediatric) among Swiss and non-Swiss children aged 0-5 years.



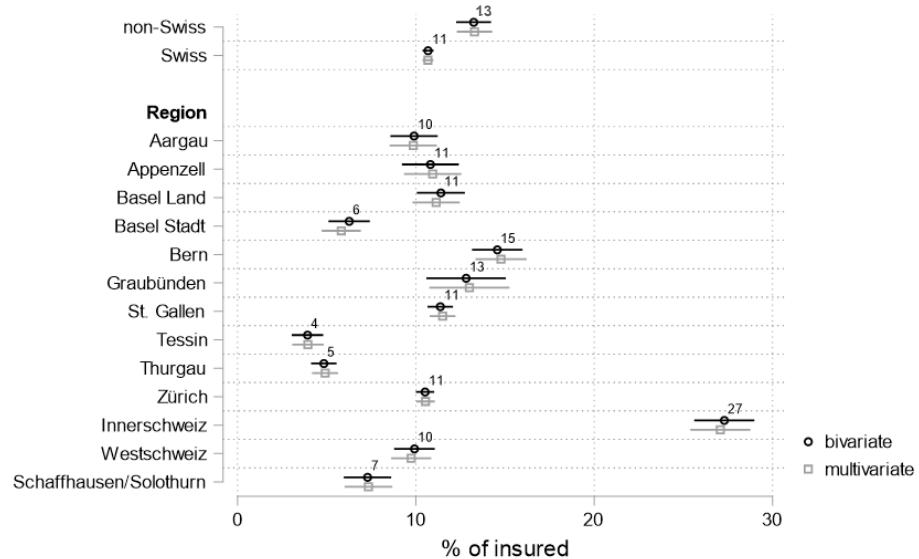
19% to 35% of children in the age-group 0-2 years seem not have had any medical examinations.

Non-Swiss children received 1-7% fewer medical examinations compared to children with Swiss nationality.

Comparing these results with the vaccination rate, the actual number of medical examinations seems to be underestimated with our approach. A possible explanation might be that not all relevant TARMED positions were considered.

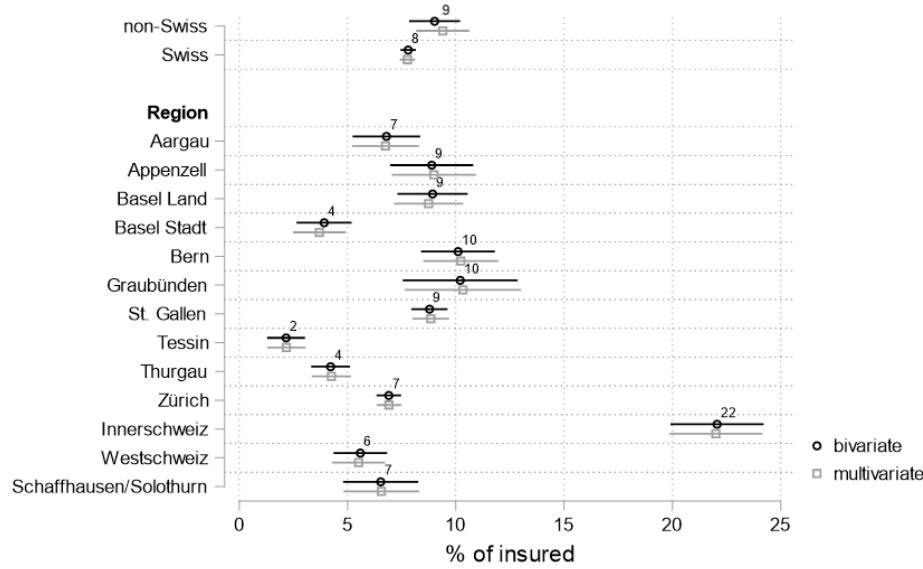
# Preliminary results II

**Figure 2.** Bivariate and multivariate logistic regression analysis on prevalence of examination non-take-up at age 0 and 1 by subgroups N= 43 775



- Nationality differences: Swiss (11%), non-Swiss (13%)
- Regional differences: Central Switzerland (27%), Canton Ticino (4%)

**Figure 3.** Bivariate and multivariate logistic regression analysis on prevalence of examination non-take-up at age 0-3 by subgroups N= 24 276



- Nationality difference: Swiss (8%), non-Swiss (9%)
- Regional differences: Central Switzerland (22%), Canton Ticino (2%)

## Discussion

- Based on the health screenings identified in the claims data (using TARMED positions), there seems to be a large non take-up in all ages 0-5 years.
- A possible explanation is that we did not consider all relevant TARMED positions (will be accounted for in further analyses).
- However, our data shows, that Swiss children have more yearly examinations than non-Swiss children.
- Regional differences exist in the prevalence of non-take-ups, especially between Central Switzerland and the other cantons.

## Conclusion

- There seems to be heterogenous practices in billing, which makes the use of health insurance data challenging when assessing the amount of pediatric medical services used.
- Nevertheless, substantial differences between the subgroups can be observed indicating different health care utilization patterns.
- Further analysis is required in order to understand these differences.