Major challenges ahead for Hungarian healthcare

The health sector in Hungary is facing its most serious crisis since the fall of the communist regime. Péter Gaál and colleagues discuss the challenges and how to respond to them.

Our recent review of the Hungarian health system laid bare some of the major challenges it faces today. Although Hungary’s problems are not unique, their size sets this nation of 10 million people apart. The country has some of the worst health indicators in Europe, and public funding of its health system, which has long been inadequate, is currently in decline. Out of pocket expenses are high and the system encourages informal payments. At the same time, the health workforce in Hungary is shrinking because of migration of skilled professionals, threatening the sustainability of the system. In this article we look at some of the successes and failures of recent health reforms and suggest a way forward.

System faced with poor population health
Since the collapse of the communist regime in 1989, Hungary has built a mixed health system, based on a single payer, the National Health Insurance Fund Administration (NHIFA), which is funded from payroll contributions and general taxes (box 1, see bmj.com). The NHIFA contracts with local government owned providers and pays for the services on the basis of diagnostic related groups in acute inpatient care, weighted patient days in chronic inpatient care, and a fee for service point system in outpatient specialist care; primary care doctors get a fixed amount per enrolled resident, adjusted by age. Although general practitioners are meant to act as gatekeepers, payment incentives weaken this role and use of hospital services is high. Between 1995 and 2008, non-diagnostic referrals to outpatient specialist care almost tripled, and the number of hospital referrals per patient increased by 66.5%. Patients can consult a wide range of specialists without referral, including dermatologists, otorhinolaryngologists, obstetricians, gynaecologists, ophthalmologists, oncologists, urologists, and psychiatrists. Hungary had 12 outpatient contacts per person in 2009, almost twice the European Union (EU) average.

Table 2: Infant and maternal mortality, mortality from and incidence of selected communicable diseases in Hungary and EU

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Infant deaths/1000 live births</td>
<td>14.8</td>
<td>9.2</td>
<td>5.1</td>
<td>4.3</td>
</tr>
<tr>
<td>Probability of dying before age 5 years (/1000 births)</td>
<td>16.8</td>
<td>10.8</td>
<td>6.0</td>
<td>5.1</td>
</tr>
<tr>
<td>Maternal deaths/100 000 live births</td>
<td>20.7</td>
<td>10.3</td>
<td>18.7</td>
<td>6.3</td>
</tr>
<tr>
<td>Infectious and parasitic diseases (deaths/100 000 population)</td>
<td>8.5</td>
<td>5.6</td>
<td>3.8</td>
<td>8.8</td>
</tr>
<tr>
<td>Infectious diseases (cases/10 000 population)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pertussis</td>
<td>0.1</td>
<td>0.01</td>
<td>0.3</td>
<td>3.8</td>
</tr>
<tr>
<td>Measles</td>
<td>0.3</td>
<td>0.01</td>
<td>0.01</td>
<td>1.3</td>
</tr>
<tr>
<td>Mumps</td>
<td>20.7</td>
<td>2.2</td>
<td>0.1</td>
<td>7.1</td>
</tr>
<tr>
<td>AIDS</td>
<td>0.2</td>
<td>0.3</td>
<td>0.2</td>
<td>1.0</td>
</tr>
</tbody>
</table>
The health sector has been struggling with an unfavourable fiscal context and an ill and ageing population. Life expectancy at birth in Hungary has consistently remained among the lowest in Europe, trailing the European Union average by 5.1 years in 2009 (fig 1). The improvements seen since 1993 have done little more than ensure that the gap between Hungary and the rest of the EU has not widened.

The main causes of death in Hungary are diseases of the circulatory system, cancer, and conditions of the digestive system—a pattern that has remained essentially unchanged since 2000 (table 1, see bmj.com).

The main culprits are the traditionally unhealthy Hungarian diet, alcohol consumption, and smoking. For example, 31.4% of the population aged over 15 years were regular daily smokers in 2009, the highest among the EU countries for which recent data are available. Unsurprisingly, in 2009, the death rate from causes related to alcohol and smoking was almost twice the average in the rest of Europe.

The picture is more positive for infant and maternal mortality, some avoidable causes of death, and especially mortality from communicable diseases (table 2). This is because Hungary has managed to maintain and improve the well functioning communicable disease control system, the compulsory child vaccination programme, and the primary care network of mother and child health nurses, which all date back to the communist era.

