Impact of health reforms on child health services in Europe: the case of Bulgaria

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Background: In the last two decades, all countries in Europe have embarked on substantial health reforms, introducing new models of financing and provision of health services. Using Bulgaria as a case study, this article examines the impact of the reforms on child health services. Methods: This is the first of a series of papers drawing on a broader research on inequalities in access to child health services, using Bulgaria as a case study. Multiple methods and data sources were used, including a review of the literature and existing epidemiological data, 50 qualitative in-depth interviews and an analysis of regulatory documents. This article presents the findings of the documentary analysis. Results: Primary health services for children are now provided by general practitioners. Children are exempted from health insurance contributions and user fees and are formally entitled to free health care. During the first years of the reform general practitioners still had insufficient training in child health. Restrictions on the number of referrals to paediatricians and discontinuation of community services at a time when general practice was not well established, undermined access to quality care. Conclusion: While many of these issues have been subsequently addressed, the reform process was far from linear. Challenges remain in ensuring access to quality child health services to the rural population and marginalized groups, such as the Roma minority and children with disabilities. Throughout Europe, health reforms need to be based on solid evidence of what works best for improving quality of and access to child health services.

Keywords: access to care, child health services, health reform, inequalities.

Introduction

There are significant differences in how child health services are organized throughout Europe, with varying roles of primary care professionals and paediatricians across and within countries.¹ This applies particularly to the level of paediatric primary care, three principal models of which can be distinguished: a paediatric system of primary care; a general practitioner (GP)/family doctor system; and, most commonly, both systems coexisting.² With the end of communism, the countries in Central and Eastern Europe inherited a Soviet-style health care system. Primary child health services, free at the point of use, were delivered through outpatient specialists in paediatrics (district paediatricians) and school health services. Health services were provided by state-owned health facilities that were centrally planned and managed and financed through national insurance systems. Tertiary care was provided by children’s departments at the university hospital.¹⁰

While many of the features of the Soviet model remained in the post-communist period, the health indicators of the region (Sliven) which had the worst health outcomes in 2006,⁶ the infant mortality rate worsened in the initial period post-communism, with IMR increasing from 13.6 per 1000 live births in 1988 to 17.5/1000 in 1997.⁵ By 2006, the infant mortality rate had improved to 9.7 per 1000 live births. However, this figure masks significant differences between rural areas (13.1/1000) and urban areas (8.6/1000).² Importantly, the region of Sliven which had the worst health indicators (IMR of 16.7/1000 in 2006) also had the greatest population of Roma (17.6%), and is ranked lowest on socioeconomic development among 28 administrative regions in Bulgaria.⁸

Exploring the case of Bulgaria, this article examines the impact of key health reforms on the provision of child health services in Europe. Bulgaria is a post-communist country situated in South-East Europe, which joined the European Union on 1 January 2007. It has a population of 7.640 million including 18.6% children under the age of 18 years.⁴ According to the 2001 census, Bulgaria’s population consists of an ethnic Bulgarian majority (83.9%), with two main minorities, Turks (9.4%) and Roma (4.7%).⁴ The GDP has been growing over the last 10 years and in 2007 was 11302 USD (PPP), while the unemployment rate in 2008 was less than 6% of the labour force.³ Infant mortality (IMR) worsened in the initial period post-communism, with IMR increasing from 13.6 per 1000 live births in 1988 to 17.5/1000 in 1997.⁵ By 2006, the infant mortality rate had improved to 9.7 per 1000 live births. However, this figure masks significant differences between rural areas (13.1/1000) and urban areas (8.6/1000).² Importantly, the region (Sliven) which had the worst health indicators (IMR of 16.7/1000 in 2006) also had the greatest population of Roma (17.6%), and is ranked lowest on socioeconomic development among 28 administrative regions in Bulgaria.⁸

During the first decade of the transition to democracy and market economy (1989–1998), the Bulgarian health system retained the main features of the Soviet model. Primary care and secondary (specialist) outpatient care in cities and larger towns were provided in designated facilities called polyclinics.⁹ In rural areas, primary care was provided by single physicians or feldshers (medical assistants), assisted by nurses. In urban areas, patients were allocated by their address to three types of district physicians: an internal medicine physician (therapist), an obstetrician-gynaecologist, a paediatrician and a dentist.¹⁰ Usually, patients consulted one of these doctors first and, if necessary, were referred to specialists at the same polyclinic or at the hospital. However, the district physicians did not have a strict gate-keeping role and often patients self-referred directly to a specialist. Thus, much of primary care was provided by specialists in polyclinics rather than generalists, and it was difficult to distinguish between primary and secondary levels of care.¹⁰ The secondary care level included children’s departments at the district municipal hospitals. Tertiary care was provided by children’s departments at the...
medical universities’ clinics and specialized children’s hospitals. In addition, there were school health services provided by doctors and/or nurses based in schools. They provided care for acute illnesses, minor injuries, health promotion and prophylactic examinations. The tasks of district paediatricians focused on treatment of acute illness, follow-up of chronically ill children, growth and development monitoring, and immunizations. Children with chronic conditions were placed on registers at the polyclinic (so-called dispensary groups) to facilitate follow-up and secondary prevention. However, links between medical and social services were poor, there were no developed services for child protection, and most children with learning and other disabilities were placed in ‘special schools’ or long-term institutions. There were also marked inequalities in access to child health services due to the uneven geographical distribution of health infrastructure and personnel, which favoured urban over rural areas.

