



Monitoring Diabetes in the Hungarian General Practitioners' Morbidity Sentinel Stations Program



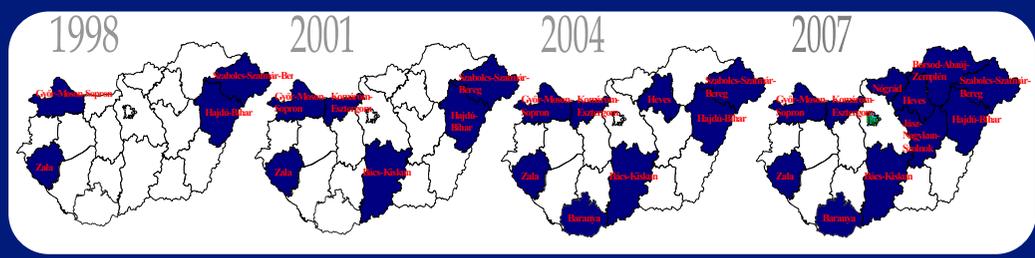
Attila Nagy, Endre Szigethy, Zoltán Vokó, György Széles, András Keszei, Tibor Jenei, Róza Ádány

BACKGROUND

General practice-based registration systems are used all over the world. The objectives of these systems are many-folded such as registration of morbidity patterns, collection of information about the function and performance of primary health care work, and to provide information about different management aspects of primary health care services. Morbidity data is essential to determine priorities, to plan capacity and various health care programs, and to evaluate their effectiveness.

METHODS

The General Practitioners' Morbidity Sentinel Stations Program (GPMSSP) was launched by the School of Public Health, University of Debrecen, Hungary and the National Public Health and Medical Officer Service in May 1998. Data collection started at the beginning of October 1998. The four counties (Hajdú-Bihar, Szabolcs-Szatmár-Bereg, Győr-Moson-Sopron and Zala) involved in the program were chosen to represent the eastern and western parts of Hungary. The study population includes people who belong to the practices of the participating general practitioners at any time (open cohort study). Direct information can be obtained about the morbidity of the selected diseases in the study population, but with the use of appropriate weights based on age and gender distribution of practices and counties, county specific estimates can be derived, as well. The practices have been chosen in a manner that settlements with different sizes would be represented in every county, thus there is the possibility that settlement size could be also considered as a determinant of disease incidence.



The program monitors the following diseases: hypertension, diabetes mellitus, liver cirrhosis, ischaemic heart disease (except myocardial infarction), acute myocardial infarction, stroke, malignant neoplasm of trachea, bronchi and lung, malignant neoplasm of colon, sigma and rectum, malignant neoplasm of breast, malignant neoplasm of cervix and malignant neoplasm of prostate. General practitioners report diagnoses mostly made by specialists in outpatient clinics and in hospitals. Since 2008 the reporting system is fully computerised via a web-based application. The monitoring system also serves as a research infrastructure for epidemiological investigation.

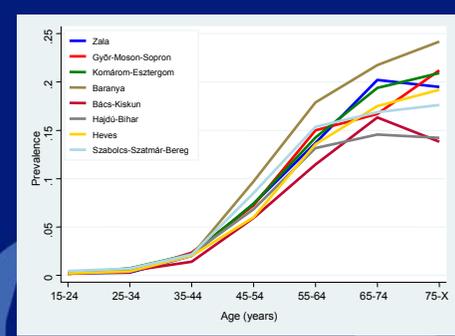


Figure 1. Prevalence of diabetes in men on 1.1.2007, by age and county

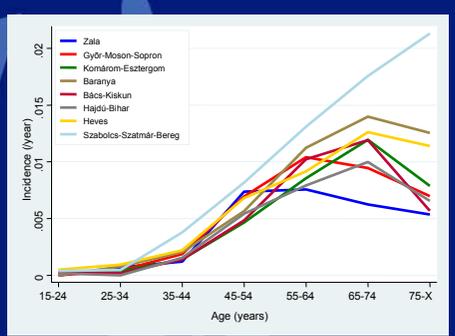


Figure 2. Incidence of diabetes in women in 2004-2006 by age and county

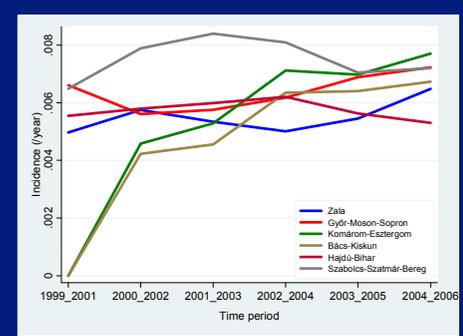


Figure 3. Time trend (moving average) of the incidence of diabetes in men aged 35-54 years by county

RESULTS OF THE REGULAR MONITORING

Eighty general practitioners were approached by the county offices and overall 73 of them agreed to participate in the study in the 4 counties (Hajdú-Bihar, Győr-Moson-Sopron, Szabolcs-Szatmár-Bereg and Zala) in 1998. Seven more counties joined GPMSSP – in 2001, 2004 and 2007 – (Bács-Kiskun, Komárom-Esztergom, Baranya, Heves, Borsod-Abaúj-Zemplén, Nógrád and Jász-Nagykun-Szolnok) accounting for 127 practices due to the success of the program. At present, 197 practices (3,9% of the 5002 Hungarian practices) are involved in the monitoring system. The sample population of practices were representative by age and sex distribution of the counties population as well as that of Hungary. The monitoring system allows estimation the prevalence and the incidence of diabetes mellitus (Figure 1-3.).

FOLLOW-UP STUDY TO INVESTIGATE THE CONTROL OF TYPE 2 DIABETES IN GPs PRACTICES (2008)

The objective of the research was to explore the quality of diabetes control in primary care. The research was performed in the framework of the GPMSSP. The study population consisted of 1466 randomly selected patients older than 35 years with type 2 diabetes. The data collection included data on treatment (specialists involved in care, medication, non-medical treatments), and on complications. The participating GPs performed a physical examination (height, weight, blood pressure, examination of the feet), and drew blood samples. HbA1c level was measured at baseline, at 3 and 6 month. Participants filled in a questionnaire about their socioeconomic status and health behaviour.

The analysis of the data is in progress. Figure 4 and 5 show some preliminary results. 41% of the study population had a HbA1c level higher than or equal to 7.5%. (Figure 4.) 22 % has larger BMI than 35 kg/m².

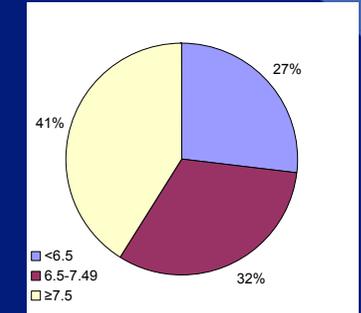


Figure 4: Distribution of HbA1c

DISCUSSION

The GPMSSP is a monitoring system that can provide reliable information on the occurrence of major non-communicable diseases. Furthermore, within this framework targeted epidemiological and health services researched can be performed. From the study performed in diabetic patients we got detailed information about the care they receive and about its efficacy.

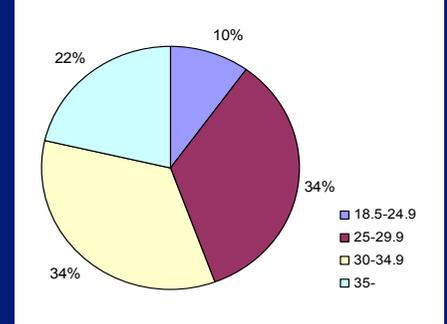


Figure 5: Distribution of BMI