Non-communicable Diseases and Development
Abstract of a presentation by WHO
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NCDs are a development issue
♦ A serious threat to the health of people in developing countries: In 2008, 60% of all deaths in the world, a total of 38 million people, died from the four main non-communicable diseases (NCDs): cardiovascular diseases, diabetes, cancers and chronic respiratory diseases. More than 80% of these deaths occurred in developing economies and economies in transition. People in developing economies die much younger from NCDs than in developed economies or economies in transition: 80% of people who die (around the world) from NCDs before the age of 60, live in developing economies.
♦ A threat to socio-economic development: At macro-economic level, the World Economic Forum, surveying the landscape of global risks for 2009 and 2010, ranked noncommunicable diseases (NCDs) as the third most likely risk to come true and the fourth most severe in its impact. NCDs were seen as a threat to global well-being, exceeded only by such threats as asset price collapse, spikes in oil and gas prices. At household level in developing economies, there is now unequivocal evidence that NCDs cause poverty and poverty are caused by NCDs.

NCDs hold back the attainment of MDGs in developing economies
♦ Despite considerable progress made worldwide, the health-related MDGs (in goals 1, 4, 5, 6 and 8) are falling short of the targets set in many countries, leading to a gap in attainment of the goals, a gap that requires scaling up of programmes, strengthening of health systems across disease groups, and improved action across sectors.
♦ A recent study on inequalities in the attainment of the MDGs, using 227 country tables covering regional and income groups in developing countries, found that the burdens of HIV and of NCD explained more than half of inequalities in child mortality progress and were strongly associated with unequal progress toward tuberculosis goals.
♦ The study further calculated that 1% reduction in the number of people infected with HIV or a 10% reduction in rate of deaths from NCDs in a population would have a similar impact on progress toward the tuberculosis MDG target as a rise in GDP corresponding to at least a decade of growth in low-income countries.
♦ This is consistent with previous studies that link NCD with tuberculosis. In an analysis of the 22 High TB Burden Countries, accounting for 80% of the global TB burden, HIV infection was estimated to be associated with 7% of TB cases, yet diabetes was associated with 6% and smoking with 23%. Smoking is already implicated in over 50% of tuberculosis deaths in India.
♦ In this context there are many connections between HIV and NCD. As the success of PEPFAR and the Global Fund has placed 4 million people on HIV treatment, they are now in need of prevention and control of the other chronic diseases they develop. Both NCD and HIV are chronic diseases needing long-term management and share the need for health care systems able to provide such management. The anti-retroviral therapy itself increases the risk of people with HIV getting cardiovascular disease, with alteration of fat distribution and other metabolic changes And the link between HIV and cancer is well-established: Kaposi's sarcoma is a leading cancer in Africa and a recent review has concluded that “most recent and large studies have also shown a 1.7-3-fold higher risk of developing non-AIDS malignancies in HIV-infected patients as compared with the general population without a significant impact of combination antiretroviral therapy on these trends”.

1 This study examined 277 country tables (and not “countries”) available as follows:
http://ddp-ext.worldbank.org/ext/GMIS/gdmis.do?siteId=2&menuId=LNAV01HOME3
NCDs cause poverty in developing economies and are caused by poverty

♦ The NCD epidemic is growing faster in the poorest developing economies: NCDs are among the leading killers in the poorest developing economies and the epidemiological transition in these countries is taking place very rapidly; for example, NCD mortality rates in Africa are rising much faster than anywhere else in the world.

♦ Poor, rural populations with NCD are doubly disadvantaged: In the mid-nineties, the Adult Morbidity and Mortality Project team reported that Tanzanian men, aged fifteen to sixty-four, were already dying from stroke at three to six times the rate of their counterparts in the UK. In a recent study of 45 villages in the Andhra Pradesh Rural Health Initiative, NCDs accounted for 55% of all deaths.

♦ Such numbers are compounded by the barriers to care for rural poor with NCD. There are higher non-clinical costs (chronic care needs more frequent contacts and thus greater transport and opportunity costs for patients). The cost of lifelong treatment drains income; in 2000, a low-income household in India would spend 34% of its income if one of its members needed diabetes care, and this number is up from 25% in 1998. Finally, any technology in NCD care is usually concentrated in hospitals due to economies of scale making it harder to reach for rural dwellers.

♦ Tobacco and poverty form a vicious circle. Tobacco is a special case of preventable risk that disproportionally affects the poor. There is a higher percentage of daily smokers in the poorest income groups than in the highest, a gradient that in countries like China and India, is driving millions of poor people to premature illness and death. Such gradients are most marked in developing economies. The poorest quintiles are more likely to smoke daily and more likely to smoke larger quantities. This larger consumption of tobacco displaces expenditure on other essentials and has a high opportunity cost for poor households. In the Philippines, for example, the poorest households in 2003 were spending more on tobacco than on education, health and clothing combined. In Nepal, in 2000, the poorest households were spending almost 10% of their income on tobacco products. In China, India and Thailand, the cost of a pack of 20 local cigarettes (expressed in minutes of labour needed to purchase the commodity) was at least double that of a kilogramme of rice in 2006.

