2: PUBLIC HEALTH IN EASTERN EUROPE AND CENTRAL ASIA

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I. INTRODUCTION

In the early 1990s, the formerly socialist countries of ECA differed from the established market economies of Western Europe in terms of high mortality -- especially in adult males, high morbidity, unhealthy lifestyles and an environment that was not conducive to long-run improvements in health status. This gap provided the rationale for the desire to “catch up” with the West, in terms of reducing health disparities that existed or could be expected to occur due to trends in health risk behavior, wars, poverty and access to health services and migration. However, institutional realignments for essential public health functions were not prominent in most of the countries. Furthermore, narrowly defined approaches to “health promotion” did not address deep-seated system problems of institutions and policies. Development assistance for public health was provided in the context of heavy emphasis on health finance reforms, with relatively little focus on health outcomes and essential public health functions. Nevertheless, a number of projects were undertaken, often on a small scale and with mixed results. Modest accomplishments were recorded in institutional capacity building and training of professionals, as in Estonia, Hungary and Romania. In the Kyrgyz Republic, an extensive, multi-agency effort helped to chart a course for the restructuring and development of a modern public health system. Implementation and successes varied enormously. There were modest implementations of disease control programs in ECA countries, some for non-communicable, others for infectious diseases. In Bosnia-Herzegovina, the government supported the introduction of public health innovation grants as part of a broader agenda of public health and disease control. Global public goods became more prominent on the agenda.

Definition and Goals

The Bank began assisting ECA governments in adapting their roles to those better suited to the new dimensions of their economies and populations soon after the economic transition began in the early 1990s. This included developing a more focused public health function than that prevailed under Communism. Eleven key public health functions were classed as “essential” through a consensus development process in 32 countries by the US Centers for Disease Control and Prevention and the Pan American Health Organization. They are:

1. Monitoring, evaluation and analysis of the population's health status;
2. Surveillance, research and control of risks and threats to public health;
3. Health promotion;
4. Assuring social participation in health;
5. Development of policies and institutional capacity for regulation and enforcement in public health;
6. Strengthening of institutional capacity for planning and management in public health;
7. Valuation and promotion of equitable access to necessary health services;
8. Training and development of human resources;
9. Assurance of quality in health services;
10. Research in public health;
11. Reduction of the impact of emergencies and disasters on public health.

For the immediate purpose of reviewing the World Bank’s operational work, the major public health functions were grouped into five categories:

- Policy development;
- Collection and dissemination of evidence for health policies, strategies and actions;
- Prevention and control of disease;
- Inter-sectoral action for better health; and
- Human resource development and capacity building.
Strategic options for an enhanced World Bank role in public health at the country level include:

- Prioritizing public health action in policy dialogue and lending;
- Assessing performance of public health functions;
- Including public health functions in poverty reduction strategy papers, country assistance strategies and comprehensive development frameworks; and
- Customizing solutions and investments (Claeson et al., 2002).

Methodology

Research for this paper included a review of all Bank-supported projects undertaken by the HNP group since ECA countries began their economic transition. All Staff Appraisal Reports (SARs), Project Appraisal Documents (PADs), and Implementation Completion Reports (ICRs) documents for ECA HNP projects from the study period were reviewed for contributions to the evolution of public health in ECA. International literature and research were reviewed also, to broaden the paper’s scope. Contributing authors and Task Team Leaders provided information about experiences in project implementation and management. The review attempted to identify, describe, summarize, and synthesize Bank efforts in public health.

Brief Reflection: Public Health in ECA in the 1990’s

In the early 1990s, ECA countries differed from established Western European market economies in terms of high mortality – especially in adult males – high morbidity, unhealthy lifestyles and an environment that was not conducive to long-term improvements in health status.

Even then, the weak relationship between life expectancy and national wealth at higher levels of income was recognized widely. Among industrial countries, income differentials were the better predictors of health status; more equitably distributed wealth, and not higher income levels, was associated with greater longevity. The poor status of adult health in the northern countries of Europe was remarkable in view of their history of a relatively compressed income distribution and supposed absence of poverty. It was hypothesized that the move to free market economics would cause health status to decline in some countries as poverty increased among some subgroups of the population (Preker and Feachem, 1994).

As they adopted Western-style economics, ECA governments began to seek ways to “close the gap” with the West in terms of health status as well, to mitigate the dangers of deteriorating health status amid economic liberalization. The adult male population turned out to be the most vulnerable of the region’s population, intensifying the urgency of health reform, as adult males typically were driving forces for economic productivity and reform.

Table 1: Health status in Central and Eastern Europe and Established Market Economies, 1990

<table>
<thead>
<tr>
<th>Health indicator</th>
<th>Central and Eastern Europe</th>
<th>Established market economies</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Life expectancy (years)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>At birth – average</td>
<td>72</td>
<td>76</td>
</tr>
<tr>
<td>At birth – range</td>
<td>69-73</td>
<td>74-79</td>
</tr>
<tr>
<td>At 15 years</td>
<td>59</td>
<td>62</td>
</tr>
<tr>
<td><strong>Risk of death (%)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Btw birth and 5 years, average</td>
<td>2.2</td>
<td>1.1</td>
</tr>
<tr>
<td>Btw birth and 5 years, range</td>
<td>1.3-3.6</td>
<td>0.6-1.3</td>
</tr>
<tr>
<td>Btw 15 and 59 years, males</td>
<td>28</td>
<td>15</td>
</tr>
<tr>
<td>Btw 15 and 59 years, females</td>
<td>11</td>
<td>7</td>
</tr>
</tbody>
</table>

Source: Preker and Feachem, 1994
By the mid-1990s, cross-national comparisons showed that, despite declines in infant mortality as GDP per capita increased, life expectancy at birth in ECA countries decreased as incomes per capita increased. This was in marked contrast to global trends and due to the fact that rising incomes were associated with a greater probability of death between the ages of 15 and 65, it seemed that the wealthier the society was, the lesser healthy was its population, particularly the adult males.

Contrary to most expectations, the high “transition mortality” of 1989-94 had not struck hardest at those groups generally considered most vulnerable for biological and social reasons, namely children, pregnant women and the elderly (Adeyi et al., 1997). In contrast, increases in adult male mortality were mainly responsible for overall deterioration in death rates and life expectancy at birth.

Development assistance for public health, meanwhile, focused more on health finance reforms rather than on health outcomes and essential public health functions. Even though many ECA countries set out to “close the health gap” through measures such as defined interventions and training of personnel (Hungary), institutional realignments for essential public health functions were not prominent in most. Nevertheless, a number of projects were undertaken, often on a small scale and with mixed results. Achievements included the following:

- **Modest accomplishments in institutional capacity building and training of professionals**, as in Estonia, Hungary and Romania. In the Kyrgyz Republic, an extensive, multi-agency ESW helped chart a course for restructuring and development of a modern public health system. The Canadian Public Health Association provided support to the Russian Public Health Association for strengthening its organizational structure and expanding its programming.

- **Legislation and/or policies for non-communicable diseases** received attention across ECA – with notable examples including Bosnia-Herzegovina, Croatia, Estonia, Poland and Hungary. Implementation and successes varied enormously.

- **Modest implementation of disease control programs**, some for non-communicable diseases (including Croatia, Estonia and Hungary), others for infectious diseases. In Bosnia-Herzegovina, the government supported the introduction of public health innovation grants as part of a broader agenda of public health and disease control.

- **Global public goods became more prominent on the agenda**, with the World Bank and a number of other agencies working on evidence collection and information dissemination in support of public health policies and interventions. Despite gaps and weaknesses in the database, contributions to the knowledge base expanded both within the countries – mostly academics, in regional professional groups – and among external agencies. They included the WHO’s Health for All Database, UNICEF’s monitoring reports on social developments and the World Bank’s ESW on Health Status during the transition.

At the end of the decade, three major constraints remain on the development of a modern public health system.

- **The Soviet-style approach to the role of the State**, which emphasized control rather than policies, standards and regulations that are based on scientific evidence, stubbornly pervades the region.

- **Epidemiology is in poor condition** in the FSU. The concepts of sampling, clinical trials and studies using longitudinal design are rare in health research. In Russia, according to State classification, epidemiology as a specialty (code 14.00.30) includes only infectious diseases (Vlassov, 2000). Clinical epidemiology and biostatistics are virtually non-existent.

- **Individual access to international literature** is very limited. The Sanitary Epidemiology Service (SANEPID) is largely unrefomed.

In a review of public health in Europe, McKee and Jacobson (2000) noted considerable variations in health status among countries. In some, health is improving. In others, especially the FSU, concern is growing about
the rapid spread of tuberculosis and HIV/AIDS. At the same time, national analyses conceal substantial variations within countries, among sub-national entities and among social classes. The responses to these threats have also been diverse. A few countries have developed effective mechanisms to design and implement appropriate policies but, in many countries, the public health community is weak. In particular, some would argue that public health has largely failed in its advocacy role for the health of the population; however, encouraging signs currently exist that this may change in the future.

During the transition, the Bank has provided assistance to ECA governments in four primary forms: non-lending services; surveillance; support for information system development and lending services.

*Non-lending services*

Documented non-lending services are either informal or formal Economic and Sector Work (ESW). A complete inventory of informal ESW is beyond the scope of this study. However, Bank staff working on country programs undertook various kinds of policy discussions with governments and local and international agencies as part of preparations for lending operations. Some were in the context of work supported by the Bank budget, while others were financed from Trust Funds.

*Formal ESW has taken two forms:*

− *Cross-country work*, which covered a range of topics of direct or indirect relevance to key public health functions. Examples are shown in Box 1.

