Comment: Deteriorating Health in Russia—A Place for Community-Based Approaches

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Russia is in the grip of an epidemic of deaths from pathologies arising from human behaviors at the levels of the individual, family, and community. In this extended Public Health Policy Forum, Barr and Field[1] and Tulchinsky and Varavikova[2] document serious increases in death rates among young adults in Russia between 1960 and 1995, particularly since 1990 and predominantly among males. Medical diagnoses attribute almost one half of the excess deaths to trauma (accidents, homicide, suicide, and poisoning). Other frequent classes of medical diagnoses are circulatory (myocardial infarction and hypertension) and respiratory (emphysema and pneumonias). Heavy smoking, excessive alcohol consumption, and a high-fat diet contribute significantly to these outcomes.

The two papers in this issue[1,2] give valuable accounts of the development of the Soviet health system right through today. The system was set up in the 1920s on the principles of scientific medicine. The authorities applied these principles, first, to make medical care available to all, particularly to industrial and military workers, and, second, to the control of communicable diseases. From the pursuance of these policies, the 1960 physician supply rate of 18.6 per 10 000 population had by 1989 nearly doubled. Since 1990 the health system has become highly decentralized and overall funding for health has declined; some districts are reducing hospital beds. Physicians are now paid less than factory workers, and the hospitals are mostly bereft of equipment and supplies. Meanwhile, administrative units of the health services have fragmented into independent entities.

The Russian health authorities are faced with a nation losing large numbers of its most economically productive people from potentially reversible causes. Treatment of these diseases in hospitals and through communicable disease control does not effectively address the underlying determinants of these deaths arising primarily from behaviors of individuals, families, and local communities.

Tulchinsky and Varavikova propose that population- and community-based programs of health promotion and risk reduction are needed at the national, regional, and local levels. Information systems, accountability, and planning based on priorities are essential for health reform. Local (*rayon*), regional (*oblast*), and national public health forums should have access to data on the most frequent, serious, and preventable conditions, as well as recommendations for what the authorities, communities, and families could and should be doing about high-priority problems.

In the last 70 years, various approaches to family- and community-based practices of medicine and public health have appeared outside Russia and the Soviet Union. The remainder of this comment traces the development of these approaches with examples. They arose in response to goals much like those expressed by Tulchinsky and Varavikova: to identify the most frequent and serious conditions affecting local communities and to then develop, manage, and evaluate programs addressing the conditions' specific, local causes—all while making the best use of local, regional, and national resources.

Communicable disease epidemiologists learn about the causation of diseases by studying their frequencies according to characteristics of the human hosts of the disease, of the environment in which the epidemic occurred, and of the infective agent. Differences and/or changes in community-based frequencies of disease and death in response to natural events, or to programs, are the epidemiologist's chief tools for discovering clues to the immediate causes and to the multiple underlying determinants of the problem, and for designing, managing, and evaluating the program effects. Data from hospi-

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tals and clinics lack credible denominators for frequencies of sicknesses and deaths related to any defined community, including the nation. Clinic data underestimate or overestimate population-based frequencies of important conditions.

Through home visits to every family in a defined community, an epidemiologically-minded program director creates a health information system to document and retrieve data to measure disease frequency and program outcomes. This information permits investigators to ask and answer questions such as the following: In this community, what are the most frequent, serious, preventable or curable conditions? Which persons, families, and neighborhoods are presenting these serious conditions? Answers to these questions stimulate further questions, providing the basis for designing, managing, and evaluating community-based programs. By making the community diagnosis in partnership with community organizations, the program director, community and local governments together can target programs to high-risk groups, and to specific individuals and families. In some cases, local projects have become self-propagating. A project of immediate interest in Russia was conducted in Finland between 1972 and 1977. The University of Kuopio and the Epidemiological Unit of the National Public Health Laboratory developed a comprehensive community-based program to control cardiovascular diseases among adults in North Karelia.[3] The project was effective.[4]