**Effects of harsh cost containment measures**

The macroeconomic climate in Hungary has been shaped by the efforts of successive governments to bring recurring budget deficits under control. In the health sector, periods of cost containment have alternated with periods of increased public spending, complicating long term planning and investment decisions. It has also led to a substantial overall drop in public expenditure on health, which fell from a high of 7.1% of gross domestic product in 1994 to 5.2% in 2009—whereas the proportion grew in many other European nations (fig 2).

This decline may threaten the sustainability of universal coverage.

Any savings from increased efficiency in the health system have been consistently diverted out of the health sector. The budget for the National Health Promotion Programme in 2007, for instance, was only a third of what it was in 2003.

The most recent austerity package, which aimed to help Hungary meet the Maastricht criteria for joining the European monetary union, was enacted well before the global economic crisis hit in the autumn of 2008. An increase in the unemployment rate from 7.1% in early 2007 to 11.6% in early 2011 has led to a decrease in contributions and further cuts in public spending. The macroeconomic climate remains unfavourable, and the government must continue to observe tough deficit targets set by the EU. Substantial increases in public spending on health should therefore not be expected in the near future, despite government declarations to the contrary.

To offset falls in public expenditure, government has aimed to shift part of the financial burden to patients by restricting the benefit package (box 3). As a result, household out of pocket spending increased from 16% of total health expenditure in 1995 to 25.2% in 2008. Drugs account for the largest amount of out of pocket expenses (table 3). There are standard tariffs, and the NHIFA reimburses either a percentage (25-100%) or a fixed amount. For fully reimbursed drugs patients have to pay a flat fee of 300 forint (about £0.90; €1.05; $1.40) per package.

A sizeable share of out of pocket expenses also goes on informal payments. These payments, which are made to doctors and, to a lesser extent, other health workers for services that should be free of charge, are a legacy of the communist era and remain despite attempts to formalise them. On average doctors earn 66-250% of their net official salary informally, with obstetricians and surgeons receiving the most; a typical payment for a delivery in Hungary (about £0.90; €1.05; $1.40) per package.

To offset falls in public expenditure, government has aimed to shift part of the financial burden to patients by restricting the benefit package (box 3). As a result, household out of pocket spending increased from 16% of total health expenditure in 1995 to 25.2% in 2008. Drugs account for the largest amount of out of pocket expenses (table 3). There are standard tariffs, and the NHIFA reimburses either a percentage (25-100%) or a fixed amount. For fully reimbursed drugs patients have to pay a flat fee of 300 forint (about £0.90; €1.05; $1.40) per package.

A sizeable share of out of pocket expenses also goes on informal payments. These payments, which are made to doctors and, to a lesser extent, other health workers for services that should be free of charge, are a legacy of the communist era and remain despite attempts to formalise them. On average doctors earn 66-250% of their net official salary informally, with obstetricians and surgeons receiving the most; a typical payment for a delivery in Budapest is around 100 000 forint. Gratitude is said to be the main motivating factor, but evidence exists that patients are subject to a wide range of external and internal pressures to pay.

**Health workforce crisis**

The harsh cost containment programmes implemented since the mid-1990s have had direct repercussions on the health workforce, which mostly comprises salaried public employees. Wage freezes and cuts have made jobs in healthcare less attractive. Salaries have been falling as a share of the average wage since 2005, and since the financial crisis struck in 2008 they have also decreased in absolute terms.

Wages are a major driver for professional mobility in the EU, and Hungary is no exception. In 2009, general practitioners’ salaries were 1.4 times the average Hungarian wage and specialists 1.6 times the average, considerably lower ratios than those seen in some other European countries. Unsurprisingly, the number of doctors seeking higher pay abroad (mainly in the UK, Germany, Italy, and Austria) is rising, making Hungary a net donor country in terms of physician migration. Moreover, the outflow of health professionals seems to be increasing substantially while the inflow is diminishing. The number of foreign nurses who

---

**Table 3** | Out of pocket health expenditures per person in Hungary by year

<table>
<thead>
<tr>
<th>Year</th>
<th>2000</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medicines</td>
<td>60.7</td>
<td>65.6</td>
<td>65.0</td>
<td>68.6</td>
<td>71.5</td>
<td>70.9</td>
</tr>
<tr>
<td>Medical aids and prostheses</td>
<td>9.5</td>
<td>10.0</td>
<td>11.5</td>
<td>9.6</td>
<td>9.6</td>
<td>9.3</td>
</tr>
<tr>
<td>Outpatient care</td>
<td>29.2</td>
<td>29.5</td>
<td>28.9</td>
<td>28.7</td>
<td>27.4</td>
<td>26.7</td>
</tr>
<tr>
<td>Dental care</td>
<td>3.5</td>
<td>9.9</td>
<td>8.6</td>
<td>7.0</td>
<td>7.4</td>
<td></td>
</tr>
<tr>
<td>Inpatient care</td>
<td>6.8</td>
<td>9.0</td>
<td>9.2</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

1 forint = £0.002 (€0.003; $0.004) at current exchange rates.
The challenges facing the Hungarian health system are great. Since more money is unlikely to be forthcoming, improvements must be achieved through efficiency gains rather than increased public spending. Successive governments have failed to formulate a consistent legal and financial framework that would provide a stable and predictable flow of resources for the health system. However, a hypothecated tax on unhealthy foods introduced in September 2011, although likely to provide only small amounts of revenue, is a promising initiative.

The most important inefficiency is the lack of coordination between healthcare providers within and across levels of care, as well as between the health and the social sectors. Although reforms have mainly looked at public sector solutions to these problems, initiatives to privatise hospitals and to introduce a competitive health insurance model have regularly entered the debate. Parliament approved a plan to partly privatise the management of the NHIFA and to entrust the coordination of care to for profit companies in early 2008, but it was repealed only months later after the public voted against user charges in a national referendum. The current government has reverted to a public sector approach and recently decided to nationalise the 12 hospitals of the municipality of Budapest. This measure has been extended to all other local government owned hospitals and polyclinics, which represents another major step towards an NHS-type system.

Responding to the challenges

The challenges facing the Hungarian health system are great. Since more money is unlikely to be forthcoming, improvements must be achieved through efficiency gains rather than increased public spending. Successive governments have failed to formulate a consistent legal and financial framework that would provide a stable and predictable flow of resources for the health system. However, a hypothecated tax on unhealthy foods introduced in September 2011, although likely to provide only small amounts of revenue, is a promising initiative.

The most important inefficiency is the lack of coordination between healthcare providers within and across levels of care, as well as between the health and the social sectors. Although reforms have mainly looked at public sector solutions to these problems, initiatives to privatise hospitals and to introduce a competitive health insurance model have regularly entered the debate. Parliament approved a plan to partly privatise the management of the NHIFA and to entrust the coordination of care to for profit companies in early 2008, but it was repealed only months later after the public voted against user charges in a national referendum. The current government has reverted to a public sector approach and recently decided to nationalise the 12 hospitals of the municipality of Budapest. This measure has been extended to all other local government owned hospitals and polyclinics, which represents another major step towards an NHS-type system.

Incentives for providers to work more efficiently are sorely needed, as are measures to eliminate corruption. A care coordination pilot from 1999 tackled these problems as well as the lack of vertical integration between providers. It showed promising results but was dismantled in 2008 (box 4, see bmj.com). This can be explained by the better economic opportunities in the private market and, perhaps ironically, by increasing numbers of foreign patients coming to Hungary for affordable dental treatment.

Low wages, migration, reductions in capacity, and the ageing of health professionals—8.2% of practising doctors in Hungary were aged over 61 in 2007—have taken their toll on the health workforce, which fell from 129 000 in 2003 to 107 106 in 2010. Figure 3 shows that ratios of doctors and nurses to population in Hungary are lower than the average for the EU. It is not the current numbers of staff but the trend that is alarming because it could worsen problems with workforce distribution, especially in rural and remote areas. Large disparities already exist by region, level, and type of care as well as profession and specialty. Shortages exist in primary care, anaesthetics and intensive care, radiology, emergency medicine paediatrics, and neurology. In contrast, the per capita numbers of dentists increased by 56% between 2000 and 2008. This can be explained by the better economic opportunities in the private market and, perhaps ironically, by increasing numbers of foreign patients coming to Hungary for affordable dental treatment.

Low wages, migration, reductions in capacity, and the ageing of health professionals—8.2% of practising doctors in Hungary were aged over 61 in 2007—have taken their toll on the health workforce, which fell from 129 000 in 2003 to 107 106 in 2010. Figure 3 shows that ratios of doctors and nurses to population in Hungary are lower than the average for the EU. It is not the current numbers of staff but the trend that is alarming because it could worsen problems with workforce distribution, especially in rural and remote areas. Large disparities already exist by region, level, and type of care as well as profession and specialty. Shortages exist in primary care, anaesthetics and intensive care, radiology, emergency medicine paediatrics, and neurology. In contrast, the per capita numbers of dentists increased by 56% between 2000 and 2008. This can be explained by the better economic opportunities in the private market and, perhaps ironically, by increasing numbers of foreign patients coming to Hungary for affordable dental treatment.