<table>
<thead>
<tr>
<th>Box 1: Cross-country formal ESW.</th>
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<tr>
<td><strong>Public health in regional or sub-regional ESW in ECA, 1990-2000</strong></td>
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</table>


− *Country-specific work*, which focuses on themes such as system analysis, epidemiology, proposals for program development and advocacy. Although most were not specific to public health, the Bank undertook country-specific formal ESW on health for Hungary, Kyrgyz Republic, Poland, Romania, Russia and Turkmenistan.
Surveillance

Surveillance is defined as: the ongoing, systematic collection, analysis and interpretation of health-related data essential to the planning, implementation, and evaluation of public health practice, and closely integrated with the timely dissemination of these data to those responsible for prevention and control. It is a critical foundation in support of many of the other public health functions such as health promotion, situation analysis, legislation/regulation, and workforce development including education/training, health system management and planning. Data from surveillance systems can supply key information for overall health system reform efforts, such as financing (assessment of equity of access, assessment of quality of health care services) and health systems organization (addressing issues of rural, poor, ethnic minorities).

In the FSU, health and disease surveillance systems were supported and operated by massive organizations directed from Moscow that fully integrated the management style of “command, control, and punish”. Preliminary findings from current ESW projects imply that even when surveillance was adequately funded and strongly supported during the Soviet era, data arising from the surveillance were incomplete, of poor quality and fragmented. Even though massive volumes of information were required to be collected and reported, little was done to synthesize and use the data to plan, evaluate or manage the health system at the local, regional, or national levels. The validity of some of the data was questionable, especially for health indicators that were politically sensitive or under political scrutiny (e.g. under-reporting of maternal mortality, under-reporting of infant mortality, mis-reporting or under-reporting of mental health disorders and suicides, over-reporting of immunization coverage, etc.)

Since the dissolution of the Soviet Union, surveillance systems have been in major disrepair. Laboratory and disease reporting systems had organizational problems similar to personal care services in the health care system, including:

- Duplicate and parallel reporting mechanisms;
- Massive organizations;
- Inefficiencies;
- Overstaffing;
- Too many laboratories with insufficient funds or modern equipment; and
- The lack of computerized information systems or even concepts of efficient data flow.

The legacy surveillance systems have not adapted to the realities of the region’s epidemiological transition, in which non-communicable diseases have emerged or are emerging as the leading causes of morbidity, disability, and mortality.

World Bank efforts in ECA have addressed directly, on a limited basis, the development or reform of health and disease surveillance systems. In the Kyrgyz Republic, joint WHO/Bank AAA work identified key elements for reform and enhancement of the SANIPED system that included emphasis on the restructuring of disease surveillance systems. Current ESW projects have identified major deficiencies in basic health information, such as birth and death statistics.

For example, in Russia, recent assessments of cause-of-death data reveal that large proportions of deaths are due to non-specific, “ill-defined” conditions, especially in older adults. Assessments of the accuracy of causes of death from official mortality data imply that major categorical errors exist in the cause of death for 20-45% of deaths. In other words, the cause of death listed on the death certificate was either only incidentally or tangentially related to the actual cause of death; or death was due to a different disease; or in a different organ system from that listed on the death certificate. Yet government priorities, public health interventions, strategies
for health systems development and international aid are influenced by information from existing official mortality statistics.

Some World Bank efforts are focusing currently on one-time, representative national surveys of households to gather data on health status, reported use of health services and risk factors for non-communicable diseases (including body weight index, glucose and lipid levels). Household surveys in Bosnia, Croatia, Kazakhstan, Poland, Turkmenistan and Turkey were intended to assist in the enhancement of the capacities of Ministries of Health to carry out such surveillance on a periodic and ongoing basis. However, the surveys are frequently implemented by local or international contractors, with varying degrees of success in actual capacity building.

**Information Systems**

A number of projects have worked to develop or improve health information systems (HIS) or management information systems (MIS), including the First and Second Health Projects in Turkey. Some of these efforts have been misinterpreted as being or becoming the health and disease surveillance system when, in reality, the HIS or MIS are simply tools for information flow that can support surveillance systems.

The financial sustainability of periodic surveys or of surveillance systems has not been addressed in Bank projects nor has it been factored into health financing reforms. Surveillance and public health functions either have been considered “outside” the health system, irrelevant to the personal health care services system, dispensable when resources are limited or largely ignored.

Health and disease surveillance systems are critical to health systems development, to health reform and to improving health status in a population. A health care system without health and disease surveillance is “blind”, rendering it unsuitable for evidenced-based decision-making, vulnerable to political pressures for making policy and program decisions and fundamentally flawed for any kind of evaluation of effectiveness and impact.

**Lending services**

In addition to information generation and dissemination, the Bank sought to support public health policies and interventions through a number of lending operations in the 1990s. Figure 1 below shows the categorical distribution of 30 lending operations in the health sector according to their coverage of specific aspects of public health. In general, most lending operations included some form of capacity-building, usually modest training. However, few had consistently strong ratings across the five functions examined.

Less than 40% of all lending operations were rated “strong” on any of the five functions of policy, evidence, disease control, inter-sectoral action and capacity building. Regardless of how much lending occurred for each of these functions, the inattention to these key areas suggests a systemic weakness in the Bank’s lending portfolio. Perhaps the countries did not seek assistance in these areas. Perhaps the Bank’s approach to, and professional capacity for, country-level diagnosis and project preparation precluded a more rigorous approach to these public health functions, or both. In view of the current status of public health functions and health status in ECA, it seems that, within the context of lending operations at the country level, the Bank has performed only modestly as a broker of knowledge and a co-convenor of substantive work on public health functions.

Certain cautionary notes are in order when interpreting Figure 1. First, some projects did not have a public health focus. Second, even for those with a strong public health focus, the analysis here is based on project objectives as designed; it includes neither restructuring during implementation nor the results upon project completion. Indeed, most of the projects are still under implementation, as of mid-2002.
Figure 1: Distribution of HNP lending operations by coverage of essential public health functions \( [n=30] \)

![Graph showing the distribution of HNP lending operations by coverage of essential public health functions.](image)

Source: Data from content analysis of Project Appraisal Documents/ Staff Appraisal Reports.

Nevertheless, examples of successful operations in one or more dimensions of public health do exist. The **Estonia Health Project**, completed in 1999, is an exemplar of achievements based on strong country commitment and timely World Bank support (Case Study 1), as earmarked funding and the institutional capacity for managing these funds was established with and clear criteria. The **Bosnia Basic Health Project**, which is under implementation, illustrates the potential for innovative approaches to earning broad financial support from government budgets after IDA funds have been exhausted, even in the context of weak local institutions (Case Study 2).

**Case Study 1: Estonia Health Project (1995-1999)**

The Health Project aimed to support the government’s health promotion efforts, to improve Estonia’s health status, while also improving the government’s financial sustainability. At the beginning of the project, the government committed 1% of health insurance proceeds for health promotion activities (thus exceeding the Bank’s recommendation of 0.5%). Toward the end of the project, some fallback of this commitment occurred in real terms, as health insurance spent 0.47% of its budget on health promotion in 1999 (calendar year). However, a major achievement of the project is the establishment of earmarked funding and the development of institutional capacity to use these resources according to transparent criteria, in partnership with NGOs and local authorities.

The project’s activities included supporting reforms that:

i. reoriented health services to promoting healthy lifestyles by emphasizing health promotion and disease prevention programs;

ii. developed human resources by strengthening modern public health training, integrated pre-clinical medical training, and continuing education for doctors, administrators and other health personnel; and

iii. supported on-going health financing reform to ensure sustainability, cost-effectiveness and equity through establishing sound analysis of costs, performance and health management information and systems; and

iv. established robust prioritization and evaluation of health promotion projects according to their cost-effectiveness and expected impact.
Activities carried out as part of the project have:
   i. established mechanisms of financing health promotion and disease prevention activities;
   ii. developed the capacity of relevant institutions;
   iii. established processes that have enhanced health promotion; and
   iv. broadened the ownership and modernized the content of health promotion and disease prevention interventions.

The project achieved most of the impact targets selected at the outset, which can be attributed partially to health promotion activities carried out during the life of the Project. The project monitored selected health behaviors (smoking, dietary habits, contraceptive use, etc.) as well as selected aggregate health status indicators (e.g., coronary heart disease death rate). However, numerous confounding factors influence health status, of which Project inputs were only a fraction.

Another important outcome for health promotion is increased local community involvement in health promotion activities, as evidenced by an increased number of projects and increased share of funding for local health promotion initiatives. In 2000, 314 of the 533 applications made for local activities were funded, compared to 1995, when 20 out of 100 applications were funded. In 2000, 60% of health promotion funds were spent on local projects, compared to 20% in 1995.

The Departments of Public Health and Family Medicine at the University in Tartu are well-staffed and -resourced, and are providing high quality programs. The Department of Public Health, housed in the Biomedicalum, proved to be one of the project’s key investments and has not only become a center of training excellence but also is becoming an important contributor to policy debate through applied research.

**Case Study 2: Bosnia/Herzegovina: Basic Health Project (1999)**

The third in a planned series of three operations in support of the government’s health sector recovery and development program, its objective is to support the development of a viable Basic Health System of primary health care, public health and disease control. Specifically, the project supports the following:
   i. development of a primary health care system based on cost-effective interventions;
   ii. reduction of lost productivity due to preventable illnesses, disabilities and premature deaths; and
   iii. improvement of national capacity for managing the health sector.

The design of the project included an assessment of the top causes of loss of Disability Adjusted Life Years (DALYs) in 1991 in the two Entities that make up the State of Bosnia and Herzegovina (the Republika Srpska and the Federation of Bosnia and Herzegovina ); 1991 was most recent year for which a complete dataset was available.

The following four causes accounted for 63 % of all DALYs lost: circulatory; mental illnesses; neurological disorders; and cancer. The loss of economic productivity attributable to these conditions is an important justification for improving public health and primary health care systems. In addition, human suffering and misery persist; access to basic services is uneven; inequities are widespread; and the service delivery system is ill-prepared to meet the population’s needs for illnesses due to lifestyles with primary and secondary prevention. For example, tobacco-related deaths accounted for about 10 % of all DALYs lost. The need to control risk factors such as these is the operational basis for developing effective primary care and public health interventions.

