Rural and Remote Health
The International Electronic Journal of Rural and Remote Health Research, Education, Practice and Policy
ISSN 1445-6354

PROJECT REPORT

Public health challenges in Kyrgyzstan: developing a new curriculum

V O'Brien[1], K Djusipov[2], T Kudaibergonova[2]

[1]*Faculty of Health and Social Care, St Martin's College, Lancaster, England*

[2]*Kyrgyz State Medical Academy, Bishkek, Kyrgyz Republic*

Submitted: *4 July 2005;* ***Resubmitted:*** *25 April 2005;* ***Published:*** *22November 2005*

O'Brien V, Djusipov K, Kudaibergonova T
Public health challenges in Kyrgyzstan: developing a new curriculum
Rural and Remote Health **5: 461. (Online), 2005**

Available from: http://rrh.deakin.edu.au

ABSTRACT

Introduction: The public health challenges facing the Central Asian Republic of Kyrgyzstan are rooted in the social, economic and political conditions that emerged after the collapse of the Soviet Union in 1991. Geographically remote and with a substantial part of it's population living in mountainous rural villages, economic recovery and the maintenance of basic standards of public health is now a major problem for the Kyrgyz people. This project report sets out the case for restructuring public health education in Kyrgyzstan. It also explains how a new public health curriculum will equip Kyrgyz students with the knowledge and skills to work effectively with urban and rural communities in this geographically remote region of Central Asia.

Methods: With financial support from the European Union's Tempus program St Martin's College, the Kyrgyz State Medical Academy (KSMA) and Pirkanmaa Polytechnic (Finland) worked together to develop a new public health curriculum for Kyrgyzstan. Project activities took place in Kyrgyzstan and Europe throughout 2002-2004 and included English language training, fact finding visits to partner institutions and health services. Seminars and workshops were used to develop curriculum content and to support the design of new programs. A core curriculum team from KSMA, supported by European project staff, devised the new curriculum now on offer in Kyrgyzstan.

Results: The project achieved its three main goals: (1) development of a new public health curriculum; (2) establishment of an international forum for public health in Kyrgyzstan; and (3) dissemination of the project's findings via an international conference and the provision of web based support services.

Conclusions: New courses in Preventive Medicine and Public Health Nursing at KSMA represent a significant cultural shift within public health in Central Asia, complementing the structural reforms of health care introduced in the 1990s. Emphasis on

community engagement, health promotion and preventive action enhances knowledge, develops new skills and refocuses work practices for public health staff serving Kyrgyzstan's remote rural communities.

Key words: Kyrgyzstan, public health education.

Introduction

Kyrgyzstan is a small, geographically remote Central Asian republic with a population of approximately 5 million people[1]. Known to merchants and travellers over the centuries as 'The Land of the Celestial Mountains', Kyrgyzstan shares borders with Kazakhstan, China, Tajikistan and Uzbekistan. At one time, an important stopping place on the Silk Road trade routes between China and Europe, Kyrgyzstan now faces real difficulties trying to establish and maintain trade links with wealthier Western countries. Geographically remote, mountainous and with a predominantly rural population, Kyrgyzstan is in transition from a centrally planned soviet system to a competitive 'free market' economy. Economic transition has been accompanied by an epidemiological transition that challenges the ability of the existing services to meet the changing health needs of the population.

Public health provision in Kyrgyzstan

Public health in the Soviet period was provided through networks of Sanitary and Epidemiological Stations, offering sanitary inspection, epidemiological monitoring and laboratory services. During the late 1990s the 'Manas Reforms' introduced, among other things, mandatory healthcare insurance for all employees, community based family practitioner groups and a fledgling health promotion service. By the end of the decade 739 family group practices were operating in Kyrgyzstan and 70% of people were covered by health insurance[2]. However health professionals often lacked the knowledge and skills necessary to operate within the new structures, and deeply embedded professional working practices inhibited real progress[3].

