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Why do health systems matter? Exploring links between health systems and HIV response: a case study from Russia

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Introduction Studies on the relevance of stronger health systems to the success of vertical programmes has focused mainly on developing countries with fragile infrastructures and limited human resources. Research in middle-income, and particularly post-Soviet, settings has been scarce. This article examines the relationships between health system characteristics and the HIV response in Russia, the country which towards the end of the Soviet period had the world's highest ratios of doctors and hospital beds to population and yet struggled to address the growing threat of HIV/AIDS.

Methods The study is based on semi-structured qualitative interviews with policy-makers and senior health care managers in two Russian regions, and a review of published and unpublished sources on health systems and HIV in Russia.

Findings We identified a number of factors associated with the system's failure to address the epidemic. We argue that these factors are not unique to HIV/AIDS. The features of the wider health system within which the HIV response was set up influenced the structure and capacities of the programme, particularly its regulatory and clinical orientation; the discrepancy between formal commitments and implementation; the focus on screening services; and problems with scaling up interventions targeting high-risk groups.

Discussion The system–programme interplay is as important in middle-income countries as in poorer settings. An advanced health care infrastructure cannot protect health systems from potential failures in the delivery of vertical programmes. The HIV response cannot be effective, efficient and responsive to the needs of the population if the broader health system does not adhere to the same principles. Strengthening HIV responses in post-Soviet societies will require improvements in their wider health systems, namely advocacy of prevention for high-risk populations, reallocation of resources from curative towards preventive services, building decision-making capacities at the local level, and developing better working environments for health care staff.

Keywords HIV/AIDS, health system, health reform, Russia, Commonwealth of Independent States

KEY MESSAGES

- There are a number of pathways through which health system features may impact on the HIV/AIDS programmatic response.
- The debates on the health system–HIV/AIDS interplay in developing country settings are equally relevant to middle-income countries, where the systems' infrastructure and human capital are much more advanced.
- The Russian HIV response was influenced by both the features of the system inherited from the Soviet times and the changes introduced in the post-communist period of reforms.

Introduction

There has been a rich conceptual discourse on the interactions between HIV/AIDS programmes and their wider health system contexts (Lee 2003; WHO 2003a; Atun 2005a; WHO 2007). However, empirical research exploring the pathways through which these interactions may occur has been limited. Such evidence as does exist (Mayhew 2003; Doherty *et al*. 2005; Barker *et al*. 2007; Dawad and Veenstra 2007) comes from low-income countries with distorted or weak health systems characterized by insufficient infrastructure, poor access to services and a lack of skilled workers. Studies in middle-income countries and particularly post-Soviet societies have been scarce (Atun *et al*. 2004; Coker *et al*. 2004), even though a better understanding of the health system–HIV/AIDS interplay in these settings would be of critical importance. The health systems that emerged from the Soviet Semashko model had extensive physical infrastructure, universal access to services and high numbers of health care staff (Twigg 1999; Tkatchenko *et al*. 2000; Borowitz and Atun 2006), and yet, when the HIV/AIDS epidemic hit the post-Soviet societies, the systems struggled to address the crisis rapidly and effectively (UNAIDS 2004; UNAIDS 2008; Wall *et al*. 2006; Mounier *et al*. 2007).

Furthermore, in the early 1990s most post-Soviet countries underwent a series of organizational reforms in the health sector (Davidow 1996; Twigg 1999; Venedictov 1999; Dixon *et al*. 2002). Over the years significant changes in health care financing and governance were put in place (Langenbrunner 1996; Burger *et al*. 1998; Chernichovsky and Potapchik 1999; Tkatchenko *et al*. 2000). However, only a few attempts have been made to evaluate the impact of the reforms on either the overall performance of the health sector or the delivery of specific vertical programmes, such as HIV/AIDS (Figueras *et al*. 2002; Twigg 2002; Tragakes and Lessof 2003; Dimitrova *et al*. 2006).

In this article we examine the relationships between health system characteristics and the HIV response in Russia, the country which in the past two decades has been simultaneously confronted with a rapidly changing political and social environment, reorganization of public services, a transition to market economy and an unfolding threat from HIV/AIDS (Chenet *et al*. 1996; Drobniewski *et al*. 2004; Atun 2005b).