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The Public Health and Disease Control component supports capacity building, planning and implementation of interventions for the prevention and control of those diseases that have a significant impact on the burden of disease. The component included funding for public health innovation grants, to jump-start new and effective approaches to public health and disease control through competitive grants.

As of January 2002, implementation of the public health innovation grants had been completed and was found to be highly satisfactory during a mid-term review of the Project. A second set of public health innovation grants was planned in the Republika Srpska in the short-term. The sub-component supported local initiatives and approaches to health promotion and disease control through small grants awarded on a competitive basis. Ninety-six applications were received in both entities, from a variety of local government, non-government and community-based organizations. An expert panel reviewed grants and 14 were awarded in both entities. Of these, 12 were completed while two were cancelled for non-performance or dissolution of the grantee organization.

The concept of public health innovation grants was well received in both entities. Operational lessons include:
- the need to prioritize and focus more strongly on areas of health promotion content; and
- the need for better linkages with the overall efforts in health reform and with primary health care.

Content-specific lessons emphasized:
- health promotion and disease control;
- the prevention of HIV/AIDS;
- hypertension control and prevention in primary health care;
- surveillance in the health and working environment of mineworkers;
- monitoring of risk factors;
- oral health promotion through mass media; and
- the prevention of diabetes.

In both entities, the government and the Bank’s team agreed on the need to disseminate these lessons. The government has also indicated a willingness to commit its own budget to a follow-on phase of the Public Health Innovation Grants.

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II. ISSUES

Non-Communicable Diseases and Control of Risk Factors

Non-communicable diseases (NCDs) are one of the most important epidemiological forces driving both mortality patterns and health system demands in ECA (Murray and Lopez 1996), particularly among adults (Table 2 and Statistical Annexes). Included in these are diabetes, life-style related diseases such as cardiovascular disease (CVD), lung cancer, and alcohol-related cirrhosis of the liver. Prevention depends on adequate public information, public policies, screening, medical care and patient education to reduce mortality, morbidity and unnecessary hospitalizations. Injuries, which previously had not been recognized as needing a systematic approach, are an increasing source of morbidity and mortality and an economic burden on health systems (McKee et al., 2000). Injuries include intentional (suicide and homicide) and unintentional (automobile crashes, drowning, poisoning, etc.) causalities.

Table 2. Selected health status indicators by region

<table>
<thead>
<tr>
<th></th>
<th>Life expectancy at birth</th>
<th>Infant mortality rate per 1,000 live births</th>
<th>Under-five mortality rate per 1,000</th>
<th>Child mortality rate per 1,000</th>
<th>Adult mortality rate per 1,000</th>
<th>Survival to age 65 % of cohort</th>
<th>Female % of cohort</th>
</tr>
</thead>
<tbody>
<tr>
<td>World</td>
<td>63</td>
<td>66</td>
<td>80</td>
<td>54</td>
<td>123</td>
<td>78</td>
<td>32</td>
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<tr>
<td>Low income</td>
<td>53</td>
<td>59</td>
<td>112</td>
<td>77</td>
<td>177</td>
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<tr>
<td>Middle income</td>
<td>66</td>
<td>69</td>
<td>54</td>
<td>31</td>
<td>79</td>
<td>39</td>
<td>12</td>
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<tr>
<td>Low &amp; middle income</td>
<td>66</td>
<td>69</td>
<td>55</td>
<td>32</td>
<td>84</td>
<td>40</td>
<td>12</td>
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<tr>
<td>Lower middle income</td>
<td>66</td>
<td>69</td>
<td>55</td>
<td>32</td>
<td>84</td>
<td>40</td>
<td>12</td>
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<tr>
<td>Upper middle income</td>
<td>66</td>
<td>69</td>
<td>52</td>
<td>27</td>
<td>67</td>
<td>34</td>
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<td>East Asia &amp; Pacific</td>
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<td>55</td>
<td>35</td>
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<tr>
<td>Europe &amp; Central Asia</td>
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<td>Middle East &amp; N. Africa</td>
<td>59</td>
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<td>95</td>
<td>44</td>
<td>136</td>
<td>56</td>
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<tr>
<td>South Asia</td>
<td>54</td>
<td>63</td>
<td>119</td>
<td>74</td>
<td>180</td>
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<td>Sub-Saharan Africa</td>
<td>48</td>
<td>47</td>
<td>114</td>
<td>92</td>
<td>189</td>
<td>161</td>
<td>92</td>
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<tr>
<td>High income</td>
<td>74</td>
<td>78</td>
<td>12</td>
<td>6</td>
<td>15</td>
<td>6</td>
<td>..</td>
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<tr>
<td>Europe EMU</td>
<td>74</td>
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<td>5</td>
<td>16</td>
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</tbody>
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Trends in mortality in the early 1990s from major diseases in ECA have shown increases, especially among men (30-100 % higher than in Western Europe), in CVD, cerebrovascular disease, cancer, injuries, and alcohol-related diseases compared with general declines or stability in Western Europe (La Vecchia et al., 1998).

To tackle these diseases, health systems and governments need to take sophisticated multi-sectoral approaches, backed by strong government and civil society commitment, in order to influence factors outside the health system that directly impact disease prevention at the primary, secondary and tertiary levels. The residual health systems in ECA were in large part inappropriate for managing the changing burden of disease toward NCDs; thus, reform measures have been undertaken, primarily directed toward improving financing and direct health
care systems. The transition to market-based economies has complicated this reform. For example, alcohol and tobacco products were marketed widely, but the associated health risks were not made known as widely and advertising was allowed freely.

In Russia and other New Independent States, trends in higher dietary fat consumption, reduced cereal and vegetable consumption, increased sugar, alcohol, and fast food consumption have all added to the burden of obesity and CVD risk (Popkin et al., 1997). Coupled with tax revenue needs, political contributions, and the profit-driven behavior of trans-national corporations (Neuman et al., 2002), transitional health systems have been unable to cope with the emerging NCD disease burdens (McKee and Jacobson, 2000; Watson, 2000). Health projects supported by the World Bank health projects have attempted to address health systems reform, sometimes including targeted demonstration or program projects that address the NCD burden. However, without a broader approach using evidence-based policy interventions, these efforts are unlikely to be successful generally.

Information Gaps
Critical gaps exist in the mortality, burden-of-disease and morbidity data needed to drive evidence-based decisions regarding NCDs. Useful information could be derived also from sentinel, nutritional data for injury prevention and behavioral surveillance.

First and foremost, mortality data are the basis for understanding the most about disease patterns in ECA. Assurance that mortality reporting systems provide accurate data depend on several factors:

− Accurate cause-of-death diagnosis by physicians or other qualified individuals;
− Accurate recording and registration by public health agencies (local and national), including “external” causes that indicate intentional or unintentional injury;
− Low national levels (<15%) of “unspecified” or other uncertain causal attribution;
− Appropriate analysis of mortality data that provides basic descriptive epidemiology and interpretation in a timely and regular manner; and
− More sophisticated epidemiological interpretation that may relate mortality to potential causative factors such as tobacco, alcohol, diet, and physical inactivity (McGinnis and Foege 1993).

Burden-of-disease studies extend mortality data to help describe risks and disease patterns that impact on health systems at the national level (Murray and Lopez, 1996). The WHO provides normative guidelines to assure national mortality reporting; most ECA countries have maintained at least moderately accurate death registration systems through transition. However, systematic examination of these systems has not occurred on a regional level.

Morbidity surveillance may take many forms, including self-reported health status information collected on surveys; service utilization data by diagnosis from hospitals and physicians; and disease registries (e.g., cancer, diabetes, and myocardial infarction). Ideally, new cases of NCDs would be recorded as they are discovered within the health system, known as incidence surveillance. Analysis of such incidence data provides valuable information about potential causality, targets for intervention, planning for services and program evaluation. Such systems are expensive and difficult to maintain, and must be used in the context of targeted national or regional programs for them to be justified.

Certain probes, or indicators, of health system functionality may serve as forms of health system morbidity surveillance. For example, repeated hospitalization for diabetic ketoacidosis or acute asthma in children may indicate a failure of the primary care system.
**Sentinel surveillance** of high-risk groups draws on targeted surveys, laboratory reports, or provider information for small groups of individuals. The information collected may then be utilized to understand patterns of disease for groups at highest risk. Examples include:

- Reproductive health surveys of child-bearing-aged women;
- Health risk behavior surveys of youth;
- Targeted diabetic screening in family members of patients; and
- General public screenings for hypertension, diabetes and hypercholesterolemia.

While **nutritional surveillance** systems are rare in ECA, they might include health interview surveys, special studies among target groups using complex dietary histories, laboratory surveillance of lipid profiles or food sales records. Considerable evidence is available from Western societies to show the results of widespread changes in the consumption of fat, especially from animal sources, in affecting CVD mortality rates (Pearson and Patel, 1997). However, the absence of nutritional surveillance in ECA makes it difficult for policymakers to understand the relationship between food policy (e.g., import taxes, subsidies, agriculture, labeling, marketing and public information) and population health.

Rarely are epidemiological data, hospital and emergency services data, and road traffic crash data linked in ECA. Injury is responsible for at least 7% of world mortality (Nicholl, 1999), and incidences can be reduced through interventions at different levels (primary, secondary, and tertiary care). **Data for injury prevention** programs need to incorporate several sources, with the ultimate health outcomes being mortality, hospital and outpatient emergency utilization, and persistent disability. In the Baltics, external causes of death registration during 1970-1997 showed rising trends in violent death among men, peaking in 1994 at 16% of total mortality. Explanations for this may be found in careful analysis of antecedent causes, driven by descriptive mortality data reports (Varnik *et al*., 2001).

**Behavioral surveillance** is essential to an improved understanding of the determinants of many NCDs. Such surveillance includes:

- Regular health interview surveys of either nationally representative populations or targeted groups;
- Indirect data on consumption patterns (e.g., tax revenue-based cigarette consumption per capita, animal vs. vegetable-based oil/fat product per capita sales data, arrests for alcohol-associated motor vehicle crashes); and
- Pre- and post-campaign evaluation data on knowledge, attitudes, and beliefs (KAB) targeted by such campaigns.