Methods
This article reports one component of a broader research on inequalities in access to child health services, using Bulgaria as a case study. The theoretical approach of the study adopted a broad view of the concept of access to care, recognizing the interplay of a number of different factors of the health system and service providers (supply side) and characteristics, attitudes and behaviour of service users (demand side factors). The case study research strategy has been defined as ‘an empirical enquiry that investigates a contemporary phenomenon within its real-life context’ and is characterized by using multiple methods of data collection and sources of evidence. Fifty qualitative in-depth interviews were conducted during four field visits between October 2005 and April 2007 with providers (general practitioners and paediatricians) and users of services (parents/carers of young children), policy makers from governmental departments and international organizations, and NGOs working with ethnic minorities, disabled children, those in institutions and homeless youth. The interview data collection and analysis was informed by the principles of grounded theory. The documentary analysis included regulatory documents, reports of governmental departments, international agencies and non-governmental organizations, and research published in English and Bulgarian. The interviews and the documentary analysis were undertaken simultaneously and the critical review of the regulatory documents was informed by the participants’ views on particular aspects of the health reform and its impact on access to health services for children. In turn, the review of the regulatory documents and wider literature informed further collection of qualitative data. This paper presents the findings of the documentary analysis, while the results and interpretation of the qualitative interviews will be presented elsewhere.

Results
Introduction of social health insurance
It was not until the late 1990s that major reforms in the health system took place. These included changes in the financing of the health system, a reorganization of primary health care, and a reform of the hospital sector. The Health Insurance Act (1998) introduced compulsory health insurance in Bulgaria. The National Health Insurance Fund (NHIF) was established to raise additional revenue for the health sector with the aim of financing primary care providers and hospitals. Health insurance contributions were initially set at 6% of wages and shared between employers and employees at a ratio of 80:20, to reach 8% and 50:50, respectively, in 2009. Insured individuals have to pay user fees for every consultation with a GP or a specialist, set at 1% of the minimum monthly salary (110 Euro in 2008), and per day of hospitalization, set at 2% of the minimum salary for a maximum of 10 days per year.

The Health Insurance Act underwent numerous amendments since it was first passed in 1998. Initially, children were insured by a working insured member of the family who paid additional insurance contributions for their dependents. Subsequent amendments to the Health Insurance Act exempted children under 18 years of age from health insurance contributions. At present, children are entitled to the basic benefits package of medical and dental services (primary, specialist outpatient, hospital and highly specialized services) paid by the NHIF, including prophylactic examinations and investigations. Children under 18 years, pregnant women and mothers of newborns up to 45 days after delivery, as well as other groups of the population, are exempted from user fees.

Several challenges have been associated with the health insurance system. One of the major problems relates to those who are not covered by the system. According to official data, towards the end of 2007, the number of health-insured individuals in Bulgaria was 6 647 084, which means that nearly 1 million people (or 13% of the population) were without health insurance coverage. One of the population groups most at risk of being excluded from the insurance system are the Roma, 46% of whom were reported to be without health insurance in 2005.

Restructuring primary health care
Restructuring primary health care was the cornerstone of the health reform, as it was considered the most important level of services for meeting the health needs of the population. In 2000, the health reform introduced general practice as the main form of providing primary health services. GPs work in individual practices, group practices or outpatient departments which conclude contracts with the NHIF. In 2006, there were 5128 GPs working in 4456 individual or group practices.

Since the introduction of a general practitioners-based system, primary health care services for children are provided by GPs. Many physicians, who previously worked as specialists in internal medicine, paediatrics or another specialty, became GPs, but usually without appropriate training in general medicine. By 2006, only 1.7% of the GPs had a qualification in ‘general practice’, which has obvious implications for the quality of services they provide and for their capacity to fulfill their designated role as gatekeepers to the system.