♦ The costs of NCD create a poverty trap: Studies by WHO in forty-two developing economies and economies in transition have shown that 2%–3% of households face catastrophic health care expenditures and that 1%–2% are pushed into poverty when they become sick. For those in near-poverty, the catastrophic cost of NCD care leads households to impoverishment. Work in progress in South Asia suggests that for households with a male member with cardiovascular disease, approximately 25% experienced catastrophic spending on health (defined as spending 30% or more of annual household spending, less survival income for all household members); and one-tenth of the households that were above the poverty line at the beginning of the year slipped below. Using eight cross-sectional panel data from 1997 to 2004 from the Russian Federation Living Standards Measurement Study, NCDs were found to be significantly associated with higher levels of household healthcare expenditure in Russia and further analysis is indicating that this situation is worse in poorer households. In the design of Seguro Popular, the Popular Health Insurance scheme in Mexico, a burden of disease analysis found an “advanced transition” to NCDs in the poorer segments of the population and an “unmet demand [for NCD care which] has been serviced by the mostly unregulated private sector, with more than half of total spending on health paid out of pocket”. Since poorer families have a higher proportion of a nation’s children, the concentration of risk factors such as tobacco use in poorer communities presents a further danger for a large number of children already suffering from social disadvantage.

♦ The NCD epidemic threatens to overwhelm health systems: In developed economies, 2 to 7% of total health care costs are attributable to obesity; in the United States alone, the combined direct and indirect costs of obesity were estimated to be $123 billion in 2001. A further 6-8% of the total health expenditure in the USA is spent on the medical costs of smoking. This trend is not limited to the United States. In developing economies, costs are more likely to be borne by individuals themselves. In Sudan, the cost of caring for a family member with diabetes is 23% of the household income for a child and 9% of household income for an adult.
The NCD epidemic slows economic growth: NCDs create a drag on economic growth, where deaths are more usually premature than in developed economies. NCDs reduce incentives for savings (in the expectation of a shorter life). They reduce social capital (the death of a teacher or skilled labourer eliminates the investment in the development of their skills and forgoes the benefit of their future work to society). Carers of chronically ill patients lose the opportunity to earn wages. A number of efforts have been made to correlate the burden of NCD with the drag on growth rates with consistent results; applying these models to current realities, the most recent estimate suggests that a region such as Latin America will see an annual slowdown of around 2% from the projected rise in NCD until 2030.

NCDs are driven by globalization, rapid urbanization and population ageing
- Globalization drives risk in populations in complex ways. Populations in developing economies are now consuming diets high in total energy, fats, salt and sugar. The increased consumption of these foods in developing economies is driven by shifts in demand-side factors (e.g. reduced time to prepare food) and supply-side factors (e.g. increased production, promotion and marketing of processed foods and those high in fat, salt and sugar, as well as tobacco and other products with adverse effects on population health status). A significant proportion of global marketing is now targeted at children in developing economies and underlies unhealthy behaviour.
- Rapid urbanization creates conditions in which people are exposed to new products, technologies, and marketing of unhealthy goods, and in which they adopt less physically active types of employment. Unplanned urban sprawl in developing economies can further reduce physical activity levels by discouraging walking or cycling.
- As a result of demographic and epidemiological transitions and population ageing, Non-communicable diseases have started to dominate health care needs in most developing countries.

NCDs are linked to environmental damage
- Land cleared for tobacco production accounts for 5% of deforestation in developing economies. Tobacco production uses pesticides which cause environmental degradation and produces more than 2.5 billion kilograms of waste each year.
- Incomplete household combustion of coal and biomass in developing economies causes 1.5 million NCD deaths per year among women and children, mostly from respiratory diseases. This combustion is also a significant contributor to the global emissions of black carbon, which is the second most important greenhouse pollutant after carbon dioxide. Improved stoves are highly cost effective for both reducing greenhouse gas emissions and improving health.
- Transport and urban planning contribute significantly to the NCD burden - each year there are 800,000 deaths from outdoor air pollution and 1.9 million deaths from physical inactivity. Transport already contributes 13% of global greenhouse gas emissions and is expected to double between 1990 and 2020.

NCDs account for a large enough share of the poverty and disease burden to merit a serious public policy response in all developing economies
- First and foremost, public policies need to prevent non-communicable diseases in developing economies to the greatest extend possible by reducing the level of exposure to individuals and populations to the common modifiable risk factors for non-communicable diseases and their risk factors, while at the same strengthening the capacity of individuals and populations to make healthier choices and follow lifestyle patterns that foster good health.
- Second, at the same time, public policies need to recognize that the burden of non-communicable diseases accounts for a large enough share of the health-care needs of people in developing economies, and thus they have a role to play in dealing with the pressures that this will impose on health services.
Third, as the basis for providing the foundation for advocacy, policy development and action, public policies need to ensure that data is tracked on the magnitude of and trends in noncommunicable diseases and their risk factors (disaggregated by age, gender and socio-economic groups), that the effectiveness and impact of interventions are evaluated, and that progress made is assessed.