Although Bank-funded projects have attempted to support surveillance systems between 1990 and 2000, these attempts have rarely been successful on a sustained basis. **Hungary** tried to institute a sophisticated health interview survey to help monitor health status, behavioral risk factors and responses to a community-based CVD reduction program; this included biological measurements of a representative national adult sample. However, supervisory epidemiological expertise was not available; inter-agency coordination did not exist and strategic planning was not conducted. As a result, the survey provided minimal data useful for decision-making, with negligible contribution to program evaluation and an unsustainable system for monitoring population health.

In **Latvia**, the Bank financed participation in the FINBALT survey system, an existing regional surveillance network coordinated by a Finnish public health agency. This system provided country-specific data, comparisons with other countries in the area and a repeated standardized sampling of the adult population, with added questions tailored to the Latvian environment.
In **Georgia**, an attempt was made to equip and train national and local health agencies to develop a health information system. This project was plagued by procurement problems, lack of epidemiological oversight and lack of sustainability. Most often, the Bank-supported projects concentrated on health information systems that were designed to track health care expenditures and utilization; rarely did these systems integrate with public health needs and public health information systems.

In some cases, Bank-supported projects have attempted to establish health policy and analysis units, incorporating a variety of technical disciplines such as economics, health policy, statistics and epidemiology. The utilization of data for decision-making seems to be a continued challenge, partly because the equipping and staffing of these units was often the only objective. A strategic framework for setting evidence-based *health* objectives, guided by measurable indicators and broad stakeholder ownership, was lacking. Even more lacking was the translation of surveillance and evaluation data for public use. Public information campaigns often were funded within the projects, but seldom did these present data either to policy makers or the public with effective interpretations and analyses that could be used to correct widespread information asymmetries.

*The Complexities of NCD Control*

It may be helpful to describe a strategic framework through which the complex problems of NCDS might be addressed. The simple concept of health systems and individual health-seeking behavior is based on the principle that, once a system is in place, individuals will seek optimum levels of care to solve their perceived health problems (Figure 2). This, however, negates much of the important role of health systems in preventing illness and the role of non-health system factors in addressing prevention at several levels (Figure 3).

**Figure 2. The simple model of health care**

Population health, or “public health”, addresses the needs of populations rather than simply individuals (McKee and Figueras, 2002). Health systems must address both the ‘public goods’ needed to improve population health status, and the ‘private goods’ needed to respond to individual health needs (Musgrove, 2000). Considering these concepts as a continuum, opportunities become apparent for primary, secondary and tertiary prevention that could be supported by a systemic public health approach to NCDs. On the left are interventions usually financed from central budgets or provided by NGOs, such as policy analysis and planning, public information activities, advocacy and disease surveillance. On the right is where most Bank programming has been applied: secondary and tertiary medical services, financed usually through health insurance schemes or sickness funds. In terms of cost-effectiveness, substantial evidence exists to show the balance of support needing to move more to the left side of the continuum.
An example of the continuum can be made for injury prevention; primary prevention may rely on enforcement of drinking and driving laws and treatment of depression. However, tertiary prevention (after the injury has occurred, with the intention of reducing morbidity and disability as well as immediate mortality), emergency service improvement may be the best public health policy (Nicholl, 1999). This intervention falls far to the right of the continuum. Emergency service improvements have been the target of investments in several Bank health projects, including Croatia, Latvia and Romania. Operational research to assess the impact of procurements and system development in these areas is lacking, however. In some cases, linkage has been established between the road safety authorities and health authorities. Even within the Bank, the Road Traffic Safety Initiative often is not linked to health project activities; rather, it is more or less partitioned as an engineering activity.

Another example could be cervical cancer prevention, for which interventions may be thought of as mixed private and public goods. On the private side, there is an interaction between women and their physicians or providers to obtain cervical samples; on the public side, there is a tracking system for positive screens, a financing system for follow up, and a procurement system to purchase relevant equipment and train specialists. In Hungary, the Bank-supported health project included a comprehensive national breast and cervical cancer prevention program incorporating clinicians and the public health service.

Health Care Systems
Health care systems can affect mortality and morbidity outcomes for persons with NCDs such as diabetes and CVD significantly; the survival of affected individuals varies considerably according to access to appropriate preventive and curative health care, even in Western countries (Harris, 2000). The current failures in ECA health systems to address evidence-based clinical preventive services through application of international standards (Task Force on Community Preventive Services 2002) must be addressed systematically. For example, a model for NCD control involves:

- **The health care system**: practice redesign, electronic information systems and changes in models of care.
- **The provider**: education, feedback, decision support and record systems
- **The patient or population**: public information, patient education, outreach, screening and feedback.

Clearly, these elements can be approached through health system reform efforts along the continuum in Figure 3. The Bank has invested heavily in reorganizing primary care and referral systems through training and retraining. However, little to no evaluation has been conducted that reviews the results of such investment vis a vis morbidity and mortality outcomes for NCDs. Operational research built into health reform projects rarely considers outcomes; instead, measurable indicators usually focus on the number of providers retrained, the number of short courses held or the number of hospital beds reduced through rationalization.
In addition to these process measures, public health strategies have been used to set measurable health indicators linked to system improvements, but measurements of these indicators require functional surveillance systems as described above. In Latvia, a public health strategy now helps guide the second phase of an Adaptable Program Loan (APL), consciously linking health outcomes to health system reform actions.

Health outcome indicators will not change quickly or visibly without system-wide, or inter-sectoral approaches, which must be supported by policy at both macro- and micro-levels (at Sections A and B of Figure 3). For example, strong tobacco control or nutritional policy background activity will permit scientific knowledge to permeate through both providers and the public. Decisions on healthy lifestyle choices can then be supported clinically, while legislative policies discourage behaviors such as smoking in public places. It may be more difficult for a patient to quit smoking if smoking is permitted throughout hospitals, government buildings, transport services, and other venues. Cues provided through tobacco advertising may continue to normalize smoking in the face of clear health risks. Thus, national or regional programs that support ‘public goods’ may need to be embedded in health systems reform projects that emerge as mixed private and public good entities.

As emphasized in the Health Sector Strategy Paper (Staines, 1999), ECA countries, supported by Bank lending and Sector work, should move toward a professional culture of policies and programs based on scientific evidence.

Health Promotion

Health promotion programs play key roles in the public health approach to behavioral risk factors. In the past, such programs have been relegated typically to school-based health education, occasional (poorly evaluated) public information messages and various ‘soft’ activities. These activities must utilize local information (such as disease burden data) and approaches that are tailored to the local environment, not re-packaged Western program approaches. Effective programs often have utilized social/professional groups, mass media, local celebrities and school health education (Prokhorov 1997). Health promotion focuses on the social environment as a major determinant of behavior and seeks to change it by correcting information asymmetries as well as advocating policymakers to support sensible public health approaches.

Funding is a problem for health promotion programs, which some countries have addressed by earmarking a proportion (e.g., 0.5 % in Estonia and Latvia) of sickness funds for the support of organized health promotion units within the MOH. Additional creative financing, including earmarking of taxes on cigarettes for tobacco control programs, has been used in other countries; it has been successful in reducing tobacco use as well as tobacco-related disease (Pierce 1997). The Bank has financed the development of health promotion units in Latvia, Estonia, Lithuania and the Kyrgyz Republic.

Strategic Planning

Public health action plans are essential tools that help drive policy, system reform and health outcomes. These are best developed through widespread stakeholder involvement over a fairly long period of time. Support for such planning activities has been part of project preparation in some countries, as well as being financed through investment projects, with the measurable indicator being the production of the public health strategy (similar to the facility and rationalization Master Plans called for in health reform projects). In addition to broad stakeholder involvement, these plans work best if accompanied by rigorous implementation strategies using measurable and realistic short-, medium-, and long-term objectives. Critical to the success of this planning process is the incorporation of monitoring systems that can measure and report progress toward these objectives. Responsibilities for data collection, analysis and reporting need to be clearly spelled out. Here again, policy analysis units may be an appropriate component for health system reform investment.
For example, in the case of poor nutrition, dietary recommendations supported by various NGO and government agencies need to be established, publicized and then monitored as part of a public health strategy. Thus, nutritional surveillance needs to be incorporated at several levels. In addition, market surveillance and possibly intervention through pricing policies need to be monitored for changes in consumption patterns. Transferring subsidies to fruits and vegetables from animal fat will affect prices and drive consumer behavior towards healthier diets (Pearson and Patel 1997). Here again, a systemic approach is needed, with several different institutions and sectors involved in the social marketing and public health approach to dietary change.

**Political Economy**

Policymakers are encouraged to address NCDs as a political priority due to the cross-border spread of diseases such as CVD, cirrhosis, and diabetes based on marketed risk factors (tobacco, alcohol, fatty foods) (Watson 2000; Moskalewicz and Simpura 2000). Public health interests and civil society capabilities are weak generally, compared with economic interests in this scenario. Economic analyses of the impact of NCDs on health systems are rare, but these may be helpful in motivating governments to take strong action (such as in Latvia and Serbia).

In the case of alcohol and tobacco, increased supply and increased interest by governments, organized crime, and multinational corporations overwhelm the health interests of the State. Most supply-side interventions (with the exception of control of smuggling) are ineffective in reducing harm caused by these substances.

Demand reductions based on public information, civil society actions, de-normalization of risk behavior, clinical support and basic policy changes may be effective. In addition to higher taxes, demand can be managed with restrictions on smoking in public places, tobacco and alcohol marketing, underage drinking, drinking while driving, and the sale of tobacco and alcohol products to young people. These interventions are generally outside the competence of health care systems. However, strong public health programs can work across sectors to assure the necessary broad approaches to these activities. Steps in this process that may be financed by health reform projects are:

- **Establishment of surveillance systems** for behavior, policy accomplishments, and health outcomes related to marketed risk factors;
- Establishment of effective (and carefully evaluated) **public information campaigns** as part of health reform;
- **Development of civil society organizations** that deal with political realities (e.g., Mothers Against Drunk Driving, Non-smokers rights movements, etc.);
- **Education of providers as change agents** in behavioral risk factor control (standards for recognizing and treating alcohol and tobacco dependence, developing fiscal or other rewards for working with the public health system);
- **Improvement of accountability of policymakers** through education of media and civil society.

