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Review Paper

Comparison of the Hungarian and Scottish communicable disease control systems: Lessons for a convergent European Community

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SUMMARY

Background: European public health systems are converging, particularly in relation to communicable disease control. This process requires mutual learning through comparison; this was undertaken for Scotland (population 5.1 million) and Hungary (population 10.5 million).

Methods: Using the official web- and paper-based publications, the practice of communicable disease control was compared between the two countries in three specific fields: seasonal influenza surveillance; human immunodeficiency virus (HIV) surveillance; and the childhood vaccination system.

Results: The organization structure for communicable disease control was very similar, comprising of government, national, regional and sub-regional tiers in Hungary, and government, national and local (sub-regional) tiers in Scotland. The influenza surveillance system in both countries was mainly based on the 'fluspotter system'. In the 2005/6, 2006/7 and 2007/8 seasons, there was no exceptional influenza activity in either country. Although the data collection and surveillance system of HIV is similar, there was a massive difference in the number of reported cases. In 2007, the cumulative incidence of reported HIV cases was 14.74/100,000 in Hungary and 105.21/100,000 in Scotland. The routine childhood vaccination schedule is similar in the two countries. However, while the vaccine uptake rates were nearly 100% in Hungary, these rates were lower in Scotland. The numbers of reported pertussis (98 vs 48), mumps (2741 vs 16), rubella (146 vs 0) and measles (168 vs zero) cases were significantly higher in Scotland than in Hungary. There were no differences for polio and chickenpox.

Conclusions: The economic difference between the two countries not reflected in the efficiency of communicable disease control and in communicable disease patterns. The historical, political and cultural differences seem more determinative in this comparison.

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Introduction

The European Community (EC) shares public health goals that are especially focused on communicable diseases.^{1,2} The

enlargement yet increasing convergence of the EC offers opportunities for cross-national learning through comparison of systems and outcomes. This paper reports such an exercise for two of the smaller EC states: Hungary and Scotland. These

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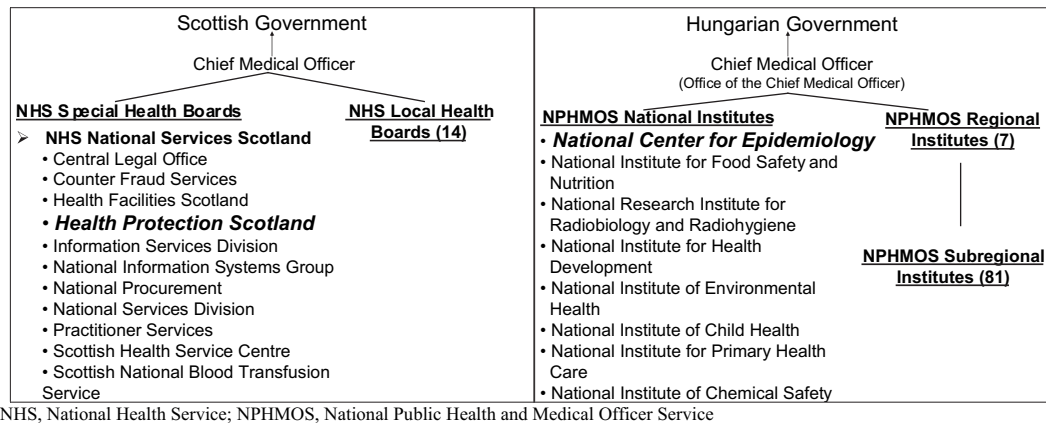


Figure 1 – Structure of the National Public Health Services in Scotland and Hungary.

states were chosen because the first author (DS) came from Hungary to Scotland to learn about the Scottish system. In an era when the volume of international migration is steeply increasing around Europe and the importance of the International Health Regulations 2005 is growing, the exercise offers some lessons that warrant further reflection, including whether there would be benefits from a pan-EC exercise of this kind.

Scotland, as part of the UK, joined the EC in 1973, and Hungary joined in 2004. Although within the same political-economical community, there are still remarkable differences between their economies. In 2005, the gross domestic product, the marker of a state's economic strength, was \$16,970 per capita in Hungary and \$33,460 in Scotland.

Nearly twice as many people live in Hungary as in Scotland (10.45 million and 5.14 million, respectively, in 2007). The dominant ethnic group in both countries is White European. The largest ethnic minority group in Hungary is the Gypsy or Roma community (1.9% of the population), while in Scotland, it is the South Asian population (1.09% of the population). Life expectancy at birth is lower in Hungary than Scotland for both genders, but the difference in males is remarkable (–5.8 years in 2006).^{3,4} Diseases of the circulatory system and cancer are the leading causes of death in both countries. Infectious and parasitic diseases are responsible for a modest proportion of all deaths in each country.^{5,6}

This study examined the communicable disease control systems in an economically stronger old European Union state, Scotland, and a recently joined country with a weaker economy, Hungary. The aim of this study was to derive lessons for a unifying Europe.

Methods

Official web- and paper-based publications were used to compare the two countries' communicable disease control systems and communicable disease patterns. Data and reports published by the National Public Health and Medical Officer Service (NPHMOS), the National Centre for Epidemiology (NCE) and the Hungarian Central Statistical Office were used to collect information from Hungary.⁷⁻¹⁴ Beyond these, country reports from Hungary published by international organizations [World

Health Organization (WHO), Joint United Nations Programme of HIV/AIDS (UNAIDS)] were used.¹⁵⁻¹⁷ Data and reports by the National Health Service National Services Scotland (NHSNSS), Health Protection Scotland (HPS) and the Information Services Division were used to collect information from Scotland.¹⁸⁻²⁶

In addition to the structure of the surveillance systems and their most important control measures, the numbers of reported influenza, human immunodeficiency virus (HIV) and vaccine-preventable communicable childhood diseases were examined.

Results

Communicable disease control services

In both countries, the prevention and control of communicable diseases is a task for national public health services. Fig. 1 summarizes the structure. In Hungary, the NPHMOS is responsible for public health, epidemiology, health promotion, health service administration and the health service. It is headed by the Chief Medical Officer, who completes his/her task under the Minister of Health. The service is delivered through national institutes, and NPHMOS offices at national, regional and sub-regional levels. The national institutes are the methodological centres of their particular medical specializations, and the National Centre for Epidemiology is responsible for the prevention and control of communicable diseases. On a territorial basis, NPHMOS is organized at three levels: the Office of the Chief Medical Officer, seven regional offices and 81 sub-regional institutes.^{7,8,15}

In Scotland, the National Health Service (NHS) is organized by the Scottish Government (including the Chief Medical Officer) and is delivered through special health boards and geographically-based local health boards. One of the eight special health boards is NHSNSS. The division of the NHS that is responsible for the prevention and control of communicable diseases is HPS. The 14 local health boards represent the local level of public health services and they cover the country on a territorial basis.^{18,19}

The information flow from bedside to the national surveillance centre is very similar in the two countries. In

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