Responding to the challenges

The challenges facing the Hungarian health system are great. Since more money is unlikely to be forthcoming, improvements must be achieved through efficiency gains rather than increased public spending. Successive governments have failed to formulate a consistent legal and financial framework that would provide a stable and predictable flow of resources for the health system. However, a hypothecated tax on unhealthy foods introduced in September 2011, although likely to provide only small amounts of revenue, is a promising initiative.

The most important inefficiency is the lack of coordination between healthcare providers within and across levels of care, as well as between the health and the social sectors. Although reforms have mainly looked at public sector solutions to these problems, initiatives to privatise hospitals and to introduce a competitive health insurance model have regularly entered the debate. Parliament approved a plan to partly privatise the management of the NHIFA and to entrust the coordination of care to for profit companies in early 2008, but it was repealed only months later after the public voted against user charges in a national referendum. The current government has reverted to a public sector approach and recently decided to nationalise the 12 hospitals of the municipality of Budapest. This measure has been extended to all other local government owned hospitals and polyclinics, which represents another major step towards an NHS-type system.

Incentives for providers to work more efficiently are sorely needed, as are measures to eliminate corruption. A care coordination pilot from 1999 tackled these problems as well as the lack of vertical integration between providers. It showed promising results but was dismantled in 2008 (box 4, see bmj.com). The government would be well advised to build on the experiences of such innovative models using combinations of better coordination and bundled payments.

Action is also needed to deal with the crisis in the health workforce. Although wage increases seem unlikely, other strategies are available. When asked in a recent survey about

Box 3 | Services excluded from Hungary’s publicly funded health system

<table>
<thead>
<tr>
<th>Services excluded from Hungary’s publicly funded health system</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-curative treatments for aesthetic or recreational purposes, such as plastic surgery</td>
</tr>
<tr>
<td>Services that are not proved to improve health, defined as interventions not included in the International Classification of Procedures in Medicine</td>
</tr>
<tr>
<td>Treatment of injuries resulting from extreme sports</td>
</tr>
<tr>
<td>Health services connected with professional sports</td>
</tr>
<tr>
<td>Sex change operations (except correction of congenital anomalies)</td>
</tr>
<tr>
<td>Abortion without medical indication</td>
</tr>
<tr>
<td>Sterilisation without medical indication</td>
</tr>
<tr>
<td>Manual therapy (physiotherapy, osteopathy, etc)</td>
</tr>
<tr>
<td>Population screening for prostate specific antigen</td>
</tr>
<tr>
<td>Medical examinations for certification and advice (such as for a driving licence or for forensic purposes)</td>
</tr>
<tr>
<td>Detoxification of drunk people admitted with alcohol poisoning</td>
</tr>
<tr>
<td>Occupational health services, including screening and examinations to assess risk exposure, but these have to be covered by employers</td>
</tr>
<tr>
<td>Health services delivered by providers without NHIFA contract</td>
</tr>
<tr>
<td>Drugs, medical aids, and prostheses, including dental prostheses, although a means tested exemption exists. Inpatient care includes the cost of drugs</td>
</tr>
</tbody>
</table>

Medical students and young doctors protest against healthcare reforms and low salaries in 2009
their reasons for leaving Hungary to work abroad, emigrant doctors cited the working environment (such as terms of employment, lower working hours, less administrative burden), the future perspective of Hungarian healthcare, career opportunities, and social prestige almost as often as higher pay. The government should consult the workforce to assess which non-monetary incentives (study leave, vacation, flexible working hours, access to training and education, occupational health counselling, recreational facilities, etc) could make the health professions more attractive.

Lastly, a more comprehensive approach to measuring system performance would be beneficial. It could improve governance by encouraging (or even requiring) the use of evidence in policy decisions and by making the system more transparent and accountable. Until now, such efforts have focused mostly on financial performance and provider activity. Although the NHIFA has been collecting detailed patient level data on use of healthcare services and drugs since 1993, this rich dataset has yet to be used extensively for monitoring and evaluation. Not until such obvious deficiencies are overcome will there be sustainable improvements in the performance of the Hungarian health system.