**The Bank’s Comparative Advantage**

**Sector Work in NCDs**

The ECA health sector strategy (Staines, 1999) elaborated the intersectoral approach to health policy, paying particular attention to NCDSs and lifestyle factors including diet, tobacco and alcohol consumption, lack of exercise and stress. The East-West gap in mortality and morbidity patterns is largely a result of these factors (Chenet et al., 1996). Investment in raising excise taxes on tobacco or alcohol products, banning tobacco advertising, removing subsidies for meat and dairy products, regulating motor traffic or work safety more strictly, and requiring nutritionally more informative labels on packaged food products were all raised as potentially cost-effective interventions. The ECA health sector strategy paper called for a better match between health care reform measures and the major patterns of morbidity and mortality, including expanded primary
care, a more cost-effective and better-equipped secondary care system, more evidence-based decision-making and practices and an expanded role for the private sector.

One of the main challenges to health sector reform described in the strategy paper included stakeholder resistance due to financial self-interest. This might take the form of specialist health providers not wanting to divert resources from tertiary care to prevention. It might mean that government interest in tax revenue would preclude raising taxes on cigarettes or alcohol for fear of increasing budgetary losses through an increase in smuggling of these goods. Most importantly, the strategy emphasized three overriding priorities:

- To reduce the high prevalence of avoidable illness;
- To create affordable delivery systems that better match the care offered with the main causes of illness, disability, and death; and
- To take advantage of intersectoral avenues for promoting health.

Clearly, these are system-oriented approaches that de-emphasize the procurement of health services as the sole objective of health reform. Health systems were called on to transform themselves from service delivery and financing bodies to policy-setting agencies, requiring legal, institutional and regulatory approaches to ensure that public goods are provided efficiently and effectively.

The Bank has taken a substantial role in addressing arguably the most important behavioral risk factors for NCDs in the region: tobacco (Staines, 1999) and alcohol. **Tobacco accounted for 12.5 % of all DALYs lost in 1990.** Beginning with the concise, “Curbing the Epidemic: Governments and the Economics of Tobacco Control” (World Bank, 1999) report and following with the “Tobacco Control in Developing Countries” (Jha and Chaloupka, 2000) report, the Bank addressed the economics, cost-effective interventions and government responsibilities within tobacco control. Currently, the Bank provides limited technical support to countries and project teams through the tobacco control team in the central Health, Nutrition and Population Unit (HDNHE). A series of training seminars for counterparts in the region has been held, and a toolkit has been developed that helps guide economic analysis at the country level. In **Latvia**, a health project funded the analysis; in **Serbia**, HDNHE funded a national analysis of tobacco economics in preparation for a proposed public health project.

**Alcohol accounted for 8.3 % of all DALYs lost in 1990** (Murray and Lopez, 1996). Considerable attention has been paid to the increasing rates of alcohol abuse, injuries related to alcohol use and diseases resulting from long-term alcohol use (Lehto 1993; Bray et al., 2000; Varvasovsky 1997). Important considerations for public health approaches include national variability in social policies and traditions, the economic benefits to governments of alcohol sales, and the political economy surrounding alcohol and public health. A paper on alcohol as a public health problem has had a much more difficult path to acceptance within the World Bank than that of tobacco. This is partly because the economics of alcohol harm are often modulated by the macroeconomic environment that supports alcohol production and government revenues; further, the reported modest health benefits of moderate drinking in preventing heart disease make clear policy lessons difficult to discern. Nevertheless, this issue has been included in a few lending activities (**Latvia**).

**Lending Activities**

A prime example of primary prevention is development of a national tobacco control program, including strategic planning, public information campaigns, policy development, surveillance and evaluation. Secondary prevention might then include improved clinical services in support of smoking cessation. Tertiary prevention might extend the treatment of CVD to post-cardiac rehabilitation (diet, cessation, hypertension control, and exercise) to reduce recurrence, as well as micro-invasive therapy to reduce recurrent coronary occlusion.
Substantial knowledge on the health and economic consequences of tobacco and tobacco control is now available and can be incorporated as either lending or non-lending support. Interventions include higher taxes and non-price measures such as bans/restrictions on smoking in public and work places, comprehensive bans on advertising and promotion of all tobacco products, better consumer information, effective warning labels, and help for smokers who wish to quit (World Bank 2001). In Latvia, a higher cigarette tax was used as a ‘trigger indicator’ in the first phase of an Adaptable Program Loan (APL). Although higher cigarette taxes will be required for eventual EU accession, this effort was resisted by the Ministry of Finance (MOF) using arguments popular among the multi-national tobacco companies: that raising taxes will only raise smuggling and crime (Joosens 1999)

Alcohol-related program activities may be linked to injury control programs (Latvia) or health promotion activities (various countries). Significant policy work has been lacking, partly due to the paucity of good experience in macro- or micro-economic policy, and partly due to the difficulty in obtaining and reporting alcohol-related disease impact data.

Nutrition-related lending has also been minimal, again confined mainly to health promotion messages and clinical education to improve providers’ interventions against CVD. Nutrition policy, surveillance and evaluation studies have not received significant attention in Bank loans. Similarly, injury control has not been specifically financed through lending instruments; in at least one instance, a road safety (engineering-based) project now has the opportunity to interact with the MOH (Latvia). Surveillance system development, operational research into the epidemiology of injuries and the development of effective suicide prevention programs has been weak. Mental health components have occasionally covered suicide prevention as a pilot activity.

A few examples of investment in a continuum approach exist. For example, in Croatia, a CVD project (focused at a regional level) involved:

- A national public information campaign on health risk behavior;
- A focused training program for primary care providers to improve HTN and other risk factor control and referral;
- An improved health information system to assure quality of service delivery; and
- The expansion of micro-invasive surgical facilities at the tertiary referral hospital to reduce the need for open-heart surgical intervention.

In Hungary, a comprehensive CVD program was designed as part of the Bank health project, involving primary care physicians, development of community sports facilities, education of caterers, development of school health education programs and mass media campaigns. This complex project was meant to replicate the success of North Karelia, Finland, which succeeded in markedly reducing CVD mortality and morbidity through carefully evaluated community-based interventions (Puska, 1997). However, surveillance, management, and evaluation deficiencies caused the Hungary project to fall short of expectations. Weak ownership by stakeholders prevented the accomplishment of its ambitious goals, and weak linkage to MOH activities precluded sustainability.

Public health systems and institutions
With the exception of a few proactive reformers, such as Estonia and the Kyrgyz Republic, countrywide public health systems remain dominated by the pre-1990 approaches to disease control. In FSU countries, the old SANEPID System remains in place, with parallel and inefficient command-and-control approaches. In summary, the need remains for major reviews and reforms of the approaches to the institutions and functions of public health. The integration of public health as part of the entire health reform process and clearer articulation
of the State’s key role in public health are needed in particular. The State’s most important roles could be summarized as follows:

- **Policy**: Setting goals and standards; financing the key roles.
- **Science**: Promoting research and development; surveillance; expanding the evidence base for public health interventions.
- **Capacity building**: Establishing and/or financing institutions; training and deployment of skilled personnel.
- **Social responsibilities**: Addressing inequities in risks and outcomes; protecting vulnerable populations.

Meanwhile, human resources analyses and development are important needs. Not only is there an oversupply of some professionals, there is also an undersupply of analytic, epidemiological, public health nursing and other key groups in most of the ECA countries.

Recognition of the need for health sector reforms that emphasize improved health status as a key outcome in the medium- to long- term is growing. This outcome-focused approach is important in light of the poor indicators of aggregate health status in many ECA countries as shown in Figure 1.

Several key features are likely to define the public health agenda in ECA over the next decade:

- Non-communicable diseases and the control of risk factors;
- New and re-emerging infectious diseases, particularly HIV/AIDS and tuberculosis;
- Mental and behavioral disorders; and
- Micronutrient deficiencies.

**Non-communicable diseases and control of risk factors**

The health challenges of a decade ago are being compounded now by a large burden of non-communicable diseases, accidents and injuries. In terms of political and strategic advocacy for better public health performance, the gap is wide between the aggregate health status of ECA countries and those of the established market economies of Western Europe. It is remarkable that, while ECA countries compare favorably with aggregate data for middle-income countries, this does not hold for indicators of adult mortality, particularly for males (Table 2). For NCDs, the case is clear for **interventions focusing on the control of risk factors**. Tobacco consumption, excessive alcohol consumption, sedentary lifestyles and unhealthy diets are prime risk factors for the excess burden of cardiovascular diseases and lung cancer (McKee and Jacobson, 2000; Shkolnokov et al., 2001; Bairnard and Varakirova, 2001). The following is an outline of specific approaches that the Bank might undertake and/or commission at the regional, sub-regional or country and country levels:

- **Analytical work on alcohol policy, public health program applications, and economics.** Given the high burden of disease, a more comprehensive approach similar to that engaged for tobacco control might assist TTLs in addressing alcohol within health lending projects.
- **Analytical work on nutrition policy, particularly over-nutrition related to the growing burden of obesity and diabetes.** Food subsidy programs, public education programs, and other nutrition-related policy approaches should be considered for evidence in ECA that would lead to inclusion of such activities in future lending projects.
- **Support for surveillance systems**, including behavior, health care utilization, mortality, and policies against marketed health risks such as alcohol, tobacco and fatty foods should be supported more specifically in lending projects. Without careful monitoring of health status, risk factors, and appropriate health outcomes, the success of Bank-supported programs in NCD control cannot be evaluated or modified.
Increasingly sophisticated public information and health promotion activities are needed to combat NCDs. It is not enough simply to support passive educational programs, as effective communication also involves advocacy and civil society mobilization. These are advanced steps in health promotion development that are now indicated in ECA countries where health promotion has a foothold and where the economics of unhealthy behavior outweigh current public health messages.