In 2002 the United Nations Joint Programme on HIV/AIDS (UNAIDS) described the Russian HIV epidemic as 'the most rapidly growing ... in history and yet one of the most under-addressed in terms of response' (Piot 2002). The number of HIV-positive individuals in Russia is estimated at 940 000 with about 50 000 new infections diagnosed annually (UNAIDS 2009). Critics of the Russian HIV response noted inefficient use of financial resources; excessive focus on testing; low priority given to prevention targeting high-risk populations, particularly injecting drug users (IDUs) and sex workers; and repressive drug laws and police practices, which undermined the few preventative initiatives available to vulnerable groups (Rhodes *et al*. 1999; Badrieva 2001; UNDP 2004; Rhodes *et al*. 2006). Many publications have discussed the Russian epidemic (Hamers and Downs 2003; Balabanova *et al*. 2006; Malinowska-Sempruch 2006; Mounier *et al*. 2007) but few have attempted to systematically analyse the causes of the system's failure to respond to the crisis (Coker *et al*. 2004; Tkatchenko-Schmidt *et al*. 2008). Even fewer studies have looked at the relationships between the Russian health system and HIV/AIDS from the perspective of local policy-makers, practitioners or service users (Atun *et al*. 2005; Rese *et al*. 2005; Bobrova *et al*. 2008).

For the purpose of this article we define a *health system* as 'all the activities whose primary purpose is to promote, restore or maintain health' (WHO 2000: 5). This includes all the institutions, formal services, actors and resources within the health sector that are involved in the financing, regulation, organization and provision of health (Murray and Frenk 2000). The main source of data presented here is semi-structured qualitative interviews with policy-makers and senior health care managers in two Russian regions (Altai Krai and Volgograd Oblast). In order to complement and triangulate our findings we also reviewed a wide range of published and unpublished literature on the health system and HIV response in Russia. Our interpretation of results is based on an analytical framework proposed by Melgaard *et al*. (1998). They examined the relationships between vertical programmes and their wider systemic contexts, and identified five elements through which health system characteristics can either facilitate or jeopardize the delivery of a specific health programme:

(1) overall health policy and strategic planning;
(2) organizational structures and processes;
(3) financial resources;
(4) human resources;
(5) service management and delivery.

We do not discuss the impact of wider socio-economic or cultural factors on the HIV/AIDS response, as this is examined by us elsewhere (Atun *et al*. 2005).

Methods

We conducted qualitative semi-structured face-to-face interviews with Russian policy-makers and senior health care managers in two Russian regions, Altai Krai (Western Siberia) and Volgograd Oblast (south-west Russia). The regions each have a population of about 2.7 million (Goskomstat 2003) and are in the top third of the Russian regions most affected by HIV/AIDS (AIDS Foundation East–West 2004). The study was the qualitative part of a multi-method research project investigating the interactions between health systems and HIV/AIDS.

All interviews took place in 2005. The questions focused on the current state of the health system, the challenges health providers faced in general and in HIV/AIDS, whether and how the health reforms had impacted the health sector, and the implications of the systemic changes for the HIV/AIDS response.

The informants were selected by purposive sampling; all were members of the Regional Interdepartmental Committees on AIDS (ICA). These are coordinating structures set up in all Russian regions in the mid-1990s to develop and monitor local policies and programmes on HIV/AIDS. The informants included the heads of local services [HIV/AIDS, drug treatment, sexually transmitted infections (STIs)]; senior officials from government departments (health, education, social care, youth, police); senior academics; and the manager of one non-governmental organization (NGO). There were 16 ICA members in Altai and 20 in Volgograd. All informants in Volgograd agreed to participate; three officials from Altai declined due to travel commitments at the time of the study.

The research was explained to all participants and free, informed consent was obtained in all cases. Ethical approval was granted by the Riverside Research Ethics Committee in the UK. There were no local Ethics Committees at the time of the study, but administrative approvals were obtained from the local authorities and departments of health in both regions.

