



## **MMS Bulletin #106**

*Chronische Krankheiten*

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# **A model for addressing hypertension in rural Kyrgyzstan Let's join the Hypertension Club!**

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*Self-help groups and self-management of chronic diseases have been proposed as a model for the future to address the burgeoning prevalence of chronic diseases occurring also in developing countries. (1) Aspects of the self-help group and self-management models, such as empowerment of the patients and increasing their control over their own health, are highly aligned with the Community Action for Health model of the Kyrgyz Swiss Swedish Health Project.*

The Kyrgyz Swiss Swedish Health Project (KYSS-HP), which is funded by the Swiss Agency for Development and Cooperation and Sida and implemented by the Swiss Red Cross since 1999, works with villagers in six regions of Kyrgyzstan to identify the diseases and health determinants that are the highest priorities among people. The KYSS-HP then partners with Village Health Committees that are established in each village to implement health actions to address these diseases. This model of empowering communities in Kyrgyzstan to work to improve health in the village has been named Community Action for Health (CAH) and is an integral part of the country's health reforms. (2)

## **Hypertension: the epidemiological situation**

Hypertension and related diseases have been identified as a significant health concern in Kyrgyzstan, both through epidemiological evidence and by Kyrgyz people themselves through participatory assessments of village health priorities. Kyrgyzstan is a mountainous, former Soviet country that has been facing many of the same changes in the health of its population as other Commonwealth of Independent States countries in this transition. The burden of hypertension in Kyrgyzstan during the Soviet era was not nearly as significant as it is today. A report published by the Kyrgyz Research Institute of Cardiology in 1985 stated that of males ages 30-59, 18.7% had hypertension. (3) Since the fall of the Soviet Union, however, as has been the case in many former-Soviet countries, the prevalence of hypertension in Kyrgyzstan has drastically increased, and hypertension and related diseases are now well established problems.

Research published in 2005 demonstrated a very high prevalence of hypertension in two Kyrgyz villages - the prevalence of hypertension after age-standardization to the WHO standard population was 39% (46% among men and 33% among women). (4) The authors of this research suggested that the high prevalence of hypertension could lead to a coming epidemic of cardiovascular disease in Kyrgyzstan, and speculated that causes of this high prevalence may include physical inactivity, overweight, liberal use of salt, and alcoholism. (5) Kyrgyzstan's number of Disability Adjusted Life Years (DALYs) lost due to heart disease is the twelfth highest of all countries in the world. (6) Kyrgyzstan's DALYs lost due to stroke is the second highest of all countries in the world. (7) Thus, hypertension and its related diseases are taking a serious toll on the Kyrgyz population by shortening life spans and years of productive, healthy lives.

## **Stress as leading cause**

To better understand the potential reasons behind the drastic increase in the prevalence of hypertension in Kyrgyzstan and the high morbidity and mortality associated with cardiovascular diseases, the Kyrgyz Swiss Swedish Health Project conducted several studies on salt excretion (as a measure of salt intake), cholesterol levels, and the prevalence of overweight and alcoholism. The studies enabled the Project to exclude the traditional risk factors, such as high cholesterol, high salt intake, alcoholism and overweight, as decisive factors causing the high cardiovascular disease morbidity and mortality: Blood lipids were found to be normal in a sample from Naryn oblast; salt intake in three oblasts ranged from 7-9 g/day, as measured by 24-hour urinary sodium excretion; the prevalence of heavy alcohol consumption is low at about 1%; overweight prevalence is still low, although an emerging risk factor.

By excluding these traditional risk factors, the studies suggest that stress and depression, caused by massive socioeconomic upheavals following the breakup of the Soviet Union, are the most likely factors behind the dramatic increase in hypertension prevalence and cardiovascular disease mortality in the last fifteen years.

## **A priority for the people**

In addition to the epidemiological evidence, Kyrgyz people themselves have identified hypertension and related diseases as a significant health concern.

KYSS-HP worked with Village Health Committees in Naryn, Talas, and Issyk-kul Oblasts to conduct an Action Research on the prevalence of hypertension and related risk factors. Action Research is an important part of the Community Action for Health model, as it empowers Village Health Committees to better understand the health situation in their village by gathering data on diseases, behaviors, and health determinants. Additionally, Action Research serves as a very effective mechanism to raise awareness in the village of the prevalence and burden of diseases. The Action Research on hypertension was a critical step in raising awareness, which would serve as a foundation to mobilize support for the subsequent implementation of the hypertension health action.

The Action Research was conducted in all villages in Naryn, Talas and Issyk-kul Oblasts during the summers of 2005 and 2006. Village Health Committees were trained to take blood pressure measurements using automatic wrist blood pressure monitors. They went to all houses in the villages and measured the blood pressure of all persons in each household who were 18 years of age or older, which resulted in a sample size of over 140,000 people.

There were many interesting findings from the Action Research, which provided direction for the development of a strategy and health action for hypertension. It was found that Naryn, Talas and Issyk-kul Oblasts all have a very high overall prevalence of hypertension - 43.3% in Talas, 40.6% in Naryn, and 46.5% in Issyk-kul (hypertension was defined as  $\geq 140$  systolic pressure, or  $\geq 90$  diastolic pressure, or taking medicine for blood pressure). The prevalence of hypertension for the three oblasts combined was 43.7%. Differences in prevalence figures across oblasts are most likely due to differences in lifestyle or economic factors. The research also found that men are more likely to suffer from hypertension than women, as 47.1% of men and 41.1% of women had hypertension. The difference in hypertension prevalence between genders was statistically significant.