Economic studies of NCD risks are needed as part of loan preparation or lending programs. These can be very valuable in terms of appealing to MOF. Health costs of NCDs, health benefits of broad policy interventions, and the lessons learned from Western countries should be mobilized in this respect.

Injury control needs to be raised as a highly cost-effective lending possibility. Cross-sectoral collaboration with the transportation sector is essential, as is the development of appropriate health surveillance systems.

Partnerships with other donors can leverage Bank lending; in particular, Nordic countries emphasize health promotion and risk reduction as part of their regional interests. CIDA brings enthusiasm to tobacco control, as does the US Centers for Disease Control and Prevention in both analytical work and technical assistance.

Given the demographic and epidemiological transitions faced by governments in the region, more emphasis should be placed on integrating public health into health system reform projects, not as an afterthought, but as a conscious joint endeavor.

New and re-emerging infectious diseases: HIV/AIDS and tuberculosis

The infectious disease burden is growing in many ECA countries; the most threatening diseases are HIV/AIDS and tuberculosis. ECA continues to experience the fastest-growing HIV/AIDS epidemic in the world. In 2002, there were an estimated 250,000 new infections, bringing to 1.2 million the number of people living with HIV/AIDS. Russia and Ukraine remain at the forefront of the HIV/AIDS epidemic, but many other countries are now experiencing rapidly emerging epidemics.

Prior to 1995, few infections had been reported, except for isolated epidemics in the early 1990s related to intravenous drug users (IDU) in Poland and to nosocomial infections among thousands of children in Romania. In 1995, the first widespread outbreak of HIV in Ukraine and Belarus began, mainly from an epidemic of IDU. The epidemic then started to take off in other countries of the region – Moldova in 1996 and Russia in 1998, followed by Latvia and then Kazakhstan. HIV is spreading swiftly now also in Azerbaijan, Estonia, Georgia, Kyrgyzstan, Tajikistan and Uzbekistan (UNAIDS, 2002).

While epidemiological and behavioral surveillance databases remain weak in many ECA countries, indications are increasing of a classic shift of the epidemic from the high-risk core transmitter groups (such as needle-sharing IDUs and commercial sex workers) through bridge populations (their sex partners) into the general population. In Ukraine, for example, where 75% of cumulative HIV infections are related to increasing drug use, the proportion of sexually transmitted HIV infections is increasing. Although absolute numbers remain small, more people, mostly women, appear to be contracting HIV through sexual transmission and more pregnant women are testing positive for HIV, suggesting a shift of the epidemic into the wider population. In Serbia, 20% of sex workers and 18% of men who have sex with men were found to inject drugs. In addition, more people are having sex without knowing the risks:

Among the youth, some are at greater risk. Young people in several countries are becoming sexually active at an earlier age and the frequency of premarital sex is increasing. A steady rise in premarital sex is being observed among Romanian adolescent girls (aged 15–19), for example. The proportion of reported premarital sexual relations more than doubled to 22% in 1999 from 9% in 1993, while a 2000 report in Ukraine revealed that about 51% of women aged 15–24 had had a premarital sexual relationship. In the psychological and socio-economic aftermath of the Balkans conflicts, young people are now more vulnerable to HIV. A recent
WHO/UNICEF study found high levels of drug injection in some countries, as well as frequent sharing of injecting equipment.

**Awareness remains low in many places.** In some Central Asian republics, awareness of HIV/AIDS is very low among vulnerable groups, such as teenage girls—a mere 10% of teenage girls in Tajikistan had ever heard of HIV/AIDS. In 2001, in Azerbaijan and Uzbekistan, fewer than 60% were aware of the disease. The proportion of young girls harboring at least one major misconception about HIV/AIDS ranged from 94% to 98% in those countries. In Ukraine, which has the highest HIV prevalence rate in Europe, only 9% of adolescent girls were aware of HIV prevention methods. Although improving in some places, levels of condom use remain low.

**Sexually transmitted infections.** Meanwhile, very high rates of sexually transmitted infections continue to be found in ECA, increasing the odds of HIV being transmitted through unprotected sex. In 2000, the number of newly reported cases of syphilis in Russia stood at 157 per 100,000 persons, dramatically higher than the 4.2 per 100,000 persons in 1987. Similar general trends are visible in the other countries of the Commonwealth of Independent States, in the Baltic States and in Romania.

**Figure 4: Trends in HIV infections in selected ECA countries**

![Cumulative reported HIV infections per million population in Eastern European countries: 1993-2001](image)

It is impossible to predict with precision the future course of HIV/AIDS in ECA, due to limitations on methods for estimates and projections, the gaps in knowledge of viral transmission rates, epidemiological data and behavioral patterns. As such, claims of certainty in the magnitude and course of the epidemic would lack credibility. However, indications at the country and sub-country levels are that the epidemic continues to grow in many parts of ECA, with potentially serious – and negative – effects on health status and economic

− **GDP in 2010 may be as much as 4.15% lower.** Without intervention, the loss could rise to 10.5% by 2020. Perhaps more significant for long-term development, the uninhibited spread of HIV would diminish the economy's long-term growth rate, taking off 0.5% annually by 2010 and a full percentage point annually by 2020.

− **Investment could decline by more than production.** In the pessimistic scenario, its level would decline by 5.5% in 2010 and 14.5% in 2020, indicating an increasing stumbling block for future growth.

− Similarly, the effective, i.e. quality-adjusted labor supply could decrease over time. However, a breakdown reveals that the overall decline would be due more to a decline in the number of workers ("total labor supply") than to productivity losses associated with those parts of the work force that would be infected with HIV. This reflects the assumption that HIV lowers productivity only by a moderate 13%.

With a few exceptions, country and sub-regional efforts to address the epidemic have been weak and patchy for a number of reasons:

− Despite the steep increase, HIV/AIDS prevalence rates remain very low, below 1% of the adult population, compared to the worst affected regions in sub-Saharan Africa, Asia and the Caribbean.

− **The epidemic currently is driven primarily by the high-risk core group of injecting drug users (IDUs),** hence there is a perception that HIV/AIDS is a problem of “social deviants”. It has been politically difficult to mobilize effective programs on a large scale for a problem that is perceived to be confined to a group with limited political clout. Few people apparently believe that HIV is an epidemic spreading quickly among normal youths who experiment with drugs and sex. Yet, HIV/AIDS disproportionately affects the younger cohorts who, without the disease, would continue to stay in the labor force for a long time, and/or would have continued to build up human capital and expertise. By December 2001, 62% of the male HIV+ and 57% of female HIV+ individuals in Russia were between 20 and 30 years old (Figure 5).

− **Political advocacy has not been linked to the evidence base.** Exhortations and rights-based advocacy have very modest success in a region that disregards data in favor of drawing geopolitical inspiration from Western Europe, where HIV/AIDS is not spreading as quickly. Many ECA countries see themselves as inherently different from other parts of the world that are affected significantly by the epidemic.

Most prevention programs in ECA are small pilots. Thus, even when the contents of such programs are well-conceived and based on reasonable evidence of what works in early-stage epidemics, the scale is too small to have much impact on a national basis. The result is that a spread from high-risk core transmitters through bridge populations to the general population would be a result of inaction rather than the failure of such methods of prevention. The major constraints to addressing the spread of HIV/AIDS fall into three categories:

− **Policy:** The current policy environment makes it difficult to develop large-scale programs focusing on effective interventions, some of which might be controversial (such as harm reduction for IDUs);

− **Finance:** ECA countries suffer financial limitations on the scale of prevention and treatment programs.

− **Non-financial constraints:** How fast and how well are many countries able to develop and implement effective programs on a large scale? What are some of the pointers to a growing problem?
The Bank’s program of assistance

The World Bank works as part of a global coalition against HIV/AIDS. It is a cosponsor of the Joint United Nations Program on HIV/AIDS (UNAIDS) and a trustee of the Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM). The Bank works in partnership with governments, NGOs, bilateral organizations, and multilateral agencies to support country- and regional-level responses to HIV/AIDS.

The World Bank is already active in the fight against HIV/AIDS in Eastern Europe and Central Asia. It has completed subregional studies on HIV/AIDS in Poland and the Baltic States as well as in Southeastern Europe. Subregional studies are underway in Central Asia and the Western Balkans. The Georgia HIV/AIDS country study was completed in 2003. Also in 2003 the Bank co-financed, with the UNAIDS Secretariat, a study of the region. The Bank is also co-financing, with the UNAIDS Secretariat, development of a directory of technical and managerial HIV/AIDS resources, which will help countries gain better access to good-quality technical assistance. HIV/AIDS lending operations are at various stages of preparation or implementation in Belarus, the Russian Federation, and Ukraine, and a grant from the International Development Association will support an AIDS control project in Moldova. HIV/AIDS control is included in the Poverty Reduction Support Credit in Albania. In the Russian Federation the Bank has helped develop models and estimates of the potential economic impact of the epidemic, with the aim of informing discussions among decision-makers. Economic analyses have also been undertaken in several other countries as integral parts of lending operations.

In September 2003 the Bank launched its regional support strategy on HIV/AIDS control (Adeyi et al., 2003). Entitled “Averting AIDS Crises in Eastern Europe and Central Asia”, it provides a unifying framework for the Bank’s work as part of international efforts to control the growing problem of HIV/AIDS and tuberculosis in the region; clarifies options for integrating effective interventions against HIV/AIDS and tuberculosis into the broader agenda of poverty reduction and economic development; identifies the main barriers limiting the effectiveness of HIV/AIDS and tuberculosis control and actions to reduce them; defines the short-term to medium-term priorities for the World Bank’s work in Eastern Europe and Central Asia, with emphasis on the institution’s comparative advantages.
The burden of mental or behavioral disorders

A major economic factor affecting the development of conflict/post-conflict societies and post-natural disaster societies is the mental health of its citizens. In 1990, the Bank/WHO Global Burden Disease Study (GBD) revealed for the first time in developing nations the importance of depression. GBD found in its original survey that depression was the fourth leading cause of disability as compared to all other health conditions. GBD predicted that in 2020, depression would be the 2nd leading cause of disability in the world. GBD, however, focused primarily on non-traumatized developing nations. Recent large-scale epidemiological surveys have shown that, in traumatized populations, depression can be up to seven times worse than the baseline level in non-traumatized societies; posttraumatic stress disorder (PTSD) can be up to 10 times worse. In addition, high rates of disability and premature death associated with chronic medical illnesses such as cardiovascular disease are associated with psychiatric morbidity in traumatized populations.