Health and economic transition

The collapse of the Soviet Union in 1991 had a devastating impact on the Kyrgyz economy, weakening already poor transport and communications networks. Landlocked and largely dependent on expensive air freight for external trade, poor economic and transport conditions left the country heavily dependent on international aid with debt servicing accounting for an estimated 40% of annual government revenue[4].

Geographical remoteness, a large dispersed rural population and extreme poverty were key factors in determining the health of the Kyrgyz people in the post-Soviet period. Structural reforms had little impact on health, especially in rural areas, and the mandatory health insurance scheme struggles to make an impact against a background of international debt, high levels of unemployment and the emergence of a 'black economy'. Privatisation of health services benefited a few medical practitioners in the cities but left the majority of people, especially those in rural areas, without access to affordable or effective health care.

Poverty is a major problem with average wages estimated at less than US$25 a month in 2001, and the real wages of health workers only marginally above the absolute poverty line[4]. A combination of low status, meagre salaries and inadequate resources contributes to reluctance on the part of health professionals to work in rural areas. Public health staff often lack the knowledge and skills necessary to provide effective support in the changed social environment. With almost 95% of the country at high altitude and 65% of the Kyrgyz people living in remote mountain valleys, this is now a major public health problem for Kyrgyzstan[3].

Figure 1: Family yurt (felt tents) in the Susaanmyr Valley, Kyrgyzstan (altitude 2500 m).

Table 1: The structure of public health services in Kyrgyzstan 2001-2004

Service	Number	Main functions
Sanitary epidemiological stations	8 Regional 58 Local 2 City disinfection centres 3 Anti-plague stations	Infection control, environmental health surveillance, sanitation advice and regulation.
Family physician groups	739 local clinics	Family medical services
Health promotion service	7 Regional centres	Health promotion

The health impact of economic collapse is evident in the rapid deterioration of health status indicators during the 1990s, resulting in significant rises in morbidity and mortality for a number of socially influenced conditions, including heart disease, mental illness and stroke[5]. Between 1991 and 1997, male life expectancy fell from 64.5 years to 62.5 years. During the same period, the rates for syphilis rose dramatically from 1.9 to 151 per 100 000[6]. Even allowing for statistical anomalies, this suggests a significant change in sexual behaviour. Given the lack of attention to sex education within the Soviet era, there is a strong argument for urgent health promotion action on sexual health. Respiratory diseases account for more than 20% of all recorded illness in Kyrgyzstan[7] and smoking related illness such as lung cancer, ischaemic heart disease, cerebro-vascular disease and chronic pulmonary obstructive disease are major causes of premature death, particularly among men in Kyrgyzstan[8].

Infant mortality rates in Kyrgyzstan are high at 66.5 per 1000 live births, compared with a European average of 5.7 per 1000. The main causes of infant deaths include respiratory disease, diarrhoea and accidents, all of which are largely preventable[5]. Infectious diseases are the second most common reason for seeking medical help with growing hardship and poverty in rural areas, contributing to a rise in the number of cases of brucellosis, tuberculosis, hepatitis B and sexually transmitted diseases[9]. Weakened local economies have left more than 75% of Kyrgyz homes with inadequate sanitation and almost 25% of households dependent on rivers and irrigation channels for drinking water[9]. These examples, along with many others, provided a strong case for refocusing of the undergraduate and postgraduate curriculum on preventive health protection and health promotion measures.

Methods

Working with the Institute of Public Health and Management at the Kyrgyz State Medical Academy (KSMA), we set out to support the Manas reforms by developing a new curriculum with a stronger emphasis on preventive health, collaborative working and community health development. The project was funded for 2 years through the European Commission's Tempus TACIS (Technical Aid to the Commonwealth of Independent States) program. TACIS provides grant-financed technical assistance to 12 former Soviet republics in Eastern Europe and Central Asia.

Our general aim was to assist in the development of public health capacity in Kyrgyzstan through academic collaboration between the consortium partners in England, Finland and Kyrgyzstan. The project had three main aims:

1. Development of a new undergraduate and postgraduate curriculum in public health.
2. Establishment of an international forum for public health in Kyrgyzstan.
3. Dissemination of the project's findings via an international conference and the provision of web-based support services.