## Awareness as a key factor

Other concerning findings from the research pertain to awareness of the condition, treatment, and control of hypertension. The percentage of Kyrgyz people with hypertension who are aware of their condition (20.2%) is alarmingly low. Additionally, the percentage of people with hypertension who are taking treatment (17.9%) is very low. However, the percentage taking treatment is much higher among those who know they have hypertension (62.5%), suggesting that lack of awareness is a key factor in lack of treatment among people with hypertension. Achieving successful control of blood pressure, among those taking treatment, is also a problem, as only 29.9% of people taking treatment had controlled blood pressure. Following the Action Research, the KYSS-HP concluded the following:

- The high prevalence of hypertension in the three studied oblasts confirms the urgent need for a community-based intervention in Kyrgyz villages that empowers people to treat and control their condition.
- The low percentage of people with hypertension who are aware of their condition underscores the importance of raising awareness of hypertension and the seriousness of this condition among villagers.
- The low percentage of those with hypertension who are taking treatment and have their blood pressure controlled demonstrates the importance of increasing access to hypertension drugs in villages, educating hypertensive people about the importance of ongoing use of these drugs, and working with health care providers on appropriate prescribing practices.
- The high prevalence of smoking found through the Action Research (~40% among men) validates the need to work with communities to promote lifestyle changes to enable better cardiovascular health.

# Establishing of Hypertension Clubs

As a next step in developing the health action on hypertension, KYSS-HP staff reviewed the literature on community-based interventions for management of chronic diseases. Two themes that emerged from the literature were self-management of chronic diseases and self-help or mutual support groups, and interesting evidence on these topics was found from both developed and developing countries. Both the Alma Ata Declaration on Primary Health Care and Ottawa Charter for Health Promotion began to encourage people's involvement in their health care, and since then, many countries have experimented with self-management programs and self-help groups as a means of enhancing the participation of the patient. In Croatia and Slovenia, Hypertension Clubs have proven to be an effective tool in increasing people's compliance with long-term treatment regimens and improving quality of life for people with a chronic condition. (8)

KYSS-HP also found through the literature review information on the Chronic Disease Self Management Program, a program developed at Stanford University which was designed to give people with chronic diseases a central role in managing their own condition. The Program differs from other methods in that it does not just focus on patient education, but teaches patients concrete self-management skills (problem-solving skills) which when exercised, enhance the self-efficacy of patients. (9)

Focus groups in several Kyrgyz villages revealed that people were very interested in Hypertension Clubs which would provide support, information, and an opportunity to have their blood pressure frequently checked. Therefore, to address the high prevalence of hypertension through a community-based intervention, the KYSS-HP developed a pilot health action being implemented in Jumgal rayon of Naryn oblast, which establishes Hypertension Clubs in the villages. The health action just started in July of 2007, and has so far involved ten clubs with 5-10 members each. Members of the Village Health Committee are trained so that they may be peer leaders for the club meetings. The peer leaders receive an automatic upper arm blood pressure monitor, which allows them to take blood pressure measurements at each meeting. Club members are given a "health passport" to track their own progress toward controlling their blood pressure.

Comprehensive informational materials have been developed and are used as "lesson plans" for the club leaders to guide each club meeting. The meetings address: understanding hypertension and its causes, lifestyle and diet changes, stress and its role in hypertension and cardiovascular disease, and proper use of medications through prescription by a local primary health care provider, who is informed about the Hypertension Clubs.

After the completion of the sessions with prepared lessons, it is up to the members of the Hypertension Club whether they will continue to meet together to check blood pressure and provide support to each other in their efforts to control their hypertension. The automatic blood pressure monitors will stay with the peer leaders to allow club members easy access to blood pressure monitoring. As this is a pilot intervention, the KYSS-HP will monitor with great

interest the progression of the Hypertension Clubs to see which groups decide to continue meeting, how often they meet and for how long following the completion of the prepared educational materials.

## Challenges

Through the health reforms, the Kyrgyz government has designated hypertension and cardiovascular disease as major health priorities. Work is currently being done on the development of cardiovascular treatment protocols and guidelines which utilize cost-effective medicines, and the health reforms have enabled many of those medicines to be subsidized through the Mandatory Health Insurance Fund. Also, treatment for hypertension and cardiovascular disease is currently available in all primary health care facilities, and organizations in Kyrgyzstan are working on continuous quality improvement for cardiovascular care, particularly at the primary health care level.

However, a significant obstacle in addressing hypertension in Kyrgyzstan is that the most appropriate medicines to treat hypertension are not always available at the village level, and the cost of these medicines can sometimes prohibit their use among all those who need them (especially given the fact that subsidies for medicines through the health insurance fund are not functioning everywhere in the country). Jumgal rayon of Naryn oblast was chosen as the location for the Community Action for Health pilot intervention to establish Hypertension Clubs because pharmacies exist in all villages in this rayon. Pharmacies at the village level are essential for easy access to antihypertensive medication. If the pilot health action proves to be successful and justifies the extension of this strategy to other Community Action for Health areas, a challenge in scaling-up this intervention will be the lack of pharmacies in many Kyrgyz villages. However, although many villages presently lack pharmacies, it is foreseen that through the health reforms, pharmacies will be established in most Kyrgyz villages over the coming years.

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