Commissioned by the Hungarian Ministry of Health, Social and Family Affairs, within the framework of the National Public Health Program
## CONTENTS

I. INTRODUCTION .................................................................................................................. 3
   Characteristics of the NHIS2003 .............................................................................. 4

II. HEALTH STATUS ............................................................................................................. 5
   Perceived health .......................................................................................................... 5
     Functionality ............................................................................................................... 6
     Diseases and conditions ............................................................................................. 7
     Body weight ............................................................................................................... 9

III. HEALTH BEHAVIOR ..................................................................................................... 11
     How much can you do for your health? .................................................................... 11
     Alcohol consumption ............................................................................................... 12
     Tobacco smoking ....................................................................................................... 12

IV. HEALTH CARE ................................................................................................................ 15
    Use of health services ................................................................................................. 15

V. GRATUITY .......................................................................................................................... 19

VI. SOURCES ........................................................................................................................ 22

VII. INFORMATION ............................................................................................................. 23
Regularly collected public health data are crucial for a successful management of the health sector - it is what allows policy makers to make sound strategic decisions and to design programs that effectively work in practice. Monitoring the changes in population health ensures that the effects of government interventions and the efficiency with which available resources are utilized are measured using objective evidence.

This highlights the significance of the Hungarian National Health Interview Survey (NHIS2003)\(^1\) carried out in the third quarter of 2003. NHIS2003 supplies today crucial data for the evaluation of the effectiveness of the Hungarian National Public Health Program. It is important to note that a questionnaire-based health survey carried out on a representative sample of the population is also capable to provide data on individuals who have not sought medical treatment for their health problems;\(^2\) thus have not registered on any records of the health care system. Unlike health data collected in hospitals and physicians' practices, health surveys are not limited to collecting information about diseases, but are important sources of data on the social and economic factors that dominantly influence health (such as education, income) and on lifestyle related factors as well (such as smoking or alcohol consumption). In a number of countries - like the Netherlands, Japan or the United States - health surveys have been for some time essential accessories of health policy management, policy planning and evaluation. It is only natural that one of the major EU public health programs is aimed at establishing a common health surveying methodology to provide comparable data across the Member States. Detailed analysis of data collected in a health survey usually requires several-year-long research. However, to minimize the delay between input and output, we have decided to carry out an abbreviated analysis on the survey data - which is by now checked, corrected and validated - and to publish it in the form of the present Update. Given the nature of the document, this Update will cover only the most important topics of the survey, and even then the results should not be considered as conclusive. Final results will be available once analysis of the survey data is complete, and will get published in the Final Survey Report (expected by the third quarter of 2004).

To demonstrate the changes in the population's health over time, the Update compares data collected in the 2003-survey with the results of the NHIS2000 - a similar survey conducted in 2000.

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\(^1\) NHIS is referred to as OLEF in Hungarian literature (Országos Lakossági Egészségfelmérés)

\(^2\) Health problem refers to the presence of one or more complaint, chronic disease or condition, disturbance, dysfunction or disability.
A random sample of 7000 individuals, citizens of Hungary, aged 18 and over, from 447 communities of the country, was selected from the registry of the national census. Data were collected through interviews carried out by the staff of TNS Hungary - the company awarded with the project through an open public procurement tender. When compiling the community sample our primary focus was to give a proportional representation for each of the 19 counties while also ensuring that communities are represented proportionally on the basis of their size. Data collection took place between October 30th and December 19th 2003. Interviewers of TNS Hungary were able to successfully complete 5072 questionnaires, representing a 72% response rate. Although this figure is somewhat lower than the response rate achieved by NHIS2000 (78%), it is still a favorable result compared to national and international averages. The following table summarizes the most frequent reasons recorded as the cause of uncompleted interviews:

<table>
<thead>
<tr>
<th>Reason</th>
<th>Persons</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>could not be located</td>
<td>680</td>
<td>9.8</td>
</tr>
<tr>
<td>could not be reached during the term of the survey</td>
<td>384</td>
<td>5.4</td>
</tr>
<tr>
<td>was not able to take part in the interview</td>
<td>131</td>
<td>1.8</td>
</tr>
<tr>
<td>refused taking part in the interview</td>
<td>569</td>
<td>8.2</td>
</tr>
<tr>
<td>was not available for other reasons</td>
<td>164</td>
<td>2.4</td>
</tr>
<tr>
<td>successfully completed the interview</td>
<td>5072</td>
<td>72.4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>7000</td>
<td>100.0</td>
</tr>
</tbody>
</table>

The respondents of the survey are representative of the entire Hungarian adult population by age, gender and place of residence (more precisely by county of residence and by the size of their community). Therefore the estimates published in the present Update do not refer to the respondents only, but are valid for the entire Hungarian adult population. The questionnaire used in the survey was developed in line with the recommendations of relevant international professional forums - the WHO and EUROSTAT among others - and relied also on existing national surveying experience. Furthermore, our design for the NHIS2003 questionnaire ensured that the data collected provides comparison with the results of both the NHIS2000 and surveys carried out in other countries. The conclusions of our questionnaire-based health survey are derived exclusively from information collected from the survey respondents, which fully complies with relevant scientific criteria, according to international guidelines and standards.
As the international experience shows an individual’s perception of her/his health does not only show how one subjectively lives her/his health situation, but is also considered as one of the best public health indicators in the sense that the proportion of the population with a negative perception of their health points to insufficiencies in the health care system. Although cultural factors may influence how 'objective' health status is perceived subjectively, major international organizations (WHO, EU, OECD) continue to use this indicator for cross-country comparisons.

50% of men and 41% of women perceived their health as good or very good. 1 out of 5 women who perceived her health bad in general reported her health status as bad or very bad (21%). The proportion of men with a negative perception of their health (13%) has not changed since the NHIS2000 survey. Compared to results of 2000, extreme opinions show a general increase with the most significant changes observed among women and young men.

In Hungary, three times more people than the EU average, perceive their health bad or very bad.
The Hungarian population’s opinion about their state of health reflects a very sad image: three times more people than the EU average, think of their health as bad or very bad.

**FUNCTIONALITY**

The concept of health has itself undergone some significant changes during the past decade or so. Whereas health was considered a lack of disease in the past, today it is characterized by the WHO as a state of 'complete physical, mental and social well-being'. We talk of decreased functionality or dysfunction when an individual is for some reason unable to perform certain activities, or to take part in social activities, or to live harmoniously with her/his environment. We differentiate between various degrees of dysfunction according to whether the loss of function is of a physical, personal or social nature.

**Self-care**

A person who requires the help of others in her/his daily activities qualifies as a person with a severe functionality restriction. Such a health situation does not only affect the given individual’s quality of life, but puts a significant burden on the family, as well as on the health care system. 7% of the Hungarian population aged 65 and over is suffering of suffering of severe functionality restriction, meaning that they require the help of others to perform some activities otherwise and essentially part of self-care (e.g.: washing hands, using the toilet, dressing), while half of these elderly people are unable to get out of bed at all. 14% of women and 9% of men reported as having some difficulties with self-care. An increase by 50% can be observed since 2000 in the proportion of middle-aged men having some difficulties with self-care (from 7% to 10%).

**Mobility**

9% of women and 5% of men registered as not being able to walk a maximum of 200 meters without help, and 3.5% of the entire adult population is only able to walk a few steps without help. From among the elderly population nearly 40% of women and one third of men have difficulties with moving around, and 1 out of 6 elderly persons is only able to walk a few steps without help.

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4 The survey did not include individuals receiving inpatient care at the time of the interviews (in hospitals, social care facilities), which is the reason why both NHIS2000 and NHIS2003 detected almost no young persons with severe loss of function or unable to get out of bed. We must also note that for the same reasons the proportion of people with a severe functionality restriction is higher in the actual Hungarian population than the figures detected by our survey!
Vision, hearing

1 out of 4 women and 1 out of 6 men has a mild impairment of vision, corrected using eyeglasses or contact lenses. 5% of women and 3% of men have registered as having a moderate dysfunction in their vision, meaning that they are able to see only to arm’s length even when using a corrective device, such as eyeglasses or contact lenses. 13% of men and 11% of women have a mild hearing dysfunction, meaning that they do not require a hearing aid, but are only able to listen to the TV or radio with the volume turned up loud. The proportion of people with a moderate or severe impairment of hearing is below 1% of the total population, as it is the case with people with a severe loss of vision.

DISEASES AND CONDITIONS

The prevalence of chronic (long term) conditions is one of the main characteristics of a population’s health status. Using a self-administered questionnaire, our survey collected data on nearly 20 chronic conditions of major public health impact. These conditions are either recognized as leading causes for mortality (e.g.: cardiovascular diseases), or are conditions that may result in complications representing a serious hazard for loss of function (e.g.: diabetes), or may have a significant negative effect on quality of life (e.g.: back pain).
Diseases of the cardiovascular system

39% of women and 32% of men suffer from diseases of the cardiovascular system. Hypertension shows a prevalence of 29%, which is 70% higher than the EU average (17%), and is still considerably higher than Portugal’s 22% - the worst result inside the EU.

Diabetes

According to our survey, 8% of the female population and 7% of the male population has diabetes. Their proportion among men aged 65 and over has increased by 50% since 2000. It is probable that this increase is connected to obesity, the primary risk factor for diabetes, since the prevalence of obesity has almost doubled in the same population during the same interval.

Neck, back, or lower back pain

Almost half of the male population and nearly 60% of the female population registered complaints of pains in the neck, back or lower back. Every third woman and every fourth man complained of a severe pain radiating out to the limbs experienced within a period of 30 days prior to the survey. It is nonetheless a positive result that the proportion of women with back pain decreased since 2000.

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Injury or poisoning

11% of men and 8% of women received treatment for injury or poisoning during the 12 months prior to the survey. Most frequently, injury or poisoning happened during activities at home: in 39% of the cases for women and 29% of the cases for men. The second most frequent circumstance of injury or poisoning was traffic accidents for women (25%) and activities at work for men (28%).

BODY WEIGHT

Besides tobacco and alcohol consumption, obesity is the third most frequent preventable cause leading to disease or death, and it has been consistently increasing in developed countries over the past decades. The prevalence of obesity is already over 30% in the United States and could well reach this level in the countries of the EU over the next 5 to 10 years, putting a significant economic burden on health and social care providers.\(^6\), \(^7\)

According to expert opinions, the probability of falling ill to various diseases increases when body weight is more than 20% over the normal upper limit. In the case of severe obesity, the risk of mortality is doubled compared to individuals with a body weight within the normal range.

Obesity was assessed using the standard body mass index calculation, based on the proportion of body weight and height. According to the survey, 29% of women and 38% of men are overweight, whereas 1 out of 5 adults qualifies as obese. The prevalence of obesity among men aged 65 and over has almost doubled to 30% from its 2000 value of 17%. A little over 70% of elderly men registered as overweight or obese, and therefore constitute a high risk population for a number of diseases. It must be noted that 10% of the young female population was found chronically underweight.

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Chart 4 - Body Mass Index categories by age and gender, in 2000 and 2003
III. HEALTH BEHAVIOR

The World Health Report 2002 highlights that only a relatively few preventable risk factors are responsible in a disproportionately large part for a society’s burden of diseases and for the high premature mortality rates. In developed countries, estimates suggest that more than 30% of the burden of disease results from tobacco smoking, alcohol consumption, hypertension, high cholesterol and obesity.\(^8\)

NHIS\textsuperscript{2003} collected data on health behavior factors: on health awareness, on tobacco and alcohol consumption, nutrition and physical activity. Survey results on nutrition and physical activity will be discussed in detail in the Final Research Report.

How much can you do for your health?

Active participation of the population in health development programs is essential for the success of public health goals. However, this assumes a general agreement on one issue: one can actively improve her/his health.

According to NHIS\textsuperscript{2003} results, a majority of the Hungarian population thinks one can do much or very much for one’s health (more than 2 out of 3 women and 3 out of 4 men). It should be noted however, that the proportion of people who think external reasons impact more on one’s health than one’s own efforts increased since 2000: 1 out of 3 women and 1 out of 4 men is of the opinion that they can do nothing or very little about their health (in 2000, these proportions were 1 out of 4 and 1 out of 5 respectively).

We have noted very sharp differences between the opinions of different age groups: 1 out of 4 young women and men think they can do very much for their health, while only 5% of elderly women and 9% of elderly men registered similar opinions.