GPs are obliged by law to provide services 24 h a day. In practice, however, there are problems with the provision of out-of-hours services, as GPs are often not available in the evenings and weekends, leading to an excess use of emergency services. The introduction of general practice was also associated with a discontinuation of community health services, such as healthy baby clinics or visiting nurses. The chronic disease registers (dispensary groups) were abolished, only to be reintroduced again in 2004. School health services were considered to be inefficient and subsequently abandoned. Restoration of these services has been recently debated, and a new decree from 2008 allocated additional budgets to the municipalities for school health personnel. There were concerns also about the provision and quality of care for newborns after discharge from maternity hospitals. During the first days after discharge from maternity hospital, many newborn babies remained without surveillance by a physician or a nurse.
One administrative mechanism to enforce the GP’s role as gatekeepers was a restriction on the number of referrals a GP could issue each month to specialists in outpatient facilities, the so-called ‘regulatory standard’. In the first years of the reform, between 1998 and 2005, the number of referrals GPs could issue for specialist outpatient paediatricians were subject to the same restrictions as referrals for adults to other specialists. As a result, access to specialist paediatric services became very difficult, and many parents were forced to seek such services privately against payment or to rely on self-treatment. Furthermore, a large proportion of children received primary health care by physicians with insufficient training, which resulted in errors in diagnosis, delayed referral to a specialist and delayed admission to hospital in a worsened clinical condition. These problems were recognized as barriers to access to quality care for children and subsequently children from 0 to 6 years of age were exempted from the ‘regulatory standard’. From 2006, the age limit was extended to 14 years. Consequently, the primary consultations of children with specialist outpatient paediatricians increased dramatically from 21,785 in 2005 to 33,562 in 2006.

Reform of hospital services

One of the main aims of the reform was to increase the cost-effectiveness of the health sector by strengthening primary care services and reducing unnecessary hospitalizations. As in other countries, in Central and Eastern Europe, the National Health Insurance Fund introduced a new way of paying for hospital services, based on clinical pathways. The number of clinical pathways grew from 30 in 2001 covering 158 diagnoses to 298 pathways covering about 7500 diagnoses in 2008. However, most of the pathways are common for adults and children and only 40 pathways in 2008 were specific for children.

Another problem is that clinical pathways in their current content cannot be used as a substitute of detailed evidence-based clinical guidelines, and are not sufficient for monitoring quality of care. They have also been criticized for better suiting standard medical conditions rather than unusual or unpredictable ones, and cannot respond to unexpected changes in a patient’s condition. This may be particularly true for children who may present very unwell, but the diagnosis may be difficult to establish.

Persisting inequalities in access to care

As in many other countries in Europe, facilities and human resources are not evenly distributed in Bulgaria, creating considerable geographical inequities when accessing child health services that have not been overcome through the reform. In 2006, there were 273 people per physician in Bulgaria, but this ratio varied from 207 people per physician in the capital Sofia to 419 people per physician in the region of Razgrad, a region with a large ethnic minority population. In 2006 there were 991 children per paediatrician. Specialist paediatric care, however, is concentrated in large urban areas. The provision of the population with GPs was 78 per 100,000 in 2006, compared to 103 per 100,000 in the EU15, but there were large regional variations, ranging from 91 per 100,000 in Pleven to 55 per 100,000 in Targovishte (Table 1).

Persons with health insurance have the right to register with a GP anywhere on the territory of the country without territorial restriction, and may change their GP every 6 months. In urban areas parents often choose to register their children with a GP who was formerly a specialist paediatrician. In rural and remote areas there are limited opportunities for choosing family physicians, because of distances and travel costs. Rural residents rarely resort to emergency medical care because they live far away from emergency centres; on average 14.4 km, compared with 2.8 km for city residents.

In order to mitigate regional imbalances in the provision of GP services, the NHIF introduced additional payments for GPs working in areas classified as ‘unfavourable’ (remote, rural, or mountainous regions). In spite of these incentives, 17.8% of ‘unfavourable’ practices remained vacant in 2006. One of the major barriers to accessing child health services in the years of transition was associated with a dramatic rise in the costs of pharmaceuticals – a result of market liberalization and the import of expensive foreign drugs. The share of pharmaceutical expenditure out of total government expenditure on health increased from 12.3% in 1990 to 23.8% in 1998. The affordability of pharmaceuticals remains a major barrier to accessing child health services also after the start of the reform in 1998. Although some drugs for chronically ill children are reimbursed by the NHIF, the high cost of drugs relative to income for acute child illness presents a substantial financial burden.

The introduction of mandatory social health insurance aimed to secure a guaranteed funding for the health sector, but failed to raise sufficient revenue. Today, private out-of-pocket payments (including official user-fees and informal payments) present a higher proportion of health expenditure than prior to the reform, undermining the principle of equal access to care. In a national survey conducted in 2005 within the International Social Survey Programme (ISSP), 35.2% of respondents stated that on several occasions in the past 12 months they could not afford medical care or medicines for their children. Dental care was even less accessible with 41.8% of the respondents not having enough money to spend for dental services for their children often or several times in 2005.

