Reviewer's report

**Title:** Ethnic differences in use of, reasons for referrals to and diagnosis in an internal medicine outpatient clinic

**Version:** 2  **Date:** 4 January 2008

**Reviewer:** Allan Krasnik

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1. The question of equal access to health services by immigrants has become an important issue within European health services research during recent years and an increasing research activity is taking place regarding this. The present study poses two major research questions - whether differences exist in the use of a specific hospital service (an internal outpatient clinic) and whether differences can be identified in reasons for referral and diagnosis. These general questions are not new in migration studies, but existing documentation does not focus specifically on internal outpatient clinics and the results available are somewhat contradictory - and seems to depend to some extent of the specific setting (the structure of the health service and the characteristics of the immigrants). The authors of this article have thereby posed well defined and relevant research questions which fit well into the existing research agenda in the field.

2. The setting seems very useful for this kind of research by including an urban population with a large immigrant group of different origin and a hospital service which seem to serve a particular geographical area as a main provider of secondary ambulatory care and serve a larger municipality also for tertiary care. However, the motivation for the division of patients according to the two different areas (referral area and municipality) is not clear in the first parts of the manuscript and is only presented more clearly in the discussion section. It would help the reader understand the setting and design if the structure of health care (including the available hospital care and primary care as well as main procedures for referral to the department of internal medicine for the two areas) was explained clearly in an early section on the "setting" of the study. The figures regarding the size of immigrant populations in the Netherlands do not specify whether these include also second generation immigrants. The open cohort design with a well defined population basis is well chosen and presented and the elements of the study are clearly defined. A figure describing the different population groups and selections taking place in the study group would, however, be helpful for the reader.

3. The data are based on registers and files and thereby probably more valid than traditional survey data which are often used in this kind of studies. However, even register and file data might be subject to problems regarding validity of information on ethnicity, diagnosis etc and this could be discussed more in depth. The data on the relative distribution of ethnicity in the population is a major element of the study allowing for calculations of risks. It should be stated
explicitly how data on age, sex, socio-economic status (what is standardised household income by the way?) and country of birth of the base populations are produced for the register including how the time issue is solved (for instance changes during the year of data collection might have taken place producing a mis-match between the patients and the base population).

4. In general, the paper is in accordance with the normal standards for manuscripts like this. Yet, the tables are not fully self-explanatory (S, T, M, A/A, C, Erasmus MC in table 1).

5. There is a tendency to present additional results from further analyses of the study in the discussion section which do provide some interesting perspectives, but which are not documented in a satisfactory way in the result section. This, I believe should be avoided (i.e. specific differences between sub-groups of migrants presented page 8 and 9). I agree that the aggregation of all immigrant groups into one "immigrant group" in part of the analysis is a major problem which might hide important variations (as found in other studies), but if results from comparing between subgroups are taken into consideration they should be presented as part of the result section rather than as additional information in the discussion. The discussion concludes that the professionals still have to take ethnicity into account in their daily medical practice (as ethnic differences are found even when socio-economic status is taken into account). This seems like a fair conclusion, but it is not very clear how the authors think that this should take place in practice).

6. The title and the abstract is clear regarding the content and the main results of the study.

7. The writing is generally OK, but the English language does not always seem fully correct. I would suggest that the authors seek assistance to ensure that the text is correct English.

What next?: Accept after minor essential revisions

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Needs some language corrections before being published

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests.