

B1: GESUNDHEIT VON KINDERN UND JUGENDLICHEN B1 : SANTE DES ENFANTS ET DES ADOLESCENTS

HOW MANY CHILDREN REMAIN UNVACCINATED IN SWITZERLAND?

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Objective

To examine the proportion of kids aged 2, 8 and 16 years living in Switzerland who remained unvaccinated for all vaccines.

Subjects and Methods

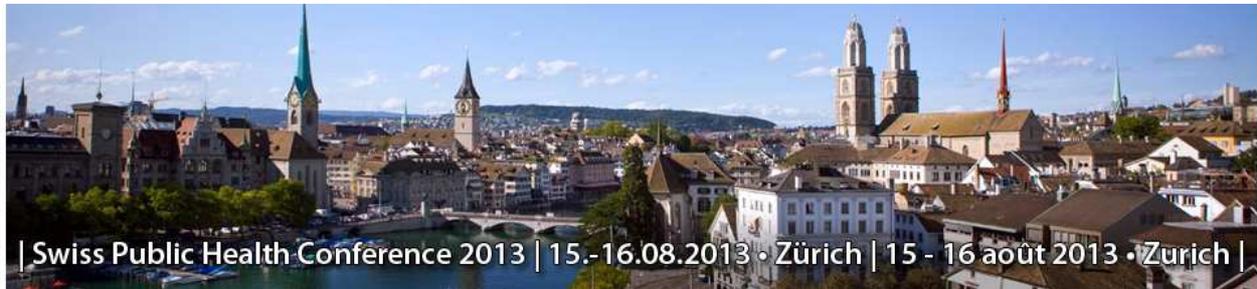
The database from the Swiss National Vaccination Coverage Survey (SNVCS) 2005-10 containing vaccination data for 52,952 participants aged 2 (2Y), 8 (8Y) and 16 years (16Y) was used for the analysis. Children defined as completely unvaccinated did not receive any vaccine dose against diphtheria, tetanus, pertussis, Haemophilus influenza type B, polio, measles, mumps, rubella and hepatitis B. Number of cases, proportions and 95% confidence intervals are weighted estimates, adjusting for population data.

Results

According to the SNVCS database 2005-10, there were 2,861 (1.22%; 95% confidence interval 1.06-1.38%) children in Survey Period 2005-07 and 2,723 (1.14%; 0.98-1.30%) in 2008-10 who remained completely unvaccinated against any type of basic childhood infectious diseases, as recommended by the Federal Office of Public Health (FOPH). The highest proportion of unvaccinated children was found among the 2Y (2.38 %; 2.10-2.67%), followed by the 8Y (0.96%; 0.77-1.14%) and then the 16Y (0.42%; 0.30-0.54%). Data from 2011 also showed minimal changes. Among the cantons, the proportion of number of kids who remained completely unvaccinated was lowest in Canton GE (0.12%; 0.01-0.22%) while it was highest in Canton NW (5.36%; 3.33-7.39%). Comparison of the different regions showed that the region "Central Switzerland" contained the highest proportion (2.55%; 2.19-2.90%) of unvaccinated children whereas the least was observed in the "Lake of Geneva" region (0.25%; 0.13-0.38%).

Conclusions

Although the SNVCS database contains cross-sectional data, we see that there were minimal changes at the national level between the two survey periods, but differences by regions, cantons and age groups were large, indicating a strong influence of local factors affecting vaccine acceptance. Moreover, the absolute number of unvaccinated kids calculated is a minimum estimation, as the SNVCS targets only 3 age groups. To improve vaccine acceptance, a national strategy must be implemented that is tailored to the regional and cantonal differences. This strategy will also be important in order to achieve the goal of the FOPH to eliminate measles by 2015.



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LOST IN TRANSITION. BECOMING AN ADULT WITH A CHRONIC DISEASE: AN EXAMPLE FROM PEDIATRIC ONCOLOGY

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Introduction

Transition to adult care is a crucial step in many chronic diseases of childhood as many patients reach adult age. It is particularly challenging in pediatric oncology where patients are often physically well at the time of transition. However, it is extremely important to ensure adherence to follow-up care. To date no research investigated this process using a chart review. We thus aimed to describe 1) how many survivors were in follow-up, discharged and transferred, overall and by risk for late-effects, 2) where they were transferred to, and 3) characterize survivors who were not transferred.