Péter Gaál is associate professor, Semmelweis University, Health Services Management Training Centre, Budapest, Hungary
Szabolcs Szigiété is national professional officer on health policy and health systems, WHO Country Office Hungary, Budapest, Hungary
Dimitra Panteli is researcher
Matthew Gaskins is researcher, Berlin University of Technology, Department of Health Care Management, Berlin, Germany
Ewout van Ginneken is senior researcher, Berlin University of Technology, Department of Health Care Management, Berlin, Germany and European Observatory on Health Systems and Policies, Berlin

Contributors and sources: PG, SS, DP, and MG have recently completed the 2011 Hungary health systems review (HTH), which served as the basis of this paper. EVG, DP, and MG have extensive experience with health systems in Europe and especially in the new EU member states through their involvement with the European Observatory on Health Systems and Policies. PG is an expert on health policy and the Hungarian health system; he was the lead author of the 1999 and 2004 HIT profiles. SS has worked as national policy officer in the WHO Country Office in Hungary on health system and policies. EVG devised the article and wrote the first draft, which was revised by PG and SS. EVG, DP, PG, SS, and MG contributed to subsequent drafts. The last draft was revised by EVG and MG. A revised draft was prepared by EVG and PG. All have read and agreed with the final version. EVG is the guarantor. Competing interests: All authors have completed the ICMJE unified disclosure form at www.icmje.org/coiDisclosure.pdf (available on request from the corresponding author) and declare no support from any organisation for the submitted work and no financial relationships with any organisation that might have an interest in the submitted work in the previous three years. PG is an unpaid advisor to the state secretary for health in the Ministry of National Resources and is an unpaid member of his cabinet.

Provenance and peer review: Commissioned; externally peer reviewed.
3 WHO Regional Office for Europe: European Health for All database (HFA-DB). www.euro.who.int/hfadb (accessed May 2011)
4 Adány R. A magyar lakosság egészségügyi állapota, különös tekintettel az eredetifordulati utáni időszakra [The health status of the Hungarian population, with special reference to the period after the turn of the millennium]. Népegészségügyi 2008;86:5-20.
17 Kádár A. Foglalkozás illetlen foglalkozás [Successful business—creating local wealth, not draining resources.]
18 No frills: Basic services. Fast, efficient, and result driven. If you want business class comfort, you pay for a business class hospital. The NHS would provide hospital service, not hotel service. No optional extras—no lifestyle, cosmetic, or non-core surgery. A non-negotiable list of essential medications generated centrally. If you want medications not on the list, you pay. No more, no less.
19 365 day service: Same healthcare, same staff, same service every day. Non-uniformed—from porters to pilots; care workers to consultants. Multi-tasking—doctors push trolleys, and nurses make beds. And you know that when you turn up, it flies.
20 365 day service: Same healthcare, same staff, same service every day. Non-uniformed—form porters to pilots; care workers to consultants. Multi-tasking—doctors push trolleys, and nurses make beds. And you know that when you turn up, it flies.
21 No travel agents: No GPs.
22 Airports compete: Cities and communities compete and subsidise Ryanair because of the employment and economic benefits of being a Ryanair destination. Similarly, cities and communities would compete for hospitals because of employment, ancillary industry, and the generation of disposable income. Hospitals are a major business—creating local wealth, not draining resources.
23 Amazing success: Love them or loathe them, Ryanair thrives while other airlines struggle. Low cost travel accessible to everyone. Can we say the same about the NHS?

This paper was prepared in conjunction with the European Observatory on Health Systems and Policies (www.healthobservatory.eu).

Cite this as: BMJ 2011;343:d7657

FROM BMJ.COM

If Ryanair ran the NHS . . .

No frills: Basic services. Fast, efficient, and result driven. If you want business class comfort, you pay for a business class hospital. The NHS would provide hospital service, not hotel service. No optional extras—no lifestyle, cosmetic, or non-core surgery. A non-negotiable list of essential medications generated centrally. If you want medications not on the list, you pay. No more, no less.

365 day service: Same healthcare, same staff, same service every day. Non-uniformed—from porters to pilots; care workers to consultants. Multi-tasking—doctors push trolleys, and nurses make beds. And you know that when you turn up, it flies.

Clean modern ergonomically designed aircraft: Wards redesigned for cleanliness. No corners, no hidden spaces, everything removable so wards can be hosed down, cleaned, and turned around overnight. No cupboards, radiators, windowsills, or furniture, and fully portable beds.

Pay for extras: Rent your bed liner on admission, or buy disposable. Food provided by competitive franchises tendering for hospital.

Non-core nursing duties either provided by family or purchased from an outside provider. Metered light, heat, telephone, and television.

Online booking: Make your own outpatient appointment—a credit card non-refundable deposit to discourage missed appointments. Book your own admission—premium times attract premium deposits. Pay for priority boarding if you wish.

No travel agents: No GPs.

Airports compete: Cities and communities compete and subsidise Ryanair because of the employment and economic benefits of being a Ryanair destination. Similarly, cities and communities would compete for hospitals because of employment, ancillary industry, and the generation of disposable income. Hospitals are a major business—creating local wealth, not draining resources.