Support For Mental Health Programs

Attempts to implement basic mental health reform are confronted by several factors from the Bank, the client and the policy-setters. For the Bank, the challenges are that outcomes are difficult to measure and in-house expertise on the subject is absent. For clients, the challenges include the prevailing culture of dependence and paternalism in the system of services as well as low political visibility of mental health programs. Strategies for mental health require a multi-sectoral approach and community involvement that is very challenging both to the Bank and to the client. While awareness of the importance of mental health is growing rapidly, current levels of experience and evidence-based mental health policies are insufficient.

The concept of community-based mental health was first introduced in post-war Bosnia and Herzegovina (BiH) and supported under the War Victims Rehabilitation Project. Significant experience has been gained in BiH in the community-based approach. Follow-up support has been provided through a post-conflict grant for technical assistance provided by the Harvard Program in Refugee Trauma which, inter alia, supports training of primary health care staff, relationships between central psychiatric units and primary health care, links with the community, social services and schools. The Bosnia Government has applied for assistance under the Stability Pact to support the development of a regional mental health strategy for Southeast Europe.

Under the Bank-financed Marmara Emergency Earthquake Rehabilitation (MEER) Project, the Turkish government will develop a national mental health policy that will provide for integration of mental health care into general health services, particularly at the primary health care level. In addition, the MEER project will support mental health training aimed at improving mental health knowledge and skills, including emergency preparedness and counseling for primary health care physicians, nurses and midwives. The ultimate goal of this training program is to provide better community-based treatment and care.

In Uzbekistan and Russia, mental health modules are being developed and included in newly developed curricula for family physicians. The Kyrgyz Republic Health II Project also includes activities that support mental health.

Country studies on mental health

Research under the Bank-supported Program of Refugees Program in Bosnia and Herzegovina is revealing that the poor mental health of the general public is affecting the development of social capital, human resources and job opportunities in post-conflict countries. For the first time, a module on mental health has been introduced to the Living Standard Measurement Survey in Bosnia.

Based on epidemiological studies targeting the general population in Turkey, the mental health yield is higher than the expected prevalence rates. Behavioral and emotional problems in children and adolescents also are reported to be high. Studies show that as many as 24% of patients who seek primary care suffer from a
diagnosable mental disorder yet more than two-thirds of these patients go undetected. Given the burden of mental health disease to society, these findings render integration of mental health in primary care a significant public health priority. To help primary health care providers to diagnose and treat these disorders, it is necessary to develop and execute a training program. The Burden of Disease Study being prepared under the Bank-financed Health II Project will provide better information on actual burden of disease for mental health disorders and contribute to informed-based policy decisions in this regard.

The Bank could commission country-specific studies to improve the basis for policies and programs on mental health. Areas needing attention include quantification of the size of the problem, estimates of the productivity loss due to mental and behavioral disorders, adaptations of global knowledge to specific instances and, potentially, lending for mental health programs within broader health sector reform and development efforts.

**Micronutrient disorders**

The knowledge and understanding of the nutrition problem in ECA are seriously limited. One of the main obstacles is the absence of a reliable and regular surveillance system including nutrition monitoring in the countries. Countries in the region do not have full domestic capacity to collect data and analyze the information. Following the collapse of the highly centralized Soviet statistical system, countries need to create their own statistical systems. The initial attempts in establishing these new statistical systems have focused primarily on population censuses and household surveys.

Anthropometric surveys important for nutrition surveillance, on the other hand, have not yet been systematized. Nutrition indicators are not collected regularly, and the available case studies done can only provide fragmentary evidences and snapshots of the magnitude of the problem. Although some countries have data on the prevalence rates of low-birth weight babies, the information is not updated systematically. The reliability of the data is questionable as well. For example, nationally representative low-birth weight data in the region, which should be relatively easy to collect and analyze, are not readily available. As a result, the region is unable to fully understand the magnitude of the nutrition problem and especially its present trends. In spite of the data limitations, there are indications that the problem of micronutrients deficiencies in the region may pose a serious concern. Cursory evidence points to the fact that specific segments of the population are experiencing micronutrients deficiencies. The prevalence of anemia among women ranges from 25% in Belarus to as high as 49% in Kazakhstan. Although the data come from various sources, one can extrapolate from Russia’s experience (considered as a likely representative of the region) that the trend is worsening. In Russia, anemia prevalence rates in pregnant women increased to 34% in 1995 from 12% in 1990 and to 27% from 7% in the Ukraine the same period (Rokx et al., 2001).

Another area of concern is iodine deficiency disorders (IDD), as inadequate iodine intake is prevalent in the region. Goiter rates among children and women range from 15% in central Russia to as high as 80% in Khatlon region of Tajikistan. Turkey, one of the more advanced countries in the region, has one of the highest incidence rates of goiter in the region with 36% of its schoolchildren having goiter. It can be safely assumed that the decline in the availability of iodized salt and the concomitant decline in its consumption may have precipitated the likely increases in the incidence of IDD in most of ECA countries. Ukraine, the major source of iodized salt in the region, now has limited exports of the commodity.

The problem of vitamin A deficiency, on the other hand, may be hidden because there are no readily observable third degree malnutrition cases in the region. Small-scale sample case studies, nevertheless, provided indications that other micronutrients deficiencies such as folic acid, vitamins A, C, and D, calcium, etc., are being experienced by various groups of people in the region. The lack of nutrition surveillance systems makes it difficult to determine the magnitude and trends of the problem of micronutrient deficiencies.
<table>
<thead>
<tr>
<th>Areas of Concern</th>
<th>Menu of Options</th>
<th>Action Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Surveillance System</strong>&lt;br&gt;&lt;br&gt;There is a need for a systematic <a href="#">nutrition surveillance system</a> for improved monitoring and policy analysis.</td>
<td>Include nutrition module in household surveys</td>
<td>Include nutrition indicators as requirement in CAS and PRSP documents&lt;br&gt;Introduce nutrition indicators in health ESW documents and Country at a Glance annexes</td>
</tr>
<tr>
<td></td>
<td>Promote Fortification Rapid Appraisal Tool (FRAT) as part of health ministries’ monitoring system</td>
<td>Pilot and mainstream of FRAT in our countries</td>
</tr>
<tr>
<td><strong>2. Political Will and Nutrition Awareness</strong>&lt;br&gt;&lt;br&gt;Development of the region’s political will to address nutrition concerns and its linkage to poverty reduction strategy.</td>
<td>Include nutrition in our country dialogues&lt;br&gt;Promote local institutional capacity for nutrition advocacy</td>
<td>Nutrition issues should be raised regularly with government officials.&lt;br&gt;Support in-country nutrition conferences, workshops, and other public forums&lt;br&gt;Strengthen the Bank’s partnership with other institutions and NGOs</td>
</tr>
<tr>
<td></td>
<td>Include nutrition agenda in internal Bank’s discussions</td>
<td>Nutrition impact analysis should be included during review meetings.</td>
</tr>
<tr>
<td></td>
<td>Build in-house capacity among regional staff to intelligently discuss nutrition issues</td>
<td>In-house training and presentations on nutrition topics for Bank staff</td>
</tr>
<tr>
<td><strong>3. Micronutrients Deficiencies</strong>&lt;br&gt;&lt;br&gt;Prevalence of Anemia due to inadequate intake of iron</td>
<td>Fortification of bread flour with iron&lt;br&gt;Iron supplements for pregnant and lactating women</td>
<td>Direct financing of the provision of iron supplements for at-risk women in our investment operations&lt;br&gt;Promote legislation and regulations requiring iron fortification of bread flour</td>
</tr>
<tr>
<td></td>
<td>Fortification of bread flour with vitamins A and D</td>
<td>Promote legislation and regulations requiring vitamins A and D fortifications of bread flour</td>
</tr>
<tr>
<td></td>
<td>Promote the consumption of vitamin C rich foods such as fruits</td>
<td>Encourage increased consumption of vitamin C rich foods in health promotion activities</td>
</tr>
<tr>
<td></td>
<td>Increase the availability of iodized salt</td>
<td>Promote legislation requiring the distribution of iodized salt&lt;br&gt;Promote the restriction of non-iodized salt imports in our countries&lt;br&gt;Levy higher tariffs on non-iodized salt</td>
</tr>
<tr>
<td>Micronutrient Supplementation for at-risk pregnant women</td>
<td>Promote the consumption of iodine-rich diet</td>
<td>Promote crop production with high iodine content or production in soils that are non-iodine depleting</td>
</tr>
<tr>
<td>---------------------------------------------------------</td>
<td>--------------------------------------------</td>
<td>------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>Encourage discussions with our agriculture sector colleagues to consider iodine as a factor in the cropping system</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Provide folic acid and iron supplements to identified pregnant women at risk</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Prenatal screening for micronutrient deficiencies should be introduced as part of the service protocol in our recommended PHC service delivery Financing of direct provisions of folic acid and iron supplements through investment projects</td>
<td></td>
</tr>
</tbody>
</table>