The interviews lasted between 45 and 75 minutes; all were audio-taped and transcribed verbatim. The initial framework of the key themes was developed using open coding. This was done by two researchers and cross-checked between them for consistency. The data from different interviews were placed on compilation sheets under respective codes and sub-codes; and several thematic charts were constructed to allocate the data across the respondents. This was followed by axial coding to establish connections between different categories and selective coding to select the key emerging themes. The themes were then grouped under the wider headings of Melgaard *et al*.'s framework. Explanations on possible links between health system characteristics and the nature of the HIV response were developed using the grounded theory approach (Glaser and Strauss 1967; Suddaby 2006).

As our informants represented largely stakeholders involved in HIV/AIDS and may not have been exposed to all aspects of the wider health system, we have complemented our discussion of the systemic context with data from a range of literature sources on the health system in Russia. The published academic literature was selected through the PubMed electronic database using the key words 'health system and Russia'; 'health reforms and Russia'; 'health services and Russia'; and 'health system and HIV/AIDS and Russia'. The selected papers included English language literature published between 1990 and 2009. The unpublished sources (in Russian and English) were identified through the databases of the Russian Ministry of Health, the Russian National AIDS Centre, the local offices of the United Nations and several large NGOs operating in Russia.

Results

Health policy and strategic planning

Many informants noted the lack of political commitment to HIV/AIDS, which was particularly evident at the early stages of the epidemic. The political support did improve in the mid-2000s, but by that time the epidemic was already fully established and it was more difficult to either contain it or reverse its trend.

Some respondents argued that the HIV/AIDS policies lacked common goals and systematic approaches to long-term planning. They therefore doubted the extent to which the increased policy attention and resources witnessed in recent years could be translated into effective and sustainable courses of action:

> *''The problem is that there is no clear policy to address the epidemic. There is no clarity, no common understanding. There is no coordination of resources. There is no system.''* (Altai, government official)

Many argued that the lack of strategic vision was reflected in the chaotic nature of the health reforms of the 1990s. Even senior health managers perceived the reforms as purposeless and unclear. Some argued that the changes put in place were fragmentary and incomplete. The old structures and processes had been destroyed before the new ones were established. The system became incoherent, which was frustrating for both health care staff and patients.

With regard to specific HIV policies, the participants noted: (a) policy ambiguity in relation to harm reduction; (b) opposition to sex education programmes from education authorities and the Russian Orthodox Church; (c) ineffectiveness of drug treatment approaches and illegality of methadone treatment; and (d) discriminatory practices, which restricted IDUs' access to antiretroviral therapy (ART). This is how one participant commented on harm reduction:

> *''The key problem is the absence of any clarity on the policy of harm reduction.''* (Altai, health care manager)

Another respondent noted the attitudes of policy-makers to IDUs:

> *''Society and the state have an attitude to drug-users as people outside respectable society, and their rights are questioned and undermined. If a person is a drug-user, his health is his personal problem.''* (Volgograd, government official)

Organizational structures and processes

A number of respondents said that the health system as a whole and the HIV/AIDS programme in particular, lacked effective approaches to prevention and health promotion.

Almost all our respondents agreed that the roots and the determinants of the HIV epidemic lay beyond the remit of health care services. Many pointed to the deteriorating social and economic environment, increasing poverty and inequalities, and higher behavioural risks noted in the period of transition.

However, the focus of HIV interventions has been mainly on mass screening and HIV diagnostics. Preventative strategies used were out of date and ineffective and limited to lectures about HIV/AIDS. Alternative, more interactive ways of health education were poorly developed; prevention strategies were not tailored to the needs of specific high-risk groups, such as IDUs or sex workers; and there was a lack of trained specialists, who could design and deliver such programmes in the public sector:

> *''Well, we do emphasize prevention but the information we give is all of the same type... We need new approaches...with a focus on different target groups.''* (Altai, government official)

Financial resources

All respondents noted that financial resources allocated to the health system were insufficient. The informants used the words 'sad', 'inappropriate' and 'poor' to describe the state of affairs in the health sector. They argued that the reforms of the 1990s, which aimed to strengthen the financial capacities of the system through the introduction of health insurance, had brought no improvements to HIV/AIDS. A number of programmes, including HIV/AIDS, tuberculosis (TB), drug treatment and mental health, were named as socially important and were to be funded directly from the federal and regional budgets rather than health insurance premiums. This was intended to protect these services in the situation of economic instability and unpredictable insurance revenues. However, throughout the 1990s the government allocations to health were extremely scarce resulting in a substantial gap between what the government committed to and what it was able to fund. The effect of this fiscal approach was dual: (a) the 'socially important' programmes received funding neither from the government budget nor from the health insurance scheme with many interventions 'remaining on paper'; and (b) the health care staff working for these programmes felt discriminated against and excluded from the reform process:

> *''Funding is insufficient and more importantly, wrongly organized... we do not get funding from health insurance and this is discriminatory.''* (Altai, health care manager)

It was further explained that in the situation of limited financial resources, other health services introduced formal and informal fees and managed to sustain their operations though direct patients' contributions. All stakeholders noted that out-of-pocket payments became widespread in the 1990s, while only part of the population could afford to pay for health care services. As a result, large numbers of people lost access to basic health care:

> *''We have many people who simply cannot get any medical help.''* (Volgograd, an academic)

As far as HIV/AIDS and TB programmes are concerned, these services provided care to disadvantaged and often marginalized populations, who could not afford out-of-pocket payments. As a result these services became some of the poorest in the system:

> *''Our hospitals are in such poverty and especially the infection control service. This is a very, very poor service.''* (Volgograd, health care manager)

Human resources

The key challenge mentioned with respect to human resources was poor remuneration for health care professionals. The economic crisis and the low salaries in the public sector forced doctors to do multiple jobs and left little time for further education and professional development:

> *''The salary does not allow doctors to feel... decent, to look after their families, their children. Therefore they have to work twice as much, to have extra duties, extra jobs. There is no time for education and personal development.''* (Altai, health care manager)

Some respondents pointed out that during the period of reforms many highly qualified physicians had left their jobs in the public sector for overseas or private practices. Others noted that poor incentives impacted on staff morale and professional ethos and promoted corruption within the system:

> *''I have been working as a health care manager for 30 years. I see the changing generation of health workers. There are fewer and fewer enthusiasts. There are more and more doctors, who have 'dirty' hands, who without blinking can take a bribe.''* (Altai, health care manager)

Service management and delivery

Two aspects of the health system were discussed here. The first one was the lack of coordination between different government services and between the government and non-governmental players. A number of respondents noted poor communication between the drug treatment and HIV/AIDS services. Interactions between the programmes delivered by the civilian and prison health systems were also limited, which affected the continuity of care for those released from prisons. The contributions of NGOs to the HIV/AIDS response was perceived as important but their role was poorly defined, their funding was unpredictable and the mechanisms for joint (government–NGO) decision-making were poorly developed. A number of informants commented on the role of international agencies, with some questioning whether the approaches to HIV control recommended by international organizations were applicable in the Russian context.

Another feature of the service management and delivery noted by our informants was decentralization of services and decision-making to the local level, which took place in the early 1990s. Most stakeholders were critical of the legacy of the organizational reforms and argued that the decentralization processes affected the system in a number of ways. First, local authorities (who were now responsible for funding the health care infrastructure) were often unable to generate sufficient

revenue to sustain the adequate functioning of the health care services. The system of government transfer from the federal level was ineffective. As a result, the health systems in poorer parts of the county got progressively impoverished, which increased inequalities between different geographical locations (urban and rural areas) and different types of health facilities (those funded from the federal, regional and municipal budgets):

> *''The problem of health care is its fragmentation. People ... using municipal health facilities are discriminated compared with those who use services funded from the regional budget.''* (Altai, health care manager)

Furthermore, being continuously short of funding, local authorities had to choose which programmes to fund and reallocated resources often at short notice. The criteria for reallocation were arbitrary and rarely discussed with health care practitioners. As a result, programmes that were politically less contentious (e.g. diabetes, maternal and child health) undercut funding allocated to HIV/AIDS. Choices also had to be made between interventions within the same programme. In HIV/AIDS, testing was always prioritized over primary prevention.