NCDs: Strategic Next Steps

Globally, a pattern emerges, across continents, of poor populations in the poorest developing economies, burdened by NCD, lacking access to public services, paying out of pocket in the private sector, and impoverished by the cost of care. This can be reversed:

♦ The recommendations for Member States and international partners included in the World Health Organization Global Strategy for the Prevention and Control of Non-communicable Diseases and its related Action Plan must be implemented. The Action Plan, which is particularly focused on developing economies, was endorsed by the World Health Assembly in May 2008 and includes recommendations for Member States, international partners and the WHO Secretariat. In order for the plan to be implemented successfully, high-level political commitment and the concerted involvement of governments and communities are required. In addition, allocation of resources will need to be improved.

♦ Global development initiatives must take into account the prevention and control of non-communicable diseases. Evidence cited above, and other studies show that the burden of NCDs is a potent force, alongside the burden of HIV, that holds back the attainment of the Millennium Development Goals. Every opportunity should be taken to include NCDs in efforts to strengthen health systems and address them together with chronic diseases such as HIV/AIDS, and incorporate the prevention and control of NCDs explicitly in poverty-reduction strategies and in relevant social and economic policies at global and national levels, including the MDGs and MDG successor goals. If they continue to be systematically excluded, then the epidemic of NCD will simply reverse any gains being made by countries, for instance, in Sub-Saharan Africa, within a couple of decades.

♦ The prevention and control of NCDs must be integrated into policies across all government departments (similar to the principles for the coordination of national AIDS responses). National policies in sectors other than health have a major bearing on the risk factors for NCDs. Health gains can be achieved much more readily by influencing public policies in sectors like trade, taxation, education, agriculture, urban development, food and pharmaceutical production than by making changes in health policy alone. Every opportunity should be taken to provide developing economies with technical support to build sustainable institutional capacity in this area, enabling them to adopt approaches to the prevention and control of NCDs than involves all government departments.

♦ The level of exposure of individuals and populations in developing economies to the common modifiable risk factors for NCDs must be reduced. Only 5% of the world's population was covered by comprehensive smoke-free laws in 2008, mostly in developed economies. Tobacco use continues to be the leading preventable cause of death, killing more than 5 million people per year. Unless urgent action is taken to control the tobacco epidemic, the annual death toll could rise to 8 million by 2030, the report states. More than 80% of those premature deaths would occur in low- and middle-income countries – in other words, precisely where it is hardest to deflect and to bear such tremendous losses. As the underlying determinants of noncommunicable diseases lie outside the health sector, strategies for reducing risk factors need the involvement of both public and private actors in multiple sectors such as agriculture, finance, trade, transport, urban planning, education and sport. Different settings may be considered for action, for example, schools, workplaces, households and local communities.
Data and information on trends in respect of noncommunicable diseases and their risk factors which is immediately available in developing countries must be included in the UNSD global statistical system. Current global surveillance efforts largely exclude NCDs and perpetuate the myth that NCDs are not a problem of developing economies. Only UNDESA's Commission of Sustainable Development database on "Indicators of sustainable development" contains an indicator on "Prevalence of current daily tobacco smoking among adults". Indeed, reliable data for this indicator is available for most developing economies (unlike for some of the 48 MDG indicators). WHO is collecting this data on a yearly basis using a survey instrument. The data is validated internally at WHO (e.g. by checking against the Parties' reports of the WHO Framework Convention on Tobacco Control), is validated by the Ministry of Health of the reporting country, and is then analysed by WHO and disseminated in a yearly WHO Report on the Global Tobacco Epidemic. The most recent report covering 2006 data on "prevalence of currently daily tobacco smoking among adults", as well as data on the status of six policy interventions which build on the measures for reducing tobacco demand contained in the WHO Framework Convention for Tobacco Control, was launched on 9 December 2009 in Istanbul.

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2 The WHO Framework Convention on Tobacco Control (WHO FCTC) is the first treaty negotiated under the auspices of the World Health Organization. The WHO FCTC was developed in response to the globalization of the tobacco epidemic. The WHO FCTC opened for signature on 16 June to 22 June 2003 in Geneva, and thereafter at the United Nations Headquarters in New York, the Depository of the treaty, from 30 June 2003 to 29 June 2004. The treaty, which is now closed for signature, has 168 Signatories, which makes it one of the most widely embraced treaties in the UN history. The WHO FCTC entered into force on 27 February 2005. There are currently 168 Parties to the WHO FCTC.