Methods

We conducted a chart review of childhood cancer survivors registered in the Swiss Childhood Cancer Registry (SCCR) aged ≥ 16 years at study and treated in four different Swiss pediatric-oncology clinics. For the analysis we obtained clinical variables from the SCCR and we coded risk for late effects in low, middle and high according to diagnosis and treatment.

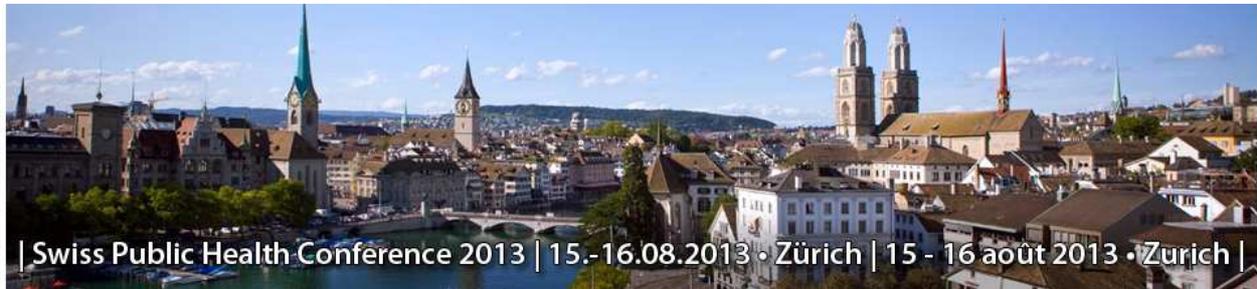
Results

We included 501 survivors (mean age=27.1 years at study, range= 16.9-48.1 years). Overall, 157 survivors (31%) had been transferred, 129 (26%) were still in pediatric oncology and 215 (43%) had been discharged. Among transferred and discharged survivors, 24 (38%) vs. 29(45%) were in the low risk group 43(36%) vs. 45(37%) in the middle and 90(28%) vs. 141(44%) in the high, respectively.

Mean age at transfer was 18.9 years, with 102 (64%) transferred after the age of 20 years. Transfer destinations were: general practitioner (55%), oncologist (20%), neurologist (13%), endocrinologist (6%) or gynecologist (6%). Using logistic regressions we found that survivors with a CNS tumor (OR=0.34, $p=0.004$), with body/cranio-spinal radiation (OR=0.52; $p=0.001$), a relapse (OR=0.46, $p=0.008$), and older at diagnosis (OR=0.95 per year, $p=0.02$) were less likely to be transferred.

Conclusions

Transition is currently not systematically provided in pediatric oncology. Patients are often transferred after the age of 20 years and this process does not clearly reflect the risk for late-effects. Further, many survivors, even in the high-risk groups, are discharged without further referral. Earlier, risk-oriented transition could help to organize adult-oriented care and avoid loss to follow-up.



CARDIOVASCULAR RISK CLUSTERING IN SAPALDIA YOUTH

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Background: The importance of childhood risk factors for childhood and adult cardiovascular health (CVD) is known. Risk factors are often presented as separate determinants; however risk-clustering increases the risk of disease. We assessed cardiovascular risk-clustering in SAPALDIA Youth study based on modifiable health behaviors and blood pressure (BP).

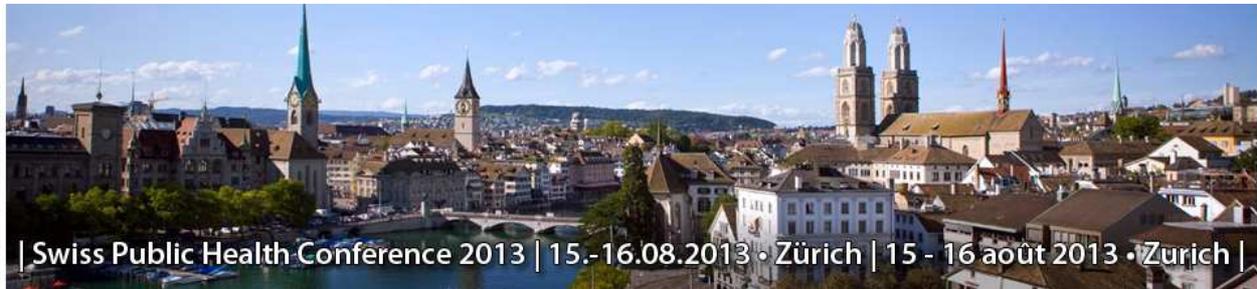
Methods: The SAPALDIA Youth Study is a nested study of 356 offspring (8 -20 yrs.) in the Swiss SAPALDIA cohort of adults, who reported on early childhood factors, past and current health status and lifestyle. 288 offspring underwent BP and cardio-metabolic biomarker measurements. Based on the AHA concept of healthy cardiovascular life-style risk-factors prevalence and risk clustering in 235 youth with complete data on smoking, body mass index, physical activity, diet; blood lipids, insulin resistance and blood pressure¹ were calculated. Association of risk clustering with BP was assessed with multilevel analyses adjusted for socio-demographic factors.