### 4. Obesity and Healthy Lifestyle

**Promoting Healthy lifestyle to reduce CVD-related mortality and morbidity including reduction in obesity**

<table>
<thead>
<tr>
<th>Social marketing components with nutrition messages in health projects</th>
<th>Develop toolkit using social marketing to promote healthy lifestyles</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>(i) Reduce excessive consumption of alcohol;</strong></td>
<td>Promote the adoption of revenue-enhancing fiscal policies targeted at tobacco and alcohol Actively seek the ministries of finance as allies</td>
</tr>
<tr>
<td><strong>(ii) Reduce excessive consumption of tobacco</strong></td>
<td>Increase tariffs on tobacco and alcohol Restrict advertisements of tobacco and alcohol Introduce and increase tariffs on advertising of tobacco and alcohol</td>
</tr>
<tr>
<td><strong>(iii) Encourage reduction in the consumption of animal fats</strong></td>
<td>Encourage the marketing of vegetable fats as substitutes to animal fats Lower the overall consumption of fats in the traditional diet</td>
</tr>
<tr>
<td><strong>(iv) Encourage exercise habits</strong></td>
<td>Social marketing with regular messages Encourage the use of exercise as a variable factor in the determination of health insurance payments Include the importance of regular exercise in health promotion activities</td>
</tr>
</tbody>
</table>

An examination of the indicators in Figures 3-11 shows some interesting findings for the eight poorest countries in ECA, based on GDP per capita (Albania, Armenia, Azerbaijan, Georgia, Kyrgyz Republic, Moldova, Tajikistan and Uzbekistan):

- **The under-5 mortality rate** (Figure 5) has remained fairly steady for the past decade in most of the countries, with the exceptions of the Kyrgyz Republic, Armenia and Albania (which experienced marked declines) and Tajikistan and Moldova (with modest declines). Uzbekistan experienced an increase in the Under-5 mortality rate during this period. Azerbaijan clearly has the highest under-5 mortality rate among the countries.
Figure 5: Under 5 mortality rates for low-income countries

The infant mortality rate (Figure 6) also remained fairly steady in most countries, with the exceptions of the Kyrgyz Republic and Albania (decreases) and Uzbekistan (an increase). Azerbaijan has the highest Infant Mortality Rate among the countries.

Figure 6: Infant mortality rates for low income countries
The maternal mortality ratio (Figure 7) showed marked variations during this period. Tajikistan, Kyrgyz Republic, Albania and Moldova all experienced declines (i.e., improvements), particularly during 1995-2000. Armenia recorded a sharp increase (worsened), almost doubling between 1990 and 2000. In Georgia, the maternal mortality ratio more than doubled during the same period.

Figure 7: Maternal mortality ratio for low income countries

The incidence of tuberculosis (new cases per 100,000 per year) increased for all countries between 1990-2000, with the exception of Tajikistan. The Kyrgyz Republic had the highest incidence rate in 2000 (Figure 8).

Figure 8: Incidence of TB for low-income countries

(New cases per 100,000 per year)
− The standardized death rate for ischaemic heart disease (Figure 9) remained steady or increased for all countries between 1990-2000, with two exceptions; Georgia and Tajikistan reported decreases between 1995-2000.

Figure 9: Standardized death rates for ischaemic heart disease (all ages) for low-income countries

− The standardized death rate for tracheal/bronchial/lung cancers decreased in all countries between 1990-2000, with the exception of Armenia, which showed an increase between 1995-2000.

− The standardized death rates for motor traffic accidents decreased for all countries from 1990-2000, with the exception of Azerbaijan, which recorded an increase between 1995-2000.

− Following a pattern of stagnation or declines between 1990-1995, the life expectancy at birth for females and males showed a pattern of moderate increase from 1995-2000 (Figures 10 and 11).

Figure 10: Life expectancy at birth (males) for low-income countries
Figure 11: Life expectancy at birth (female) for low-income countries
III. AGENDA

Over the next three to five years, the Bank’s work would be most useful in five areas:

− **Partnering with clients to articulate the case for health status as a driver of economic growth** - and the role of public health in improving health status, defining the relationship between poor health and poverty, and influencing development policies on that basis. Doing and/or commissioning economic analyses of the optimum policy mix is an area in which the Bank has a comparative advantage, and this has proved immensely useful in the global tobacco control work that the Bank supported in the late 1990s. Generating information is not sufficient for influencing policies; it is crucial that such information is integrated into policy discussions and advisory services. In this regard, a recent example of this is the Bank’s analytical analysis of the economic impact on AIDS in **Russia**, which generated considerable interest at high levels.

− **Supporting the identification, development and delivery of global public goods** by commissioning assessments of country systems vis-à-vis essential public health functions.

− **Brokering consensus on policies, institutional reforms and large-scale programs of modern public health, health promotion and disease control.** At the country level, this might include reviews and realignment of the State’s role in public health, support for health monitoring, disease surveillance, capacity building and the protection of vulnerable populations.

− **Advocacy and support for vigorous action on large and/or emerging threats to public health.** Two items stand out among the priorities. One is the dual epidemic of HIV/AIDS and tuberculosis. The other is the control of tobacco and alcohol abuse.

− **Using quantitative methods to identify appropriate indicators** for use in ECA countries, on a country-by-country basis, with reference to the Millennium Development Goals. These might include indicators outside the traditional ones included in the MDGs.

In order to meet these needs, the Bank’s primary role might consist of **improving the knowledge base through ESW and brokering agreements** on policies and strategies in partnerships with countries, other development agencies and donors. The latter would be with a view to correcting public policies that adversely affect risk and vulnerability. The Bank might also take a more proactive role in securing the involvement of a larger number of non-traditional donors, such as foundations and corporations.

A secondary role would be to **finance programs or projects as a lender of last resort**. Although variations will exist amongst countries, the Bank’s legitimacy and effectiveness are more likely to be determined by the primary role. **Updating staff knowledge and skills**, including recruiting additional staff, to play this role is essential to being effective and credible.

An evaluative framework is needed to assess the Bank’s work on public health in ECA. One useful tool has been developed for this study, as indicated in Figure 1.

Meeting these challenges raises many practical questions for the World Bank’s Health, Nutrition and Population Unit in the Europe and Central Asia Region. The group has very few staff who are well prepared to address directly – or broker – this range of knowledge-intensive subjects in a very diverse region. As a result, HNP will need to consider hiring more specialist staff with the required knowledge and skills, establishing
“retainership” arrangements with technical centers of excellence, reconsidering the evidence base for setting priorities, or some combination of these.

Such arrangements would strive to attain sub-regional and/or cultural affinity, for example, among the Baltic States and the Nordic Countries. It is not essential that in-house capacity be developed to cover all functions of public health. However, it is important that the core staff include people with sufficiently high-level of training in the core disciplines of public health knowledge and operational skills to be effective and credible with clients. These specialists would, in turn, work closely with in-house or external experts in social and political processes with the goal of influencing policies and changes at the country level.
### ANNEX 2.1: KEY HEALTH INDICATORS AND GROSS NATIONAL PRODUCT PER CAPITA FOR COUNTRIES OF ECA REGION

<table>
<thead>
<tr>
<th>Countries</th>
<th>GNP/capita**</th>
<th>Under 5 mortality rate (per 1,000 live births) **</th>
<th>Infant mortality rate (per 1,000 live births) **</th>
<th>% 1-year olds immunized against measles *</th>
<th>Maternal mortality ratio (per 100,000 live births) **</th>
<th>Births attended by health staff (% of total) **</th>
<th>HIV prevalence (%) among 15-24 year old pregnant women **</th>
<th>Incidence of TB (new cases per 100,000 per year) **</th>
<th>Female adult mortality rate (probability of dying btw ages 15 and 59 years) **</th>
<th>Male adult mortality rate (probability of dying btw ages 15 and 59 years) **</th>
</tr>
</thead>
<tbody>
<tr>
<td>Albania</td>
<td>1120</td>
<td>31</td>
<td>27</td>
<td>85</td>
<td>22.29</td>
<td>99x</td>
<td>19.4</td>
<td>95</td>
<td>209</td>
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<tr>
<td>Armenia</td>
<td>520</td>
<td>37</td>
<td>25</td>
<td>84</td>
<td>72.94</td>
<td>97</td>
<td>35.06</td>
<td>106</td>
<td>223</td>
<td></td>
</tr>
<tr>
<td>Azerbaijan</td>
<td>600</td>
<td>105</td>
<td>74</td>
<td>87</td>
<td>37.61</td>
<td>100</td>
<td>64.45</td>
<td>153</td>
<td>261</td>
<td></td>
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<tr>
<td>Belarus</td>
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<td>20</td>
<td>17</td>
<td>98</td>
<td>24.55</td>
<td>100x</td>
<td>67.96</td>
<td>133</td>
<td>381</td>
<td></td>
</tr>
<tr>
<td>Bosnia &amp; Herzegovina</td>
<td>1230</td>
<td>18</td>
<td>15</td>
<td>83</td>
<td>~</td>
<td>97x</td>
<td>~</td>
<td>65.61</td>
<td>93</td>
<td>200</td>
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<td>15</td>
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<td>~</td>
<td>40.99</td>
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<td>55.35</td>
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<td>73</td>
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<td>~</td>
<td>~</td>
<td>105.25</td>
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<td>8</td>
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<td>10.25</td>
<td>99x</td>
<td>0.02</td>
<td>30.1</td>
<td>123</td>
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<td>173.8</td>
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<td>126.94</td>
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<td>~</td>
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<td>Macedonia, FYR</td>
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<td>26</td>
<td>22</td>
<td>92</td>
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<td>~</td>
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* Data refer to 1999  
** Data refer to 2000
### Annex 2.2: Key Health Indicators and Gross National Product per Capita for Countries of ECA Region

<table>
<thead>
<tr>
<th>Countries</th>
<th>GNP/capita*</th>
<th>% regular daily smokers, female **</th>
<th>% regular daily smokers, male **</th>
<th>Life expectancy at birth (females) **</th>
<th>Life expectancy at birth (males) **</th>
<th>SDR for ischaemic heart disease **</th>
<th>SDR for tracheal/bronchial/lung cancers **</th>
<th>SDR for motor traffic accidents **</th>
<th>Annual pure alcohol consumption per person **</th>
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* Data refer to 1999  
** Data refer to 2000

Sources: GNP, Life expectancy, SDRs, Smoking prevalence, Alcohol consumption : European Health for all Database WHO, Europe