A number of respondents said that decentralization of health and social care resulted in the disruption of links between the federal, regional and municipal authorities. Management of the system became fragmentary, with multiple local directives which were backed up neither by evidence nor by appropriate resources:

> *''The new regulations state that local authorities are not dependent on the central government and should pursue their own policies; the central government can only recommend. But in reality, this results in inability to build a coherent system of management. In the absence of a centralized management, programmes developed at the regional level are not applicable to municipalities; while the programmes developed at the municipal level cannot get resources from the region.''* (Volgograd, government official)

Discussion

There has been an interesting academic debate on horizontal versus vertical approaches to the implementation of HIV/AIDS programmes (WHO 2000; WHO 2003), with many arguing that an effective HIV response requires strengthening capacities across the whole system (Melgaard *et al*. 1998; WHO 2003). However, the studies on the relevance of stronger systems to the success of vertical programmes focused mainly on developing countries with fragile infrastructures and limited human resources (Conn *et al*. 1996; Unger *et al*. 2003; Mutemwa 2006; Bedelu *et al*. 2007).

This article examined the relationships between the HIV/AIDS programme and the wider health system in Russia, the country which towards the end of the Soviet period had the world's highest ratios of doctors and hospital beds to population. We found that the system–programme interplay in this setting is as important as in poorer countries. However, the effectiveness of the HIV response in Russia is more than a function of input available within the system. Other systemic features, such as political priorities and ideology, organizational set up, traditions in management, and capacities and motivations of staff, determine how the available inputs are put together and utilized in the delivery of the HIV programme.

We identified a number of factors associated with the system's failure to address HIV/AIDS in Russia: (a) the lack of political commitment and limited financial resources at the early stages of the epidemic; (b) the absence of common goals and systematic planning; (c) excessive focus on diagnostic and screening services; (d) a lack of effective preventative approaches to address the needs of high-risk groups; (e) fragmentation of the system and poor coordination between services and sectors; (f) poor incentives and low morale among health care providers; (g) decreased access to services; and (h) a growing corruption within the system. We argue that these factors are not unique for HIV/AIDS. The features of the wider health system, within which the HIV programme was set up, influenced the structure, processes and capacities of this programme. Based on our analysis we tried to identify a number of systemic features that affected the policies, organization, financing, management and delivery of the Russian HIV response. Below we discuss the pathways through which the system–programme influence may have occurred.

HIV policies and planning

Our analysis of the interview data and the literature review suggests that the system characteristics affecting the Russian HIV policies can be divided into two groups: (a) the ideology of Soviet health care; and (b) traditions of Soviet and post-Soviet decision-making. Thus, the underpinning principles of the Soviet health care were grounded in the communist ideology aiming at building an 'ideal' society for 'ideal' citizens with no place for such attributes of 'sick' Western societies as prostitution, drug–abuse and homosexual practices (Kon 1995; Barr and Field 1996). Those who were perceived as 'badly behaved' and 'non-ideal' (drug-users, sex workers, homosexuals) were marginalized and stigmatized, with little attention to their needs and priorities (Kon 1995). It is therefore unsurprising that a general view at the early stages of the HIV crisis was that Russia would not be touched by a large-scale epidemic; those affected would constitute a small asocial group, which is marginal to the rest of the population and could be easily controlled through strict punitive measures (Domeika *et al*. 2002; Butler 2003; Kelly and Amirkhanian 2003; UNDP 2004). As a result, little political and financial support was given to the HIV/AIDS programme, and little attention was paid to the policies targeting high-risk groups (Riley and O'Hare 1999; Burrows 2002; Open Health Institute 2004; WHO 2005; Rhodes *et al*. 2006).

With regard to decision-making, a number of authors have noted the lack of strategic vision and poor capacities for long-term planning in the Soviet and post-Soviet health sectors (Burger *et al*. 1998; Tkatchenko *et al*. 2000). This was particularly evident at the local level, as the policy-making in the Soviet health system was highly centralized with most decisions coming from the national Ministry of Health (Barr and Field 1996; Chernichovsky and Potapchik 1999). Some authors also noted poor use of statistical data and the isolation

of the Russian medical profession from internationally available evidence and best practices (Farmer *et al*. 2003; Geltzer 2009). Both factors are likely to have contributed to the inability of national and local policy-makers to properly assess the growing threat of the HIV/AIDS epidemic or build epidemiological projections of its further course.