According to the 2001 census, 14.8% of the ethnic Bulgarian children 0–17 years consulted paediatricians during the month prior to the interview, compared with 9.9% of the Turkish children and 5.6% of the Roma children (5.6%). Possible explanations of these differences in utilization of specialist paediatric services could be that a larger proportion of the Roma population lives in rural areas, where geographical access to specialists is more difficult. Informational, cultural and financial barriers to access are likely to play a role as well, associated with poverty, poor education and discrimination.

A delayed public health response contributed to a large outbreak of hepatitis A in a Roma ghetto in Plovdiv, affecting mostly Roma children.

Disabled children in Bulgaria continue to face insurmountable cultural, social and economic barriers in accessing services. Widespread stigma and lack of community-based services for rehabilitation and social integration of these children contribute to high rates of institutionalization. Although medical services for children in institutions are financed from the state budget, the quality of services is poor. Healthcare staff working in institutions usually lack appropriate training and skills to diagnose and manage complex health needs of children.

### Table 1 Human resources in Bulgaria in 2006

<table>
<thead>
<tr>
<th>Provider</th>
<th>Value</th>
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<tbody>
<tr>
<td>Physicians</td>
<td>1 per 273 population</td>
</tr>
<tr>
<td>(ranging from 207 in Sofia to 419 in Razgrad)</td>
<td></td>
</tr>
<tr>
<td>Paediatricians</td>
<td>1 per 991 children</td>
</tr>
<tr>
<td>GPs</td>
<td>1 per 1282 population (ranging from 1099 in Pleven to 1818 in Targovishte)</td>
</tr>
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Source: NSI.
Discussion

The experience of transforming child health services in Bulgaria offers a number of lessons that are relevant to other countries in Europe. One major issue concerns whether children are seen by family physicians or paediatricians. There is a long-running academic debate about which type of doctor is better placed to provide paediatric primary care. Evidence from the United States shows significant differences in terms of medical care and specialty referral patterns. Most general practitioners lack training in community paediatrics regarding issues such as mental health, immunizations and other preventive measures. Where child health services are provided by family physicians, they need to be appropriately trained and to know when to refer children to paediatricians.

The case of Bulgaria illustrates that the transition from a paediatric system of primary care to a mixed system requires a comprehensive approach, to make sure that there is no deterioration in the availability and accessibility of services. The initial reforms introduced organizational or financial barriers to the utilization of child health services, which limited access to qualified paediatric care and ran counter to the legal obligation to provide ‘accessible and quality health care, with priority for children, pregnant women and mothers of children under one year of age’. The resulting deterioration of child health services was criticized in independent evaluations and by Bulgaria’s professional paediatric community and policymakers reversed the controversial elements of the reform.

As the above section on access to care has illustrated, the health reform process in Bulgaria had unintended negative consequences for the provision of child health services. The desire to strengthen primary health care and introduce a health insurance system resulted in new barriers to accessing services in terms of primary care, community services, paediatric care and hospital care. This suggests that similar reforms in other countries will need to ensure a proper training of primary care workers, as well as embedding primary care in community services and ensuring a seamless coordination with higher levels of care.

Despite its economic constraints, Bulgaria has opted for a model of child health services which aims to ensure that children can access free care. The process, however, has not been straightforward, but involved a series of amendments, such as to health insurance coverage, in many instances reversing changes introduced earlier in the reform process. This highlights the incremental nature of health reforms and the necessity to adjust them swiftly when problems in the utilization of services arise. Of particular importance in the Bulgarian case was that children are now exempted from co-payments and health insurance contributions and that they have access to quality health services.

While many countries of Central and Eastern Europe have, like Bulgaria, been moving from a system of polyclinics to a GP-led system of paediatric primary care in the years since the collapse of the Soviet bloc, many countries in Western Europe are actively considering a transition towards paediatric-led primary care for children. England is now introducing the polyclinic model of health care delivery that countries in Central and Eastern Europe were so recently encouraged to give up. Our article suggests that these and other health reforms will need to be based on a more solid evidence base of what works best for improving quality of and access to child health services.

Key points

- Health reforms in Europe need to ensure that children have access to quality health services.
- In Bulgaria, children were exempted from insurance contributions and user fees for outpatient and hospital services.
- Responsibility for the provision of primary care for children was transferred from district paediatricians to general practitioners, not all of whom had appropriate training in child health.
- Initial restrictions on referrals by general practitioners affected access to quality paediatric care and were subsequently removed.
- Family physicians need to be appropriately trained in child health and – where clinically indicated – have to be able to refer children to specialists without facing arbitrary restrictions.

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References