Throughout the project, strong emphasis was placed on collaborative work within the context of existing public health needs and resources in Kyrgyzstan.

Activities

We began with initial fact finding and familiarisation visits to each of the partner countries. This was followed with a 2 month intensive English language course for 12 Kyrgyz staff in Bishkek, delivered by language teachers from the KSMA, and a 2 week language program at St Martin's in Lancaster, UK. These early visits provided opportunities to begin discussions and agree detailed plans for future project activities.

A total of 20 Kyrgyz and nine European staff worked directly on the project with many others attending and contributing to workshops throughout the project. Members of Kyrgyz team visited Europe on eight occasions, and

European project staff visited Kyrgyzstan on four occasions between September 2002 and March 2004. During each visit the project teams met with public health professionals, students and academic staff to gain better insight into the nature of public health provision and education in the Kyrgyzstan, the UK and Finland.

Typical activities included visits to healthcare facilities, participation in seminars and workshops on public health policy, service design and delivery, learning, teaching and assessment methods, curriculum development and program design meetings. We were particularly conscious of the need to develop a sustainable curriculum suited to Kyrgyz context, and emphasis was placed on partnership, collaborative learning and sharing of knowledge and expertise. In line with this, both Kyrgyz and European staff led workshops, with additional contributions from visiting speakers where this was appropriate. The primary responsibility for curriculum development remained with Kyrgyz staff with advice and assistance provided by the European project team.

Near the end of the project, a 3 day international conference in Kyrgyzstan provided a launch event for an International Forum for Public Health in Kyrgyzstan and dissemination of the results of the project.

Results

More than 90 delegates from Kyrgyzstan, Armenia, Uzbekistan, Tajikistan and Kazakhstan attended the dissemination conference in October 2004. With 50 papers published in the conference proceedings, this event provided a solid base for the launch of the International Forum on Public Health in Kyrgyzstan. Conference papers covered a wide variety of topics of local and regional interest on health protection, health promotion, epidemiology, education and public health policy. Five papers from Finnish and UK delegates provided an insight into European public health. Publication in Russian and English provided web and paper based materials to support learning and teaching in Kyrgyz Universities.

There are now two new undergraduate programs incorporating 19 new subject areas on offer at medical universities in Bishkek and Osh, Kyrgyzstan. In addition to medical and nursing modules, students will now study and gain practical skills in health promotion, working with communities, health communication, networking, managing conflict, leadership, media and health, project management and international health. A new masters program, aimed at existing public health staff, is awaiting final approval from the Kyrgyz Ministry of Education. Since 2003, a total of 60 students have enrolled on the Public Health Nursing degree and 95 students are undertaking the undergraduate program in Preventive Medicine. The first cohort of students from these programs will graduate in 2008.

Discussion

The need for a well educated public health workforce capable of understanding and responding to the health challenges posed by social, economic and cultural determinants is widely acknowledged in the public health responses of Europe, Canada, Australia and New Zealand. Recent epidemiological transition towards non-communicable chronic disease in Kyrgyzstan strengthens the case for shifting the emphasis of public health education firmly in the direction of preventive strategies[4].

While economic conditions are poor throughout the country, the transition to a market economy has intensified competition for resources and reduced rural economies to subsistence level. The difficulties of economic transition have contributed to weakened government and the absence of effective public health measures. The new economic conditions have also created new social problems, such as homelessness among children[5], sex trafficking, forced prostitution and a six-fold increase in drug use[2]. All of these factors inevitably affect the health of the population and are of concern for public health services.

Approximately 75% of the Kyrgyz people are Sunni Muslim with smaller minorities of Russian Orthodox and Roman Catholics among the Russian and German population[10]. Home to more than 70 different ethnic groups, Kyrgyzstan's multi-ethnic population presents service delivery challenges in rural areas where a variety of languages and cultural traditions exist side by side. The new curriculum aims to prepare students to work effectively in culturally appropriate and effective ways. The next phase of Manas health reforms, covering the period 2006-2010, strengthen the case for the new curriculum by placing emphasis on health promotion, especially in the areas of heart disease, substance abuse, tuberculosis and HIV/AIDS[11].

