Reviewer's report


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Reviewer: Reijo Sund

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In this study authors aim to compare the incidence rates of skin diseases in children aged 0-17 years between 1987 and 2001 using data from two surveys concerning longitudinal registrations of GP consultations.

Methodological comments:

Introduction
1. The difference between incidence (epidemiological approach) and use of services (health services research approach) should be made clearer. Minor Essential Revision
2. Motivation for this study should be stated out more explicitly (instead of just saying that it is important to estimate the incidence it would be more informative to tell why this kind of information is new and important). Discretionary Revision

Methods
3. National surveys of general practice certainly provide a representative sample of practices and general practitioners. However, without appropriate weighting scheme and/or some description of health system in Netherlands it remains unknown whether the patients treated in sample practices are representative sample of Dutch population. Major Compulsory Revision
4. Non-proportionally stratified sample was selected randomly? Discretionary Revision
5. Response rate for individual specific questionnaires were not perfect – how were non-respondents (missing values) dealt with in the analyses? Minor Essential Revision
6. Urbanization was determined using practice level information (using postal code of practise) instead of patient level information – do all patients come from the same postal code area? Discretionary Revision
7. Definition for season variable is missing. Discretionary Revision
8. Episode approach is reasonable, but why just 28 days was chosen as a definition for new episode? Minor Essential Revision

Statistical analysis
9. Mid-population was determined using all listed patients in practices. Used approach seems to approximate the total follow-up time for individuals who have had at least one consultation during the registration period. Importantly, the follow-up time is not for whole population at risk but for population with some service use. This results in overestimation of actual incidence rate, if all individuals at risk have not GP consultation during registration period. Why the population figures of catchment area of corresponding GPs were not utilized? Justify and discuss the consequences of your risk-population assumption. Major Compulsory Revision
10. Even though the incidences are overestimates, the comparisons between different strata or
sample may be reasonable. However, this seems to be true only if there is equivalent risk-population
selection bias across all strata in both samples. Since this most probably is an unfeasible
assumption, the observed differences may reflect more differences and/or changes in service use
than in the actual incidence rates. Please justify your approach very carefully, because in the worst
case your interpretations concerning incidence rates are invalid (and describe only skin disease
incidence among the service users). Major Compulsory Revision

11. Confidence intervals were calculated assuming a Poisson distribution (for the number of new
episodes) Discretionary Revision

Results
12. How were person years derived? In 1987 it seems that each child was followed exactly three
months ("full" follow-up for all children), but in 2001 follow-up was less than 12 months ("non-full"
follow-up?) Minor Essential Revision

13. Visiting more often because of skin disease (use of services) does not necessarily mean that the
incidence rate of skin diseases (epidemiology of disease) is different. Please clarify your
interpretations. Major Compulsory Revision

Discussion
14. Comprehensive assessment of dermatological morbidity in children encountered in Dutch
general practice is not enough for accurate estimation of incidence rates. Discuss your choice of risk
population. Major Compulsory Revision

15. Decrease of the overall consultation rate is mentioned. What are the reasons for decrease? You
could explicitly state your hypotheses also in the introduction. Discretionary Revision

16. Why would shorter registration period result in underestimation of incidence rates? Please clarify
what you actually mean. Minor Essential Revision

Table I
17. Should you correct P-values for multiple comparisons? Would it be more reasonable to compare
standardized incidence rates? Discretionary Revision