**Alcohol consumption**

Alcohol consumption can have both benevolent and destructive effects, depending on the volume of use. Scientific evidence suggests that moderate drinking decreases the risk of cardiovascular diseases, whereas excessive drinking seriously increases the risk of certain conditions (cirrhosis of the liver, stroke, cancers of the mouth, throat and breasts, birth anomalies) and is, to a significant degree, responsible for premature mortality. In 1999 for instance, 1 out of 4 deaths occurring in the male population aged 35-64 was connected to excessive alcohol consumption.9

Due to the privacy issue involved, we used self-administered questionnaires to survey alcohol consumption habits for NHIS2003. According to these responses, 3% of women and 18% of men can be considered heavy drinkers, while 8% of women and 31% of men qualify as moderate drinkers. The highest frequency for heavy drinking was registered in the medial age categories for both women and men.10

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10. *Because differences in the instruments used, these results are not comparable to our results of 2000*
Tobacco smoking

According to an estimate published by the WHO, tobacco smoking - as one of the most prevalent lifestyle-related risk factors - is in itself responsible for 8.8% of the deaths occurring worldwide. Additionally to its impact on mortality, smoking is of course a factor contributing to the increase of the burden of disease, since it plays a definitive role in the occurrence of a number of diseases. Tobacco consumption was shown for instance to be at the root of 90% of lung cancers detected among men, and 70% among women. Besides various other neoplasm (e.g. neoplasm of the respiratory system) tobacco consumption can be held responsible for a large proportion of cardiovascular and chronic respiratory diseases. Tobacco consumption does not only harm the health of the users themselves: passive smoking increases the risk of lung cancer and various respiratory diseases in non-smokers, too, while smoking during pregnancy may damage the health of the unborn child.

In 2003 28.5% of women and 41.5% of men were found to smoke tobacco, most of them regular daily users (25% of women and 38% of men). 1 out of 10 women and one out of 4 men registered as heavy smoker, meaning that they smoke at least 20 cigarettes per day, just like in 2000.

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International comparison of our data on tobacco consumption is made difficult by existing differences in the surveying methods used. However, one valid comparison shows that the proportion of tobacco users in Hungary in 2000 was 40% higher than in the US.

If we take a look at the differences between different age groups of the population it is apparent that the proportion of smokers is the highest in the younger age groups for both genders: while 38% of young women and 51% of young men smoke regularly, only 7% of elderly women and 17% of elderly men were found to use tobacco regularly.
IV. HEALTH CARE

Use of health services

When entering into an analysis of the use of available health services, it is reasonable to start with differentiating between the expectations and the needs of the population. In the context of health care services, these words have special meanings: 'needs' refer to treatment prescribed by health professionals using applicable health standards (e.g. the lowest value of blood pressure at which a physician will decide to start a treatment for hypertension); 'expectations' is used as the manifested intention of an individual to use health services.

Expectations often surpass the capacities of available health services. However, objective data are inevitable to optimize the resource distribution system of the health sector. The data collected through health interview surveys provide information about certain issues that can help us understand the structure in which health care resources are used, i.e. the link between needs and the use of existing capacities, as well as the quality of the health service. NHIS2003 examined the following factors: use of general and specialist physician services, physiotherapy and alternative health services, the time since the last medical check for blood pressure, blood sugar, cholesterol, the time since the last dental check; and for women, the time of the last visit with a gynecologist aborted pregnancies, the time since the last screenings for breast cancer and cervical cancer.

81% of respondents had used some kind of basic treatment (GP, nurse) in the 12 months prior to the time of the survey. This is slightly higher than the EU average of 79%.11, 12 Excluding psychiatric treatment, 56% of respondents visited a specialist in the 12 months prior to the survey. This is considerably higher than the EU average (49%) and needs further analysis. However, our data suggest that this may be due to the fact that the 'gateway' role of basic health care is still very limited in Hungary. The 'gateway' role, screening and distribution of incoming patients to optimize specialist health services' workload, is one of the most important functions of basic health care.