Organization of the HIV programme

From the organizational point of view, the Soviet system was strongly hierarchical with a uniform provision of services across the country. It was guided by hundreds of norms and regulations (Tragakes and Lessof 2003; Axelsson and Bihari-Axelsson 2004; Floyd *et al*. 2006) and the focus was on quantitative output (Rozenfeld 1996; Curtis *et al*. 1997; Danishevski and McKee 2005). Preventative and health promotion approaches were weak and the provision of care was dominated by curative, largely in-patient services (Curtis *et al*. 1997; Danishevski and McKee 2005). We argue that the response to HIV/AIDS reflected the overall organization of the system and was, therefore, regulatory, structural and clinically focused. The first two interventions introduced in response to HIV/AIDS were mass HIV screening with 20–25 million tests performed every year (Cartright 2001), and a network of over 100 identically organized AIDS centres, supplemented by 1000 laboratories and 400 infectious disease units (WHO 2004). Primary prevention activities were ignored for many years, largely because of the traditional system focus on diagnostics and treatment.

Limited and inefficient use of financial resources

The problem of scarce financial resources in the early 1990s was not exceptional to HIV/AIDS. The lack of funding had been a challenge in the Russian health system long before the HIV/AIDS epidemic (Tragakes and Lessof 2003). Soviet health care was funded by the so-called 'residual' principle, i.e. what was left from other 'more important' sectors of society (the army, industry and agriculture) (Burger *et al*. 1998; Tkatchenko *et al*. 2000). At the same time Soviet health care was characterized by what Rozenfeld (1996) called state paternalism, when the government takes entire responsibility for the health of its citizens (Clarke 2006). The emphasis of the Soviet system was on the socialist-oriented priorities of access and equity (Twigg 2002), and the government was not in a position to formally declare its inability to pay for all its health care commitments even at the time of the economic crisis (Venediktov 1999; Twigg 2002). The growing gap between the government's commitments and the resources available resulted in the impoverishment of the HIV control services and the symbolic nature of the HIV programme, noted by almost all our informants. Similar problems were reported by other reviews (World Bank 2008) and in the studies of other vertical programmes in Russia, particularly TB (Coker *et al*. 2004; Dimitrova *et al*. 2006) and mental health (McDaid *et al*. 2005).

While reading this article, one needs to bear in mind that we completed collection of empirical data in 2005 and our analysis focuses mainly on understanding the HIV response throughout the 1990s and early 2000s. In 2006 the Russian federal budget for HIV/AIDS rose to US$175 million, an unprecedented 30-fold increase compared with the previous year (Alcorn 2006; Klomegah 2007). In 2007, Russia's HIV spend was US$445 million (UNAIDS 2009). However, some data suggest that the new funding aims largely at the provision of antiretroviral treatment and related services, with little increase for prevention (Wolfe 2005; Open Health Institute 2008). Thus, 41% of the 2007 resource envelope was allocated to capital investments and care and treatment services. Prevention services received about 15% of the funding available (Open Society Institute 2008; UNAIDS 2008). This once again suggests that the HIV response is strongly dependent on the overall system orientation; and whether the resources are available or not, the system prioritizes interventions it is used to delivering, irrespective of the needs and evidence of effect.

Human resources

One of the key barriers to an effective HIV response in poorer settings is the lack of human resources in the health sector (WHO 2003; WHO 2004). The Russian health care system has always had more health care workers than almost any other country in the world (Farmer *et al*. 2003), and yet the human resource factor appears to be crucial for understanding the system's failure to respond to HIV/AIDS. We found that the context in which staff work, issues around health care workers' professional status and their motivation are as important as the presence or absence of skilled personnel. Similar conclusions were made by Parkhurst *et al*. (2004), who examined the role of human resources in the delivery of maternal services in Russia.

In the Soviet system health care professionals were state employees, who worked on a fixed (usually low) salary and had little incentive to improve efficiency and quality of care (Tulchinsky and Varavikova 1996). Our findings suggest that this position of health care staff, coupled with frustration around the purposelessness and incompleteness of the Russian health reforms, affected the morale of HIV workers and led to an increase in corruption, a decline in access to services and brain-drain from the public sector (Balabanova *et al*. 2003; Salmi 2003; WHO 2003a,b).