Results: Overall, ten percent of the youth were weekly smokers, 14% were overweight, 5% obese and 59% reported less than 60 minutes physical activity/day. We found elevated total cholesterol in 4.5%, no case of insulin resistance and BP values exceeding the 90th percentile U.S. reference values² by age, height and sex in 29% and the 95th percentile in 16%, indicating prehypertension and hypertension, respectively. Clustering of ≥ 3 risks was present in 32%. There was a borderline significant risk of increased systolic blood pressure with each additional cardiovascular risk factor (1.30 mmHg, 95%CI - 0.46; 3.05).

Conclusion: Single cardiovascular risk factors were frequent and risk clustering occurred in a third of the youth. One time measures do not allow the diagnosis hypertension, however, prehypertension and the risk of developing hypertension can be assessed. The association seen between risk clustering and BP underlines the significance of cardiovascular risk factors already in youth and is confirmed by adult studies on long-term consequences of early risk factors. Cardiovascular risk factors in adolescence should be given our full attention to reduce the population risk by early optimal metabolic control and lifestyle modification.

1. Lloyd-Jones et al, Circulation 2010;121(4)

2 National High Blood Pressure Education Program Working Group on High Blood Pressure in Children and A. Pediatrics 2004;114(Supplement 2)



CARDIOVASCULAR PROBLEMS IN SURVIVORS OF CHILDHOOD CANCER AND THEIR SIBLINGS

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Background: Cardiovascular diseases (CVD) are important causes for late morbidity and mortality in childhood cancer survivors (CCS). In the UK, the standardized mortality ratio for circulatory deaths of CCS was 5.0. For Switzerland, data on late cardiovascular morbidity in CCS is lacking. Therefore, this study describes lifetime prevalence of CVD in CCS compared to siblings.

Methods: Within the Swiss Childhood Cancer Survivor Study we sent a postal questionnaire to all CCS registered in the Swiss Childhood Cancer Registry, diagnosed between 1976 and 2005 at an age of 0-15 years, who survived >5 years. A control group of siblings received the same questionnaire. This analysis includes only participants aged ≥ 16 years at survey. We assessed self-reported cardiovascular morbidity (lifetime prevalence) of: hypertension, arrhythmia, heart failure, deep vein thrombosis and pulmonary embolism (DVT/PE), valvular problems, myocardial infarction and stroke; angina pectoris and atherosclerosis (only in those ≥ 20 years). Age- and sex- standardized proportions are given for siblings. We used age- and sex- adjusted logistic regression models to calculate odd ratios (OR).

Results: The study included 1'607 survivors and 713 siblings (response rates 69% and 55%, respectively). Mean age at survey was 26.1 years (SD 7.5), 49% were males. All cardiovascular problems were reported more often by survivors than siblings: DVT/PE (1.4% vs. 0.3%, OR 5.8 [95% confidence interval (CI) 1.7-19.7]), heart failure (2.4% vs. 0.1%, OR 18.3 [CI 2.5-134.1]), valvular problems (2.0% vs. 0.5%, OR 3.9 [CI 1.5-10.4]), arrhythmia (3.9% vs. 2.3%, OR 1.7 [CI 1.0-3.0]), hypertension (5.4% vs. 3.5%, OR 1.59 [CI 1.0-2.6]), stroke (0.4% vs. 0.1%, OR 4.4 [CI 0.8-25.5]) and angina pectoris (2.1% vs. 1.5%, OR 1.4 [CI 0.6-3.3]). Results for myocardial infarction (0.2% vs. 0.2%, OR 0.9 [CI 0.1-8.3]) and atherosclerosis (0.2% vs. 0.1%, OR 1.6 [CI 0.1-17.3]) were inconclusive due to small numbers.

Conclusion: In line with international data, CVDs are more often reported by CCS in Switzerland than their siblings, even at a young age. We will validate these self-reported problems using medical records to investigate potential bias. Further analyses will aim to detect avoidable risk factors for CVD and identify high risk groups who could benefit from regular cardiovascular follow-up, aiming at an early detection and timely treatment.