12 We should note here that the EU countries' surveys were conducted 6 months before the Hungarian survey. There is also an important difference in the methodology: the EU data refers to the population aged 15 or over, whereas NHIS2003 collected data on the adult population aged 18 and over.
Considering the poor dental health status of the Hungarian population, it is rather surprising that only 38% of the adult population had visited a dentist in the 12 months prior to the survey (including private dental services). Hungary is substantially behind the EU’s 60% average for the use of dental services, although some positive changes can be observed as compared to 2000. One positive advance is that the proportion of women who had not visited a dentist in the 12 months prior to the survey decreased substantially: this proportion was recorded at 63% in 2000 against 57% in 2003. No such changes can be detected, however, among the male population: in both 2000 and 2003, 66% of the adult male population was found not to have had a visit with a dentist in the 12 months prior to the survey.\(^\text{13}\)

With a look on the high prevalence of cardiovascular diseases in Hungary and their role in premature domestic mortality, an annual checking of the blood pressure is medically recommended for adults. It is a very favorable that 78% of men and 82% of women had had their blood pressure measured by a nurse or physician in the 12 months prior to the survey. 94% of men and 96% of women with a diagnosed high blood pressure had had their blood pressured measured in the 12 months prior to the survey.

\(^\text{13}\) We would like to note that the assessments of both the NHIS2000 and NHIS2003 included data about private medical services.
According to general medical recommendations, women aged 45-65 should be screened for breast cancer at least once every two years. According to our data, approximately one third of the high-risk population of women aged 45–64 had not had mammography within the 2 years prior to the survey.

80% of the adult population had its blood pressure measured in the 12 months prior to the survey.

One third of women aged 45-64 had not been to breast cancer screening within 2 years prior to the survey.
Although it is medically recommended for all women aged 25-64 to take a screening for cervical cancer once every three years, 11% of this population has never been screened at all. More than half of the adult female population (56%) had had a Pap smear test within the 2 years prior to the survey. Three out of four women aged 25 to 44 were screened for cervical cancer in the past two years, but only 48% of the women aged 55-64.

11% of women aged 25-64 have never been screened for cervical cancer.
V. GRATUITY

There is no common agreement in Hungary about the definition of gratuity. Some propose to use the word 'gratuity' to refer to all 'additional revenues' paid to medical professionals, and to use the expression 'gratitude money' for money paid out of sincere gratitude after receiving a health service. The related question of the NHIS instrument does not allow to differentiate between these different types of gratuities, it is not possible to judge what types of money the respondents included in their answer (e.g.: whether they included money paid for favors not directly related to health care, such as administrative favors, etc), nor are we able to differentiate the more subtle characteristics of gratuities (e.g.: the distribution of gratuities within the medical hierarchy). All considered, for the purpose of this Update, the terms 'gratuity' and 'gift' will be used as synonyms.

Our survey examined whether the respondent had paid any kind of gratuity for her/his own health. Therefore, our assessment does not include gratuity paid in relation with health service provided to others, such as family members. NHIS collects data about the adult population exclusively, our estimates do not include therefore gratuity paid for health services provided to children aged 18 or under. This explains why the amounts published in our estimates are lower than the results of other national surveys.

To ensure comparability of our results in 2000 and 2003, we have corrected the results for 2003 using the official health care price index for 2000 (130.2%). The estimates published here refer exclusively to the population that used some kind of health service, NOT the entire adult population.

According to NHIS2003 results, one out of four adults (28.7%) using health services for their own health paid gratuity of some amount – at a total of 22.1 billion HUF calculated to the health service prices of 2000. In comparison, 26% of adults spent a total of 20.7 billion HUF on gratuity for health services in 2000. In 2003, 87% of the total amount of gratuity money was given to physicians and 13% to nurses.
Gratuities paid in 2003 show the following distribution by levels of the health care system: 25% of the gratuities were paid for GP services, 33% for specialist ambulant care, and the remaining 42% was paid for hospital inpatient care.

Every second hospital inpatient pays a gratuity to hospital staff.
15% of the patients using GP services paid gratuity to the physician, 17% for specialist ambulant services, and 56% for hospital inpatient care.

No significant change was registered either in the frequency or the total amount of gratuities paid, as compared to 2000.
NHIS2000 database

NHIS2003 database


Status report on the European Commission’s work in the field of nutrition in Europe. European Commission, 2002


Special Eurobarometer: Health, Food and Alcohol and Safety. European Opinion Research Group EEIG 2003
VII. INFORMATION

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One cannot repair harm that one does not know about.

(Cornelius Gallus)