Service management and delivery

One of the key problems identified in our study was the lack of coordination between different services and sectors. The academic literature shows that a lack of coordinated efforts in public health is not uncommon. However, the extent of the problem of coordination in Russia is rather unusual (Axelsson and Bihari-Axelsson 2004). Our informants mentioned poor coordination between different services within the health sector, between different government departments, and between the government and other players, all of which can be rooted to the attributes of the wider health system.

The Soviet system was organized around specific diseases with little focus on integration across specialities (Tragakes and Lessof 2003). There were also inadequate links between parallel health systems, for example civilian and prison institutions (Coker *et al*. 2004). This organizational structure presented particular challenges for those conditions with co-existing epidemics and co-morbidities, such as HIV/AIDS. Furthermore, HIV/AIDS and TB control services were poorly linked to other providers, as they were run through vertically organized

programmes with separate systems of financing and management (Bingham and Waugh 1999).

Another problem related to the newly emerged players, such as NGOs and international agencies. They started playing a significant part in HIV control in the mid-1990s but their integration in the already fragmented system was difficult due to legal and administrative complexities and differing priorities. There was also a fair level of mistrust between the government and these new policy players at the early stages of the epidemic (Rhodes *et al*. 2006; Tkatchenko-Schmidt *et al*. 2008).

Furthermore, the Russian health system of the 1990s underwent a series of organizational and managerial changes. The HIV response was set up within a transient system, where old structures and processes had been destroyed, but the new had not been established. We found a fair degree of frustration about the legacy of reforms among the informants we interviewed. A detailed analysis of the effectiveness of health reforms in Russia is beyond the scope of this article, but it seems that the reforms did not manage to address the major systemic flaws either in policy or in organizational and delivery structures, or in the resources available to the health sector. The reforms themselves were perceived as ill-designed, fragmentary and incomplete (Twigg 1999; Dixon *et al*. 2002). A number of changes introduced in fact exacerbated some of the system's deficiencies and created additional challenges for the vertical programmes, including HIV/AIDS.

We found that the decentralization of financing and management to the local level had resulted in further disintegration of the system, disruption of links between the federal, regional and municipal authorities, and increased inequalities between geographical regions. Similar observations were made by other authors (Tillighast and Tchernjavskii 1996; Danishevski and McKee 2005). Even more recent efforts of the central government to strengthen federal control, through the appointment of local governors and grouping the regions into seven Federal districts, appear to have limited impact on the consistency and coherence within the system (Danishevski and McKee 2005).

Conclusions

In this article we have examined the relationships between the HIV programme and its wider health system in Russia, and conclude that the system–programme interplay is as important in middle-income countries as in poorer settings. An advanced health care infrastructure and high numbers of health care workers cannot protect health systems from potential failures in the delivery of vertical programmes, such as HIV/AIDS. There are other factors, such as the system's ideology, traditions in policy-making and management, orientation of service delivery, and capacities, motivation and morale of health care staff, all of which can either facilitate or jeopardize the country's HIV response. The characteristics of the system within which the HIV programme was established in Russia affected the structure and delivery of the HIV response, particularly its regulatory and clinical orientation; the discrepancy between government formal commitments and implementation; the focus on screening and diagnostic services; and problems with scaling up interventions targeting high-risk groups.

The HIV response cannot be effective, efficient and responsive to the needs of the population, if the broader health system does not adhere to the same principles. Strengthening HIV responses in the post-Soviet societies will require improvements in their wider health systems, namely advocacy of preventative approaches with a focus on high-risk populations; reallocation of resources from curative services towards primary prevention; building capacities for effective decision-making and long-term planning at the local level, including better use of information and access to evidence-based practices; and developing better working environments and higher remuneration of health care staff. However, the reforms themselves need to be carefully thought through and planned with a detailed analysis of potential risks, because as much as successful reforms can strengthen HIV/AIDS programmes, reform failures can be disruptive and damaging and exacerbate the HIV crisis even further.

The paper is based on the purposive sampling of a group of stakeholders, who deal largely with HIV issues and in the context of their respective regions. Although the methods used were appropriate for the purpose of this research, more studies looking at a wider range of stakeholders, other vertical programmes and in a variety of settings would be desirable to test and verify our conclusions on the links between health programmes and their health system contexts in middle-income countries.

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