The best examples come from work in child health and nutrition through support from organizations such as the Rockefeller Foundation, and since 1950, by United Nations Children's Fund (UNICEF), US Agency for International Development (USAID), The Ford Foundation, and others. In the 1920s, John B. Grant of the Peking Union Medical College, supported by the Rockefeller Foundation, pioneered community-based medical care and public health practices in nearby rural areas.[5] Important future developments followed. In the 1950s, China's barefoot doctors appeared as part of overall village development covering about 800 million rural people. In the 1930s, John Grant helped a young Rockefeller scientist, John E. Gordon, see how village-level workers could visit every child in a Romanian town twice weekly to swab his or her throat to detect the advent of the scarlet fever streptococcus, and to follow the paths of the infection to the last case. Later, as chief of US forces in Europe, Gordon applied this approach to the epidemiology of communicable and noncommunicable diseases in the military and among civilians.[6] Also during the 1930s, with the same John Grant in the background, Sidney Kark in South Africa was laying the foundation of community-oriented primary care. This approach now has many adherents far beyond South Africa and Israel, Kark's home since 1955.[7]

In 1958 John Gordon became professor of epidemiology at the Harvard School of Public Health. He pioneered community-based approaches to several public health issues using *longitudinal community health research* as the chief method: nutrition with Scrimshaw and Taylor,[8] population dynamics with Wyon,[9] and others. Regular visits to all homes in defined communities is one characteristic of this approach. These approaches have been passed on, for example to the Berggrens[10] and their successors at Save The Children, USA, who recently published accounts of 19 field projects under the title *Everyone Counts: Community-Based Health Information Systems.*[11]

The International Center for Diarroeal Disease Research, Bangladesh, has been applying community-based approaches to a population of 500 000 for more than 30 years.[12] One of their present staff, Dr Henry Perry, had applied earlier these principles to primary health care programs in three rural areas of Bolivia with populations of about 10 000 each over the past 12 years. The staff has provided high-quality services reducing under-three-year-old mortality by 40%, at the same time generating 40% of the costs from within Bolivia.[13]

The community-based approach to primary health care also advanced under the influence of James Grant, John's son. In 1980 James Grant became executive director of UNICEF. He was best known for energetically promoting large-scale categorical public health programs and campaigns for immunizations and control of diarrhea, but he was also concerned about the infrastructure required to make such programs sustainable. He stimulated the Bamako Initiative to promote self-financing and self-reliance in community-based care (especially the self-financing of medicines). By late 1994, the initiative was operating in 33 countries, mostly in sub-Saharan Africa, but also in nations such as Nepal and Peru.[14,15]

Raj and Mabelle Arole have made outstanding contributions to community-based programs in health, social, and economic development in a particularly poor part of rural India. They started a program of simple primary health care with a small hospital in a small market town. The project paid all its own costs from fees for services, including the Aroles' own salaries. Then, they themselves moved into the local villages, starting discussion groups of women, young men, farmers, etc. Through Socratic dialogue they taught the members of these groups to identify and work towards solutions of their own problems, most of them in the fields of income generation, making full use of available government development programs. As the people learned how to help themselves, the Aroles added simple medical care and public health. Infant mortality declined from over 160 per 1000 live births to 18 per 1000; the birth rate declined from over 40 per 1000 population to 19 per 1000. Neighboring villagers asked to be included. The Aroles asked the women workers in villages with proven capacities to teach those wanting to learn. The program now functions in more than 200 villages with a total population of 200 000.[16]

What do all these activities have to offer Russia as it addresses its epidemic of excess adult deaths?

A country wishing to follow this approach as one way to address their high-priority problems might consider a program as follows: allow 1 to 2 years to develop policy and to find and train the future leaders of the whole program and the leaders of the first community-based project; then 2 years to develop and prove the necessary exploratory and pilot field programs, and towards the end, to train staff to begin programs in four other regions, to function during the next 2-year period. Some months after the one original and the four new projects have trained the lead staff for four more programs each, there would be 23 programs functioning in 23 regions of the country; and so on to whatever end point the policymakers feel justified at that time.

A body of persons experienced in addressing problems much like those now facing Russia is scattered in countries across the world, including neighboring Finland. Many would surely be ready to contribute their hard-won understanding and diverse experience. □

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