Conclusions

Working over considerable geographical distances and from different cultural perspectives the project team faced many challenges. However, funding from the European Union's Tempus program enabled us to meet in Europe and Kyrgyzstan to gain first-hand experience of differing social conditions and approaches to public health. The opportunity to meet face to face enabled us to establish strong professional and personal relationships that were essential to successful completion of the project. The new curriculum, along with the modernisation and reform of public health services, will help to develop public health capacity in Kyrgyzstan by creating a skilled and knowledgeable workforce who can, with appropriate support from government and financial support from international agencies, begin to make a significant impact on public health in Kyrgyzstan. The courses now provide the basis for the newly established Faculty of Public Health, which is an acknowledgement of the perceived importance of the project within the Kyrgyz State Medical Academy.

Kyrgyzstan is a country in transition and its health systems and public services are extremely fragile. Kyrgyzstan still faces many challenges in its efforts to improve public health conditions. Growing dissatisfaction with deepening poverty and widespread corruption finally led to the overthrow of the former president during the 'Tulip Revolution' of 24 March 2005. A new but a fragile government coalition is working to bring about improvements, but political instability in the region means that establishing effective governance in Kyrgyzstan will not be easy[11]. Political instability in Central Asia is outside the control of public health practitioners but it remains a significant factor in determining the health of the population of Kyrgyzstan. The rapid economic, social and cultural changes that Kyrgyzstan is undergoing make it all the more important that public health practitioners, managers and policy makers are well informed and knowledgeable about the social determinants of health as they apply to urban and rural communities in Kyrgyzstan.

Acknowledgements

The authors acknowledge the European Union Tempus Program for financial support for the project, also the Ministry of Health of the Kyrgyz Republic.

References

1. Centre for Social Research in Kyrgyzstan, *Migration Trends in Kyrgyzstan*. (Online) 1999. Available: http://www.angelfire.com/ar/researchkyrgyzstan/mig.html (Accessed 22 June 2005).

2. Djusipov K. State of reforms in the health system of the Kyrgyz Republic. Proceedings, *State, Politics, Society: Issues and Problems within Post-Soviet Development*. University of Iowa, USA: CREES, 2002; 141-150.

3. WHO Regional Office for Europe. *Interagency Mission Report*, 21 September – 6 October 2000. Geneva: WHO, 2001.

4. United Nations. *The UN System in Kyrgyzstan: Common Country Assessment*. Geneva: WHO, 2003.

5. The European Observatory on Health Care Systems. *Health care systems in transition. Kyrgyzstan: The European Observatory on Health Care Systems*, 2000.

6. McKee M, Healy J, Falkingham J (Eds). *Health care in Central Asia*. Buckingham: Open University Press, 2002.

7. Centre for Health Care Research. *Top twenty diseases of the Kyrgyz Republic*. Bishkek: Kyrgyz State Medical Academy, 2002.

8. WHO Tobacco Information and Prevention Source (TIPS) *Country profile: Kyrgyzstan*. (Online) 2005. Available: http://www.cdc.gov/tobacco/who/kyrgyzst.htm (Accessed 25 June 2005).

9. Government of the Kyrgyz Republic: Interim National Strategy for Poverty Reduction 2001-2003. Bishkek: Government of the Kyrgyz Republic, 2001.

10. Djusipov K. State of Reforms in the Health System of the Kyrgyz Republic. Conference Proceedings: *State, Politics, Society: Issues and Problems within Post-Soviet Development*. CREES, University of Iowa, USA: P.141-150

11. International Crisis Group. *Kyrgyzstan After the Revolution*. Asia Report No 97, 4 May 2005. Online (2005). Available: http://www.crisisgroup.org/home/index.cfm?id=3411&l=1 (Accessed 7 November 2005).