Chronic disease

Developed countries should be the focus for effectively reducing chronic disease

Eric J Buenz

The Millennium Development Goals were created to provide both assistance and a roadmap for less developed countries. Recently, the World Health Organisation proposed an additional effort to reduce the burden of chronic disease by 2%; particularly in less developed countries. However, this new effort is directly at odds with the Millennium Development Goals. This disparity, along with the projection that populations in developed countries will incur the greatest increase in chronic diseases, suggests that the more developed countries should be the focus of the proposed effort to reduced chronic disease.

Recently the Millennium Development Goals have been criticised for lack of foresight and proper metrics to evaluate their effectiveness.^{1,2} Now an additional roadmap to reduce the global burden of chronic disease by 2% is proposed.³ Superficially, the proposed roadmap is reasonable. It would seem that, generally, people would like to increase their quality of life through the reduction of habits that contribute to chronic disease. However, that attitude is not the case throughout the world.

For example, Independent Samoa is one of the United Nations least developed countries⁴ and two thirds of the population exists by subsistence agriculture.⁵ Thus, it is not surprising that the ability to purchase canned corn beef, *pisupo*, is a sign of affluence and that many farmers simply cannot afford this fat laden delicacy (fig 1A). The current cultural scenario is predisposed such that as the islands develop economically, obesity and concomitant chronic disease will become an increasing

problem.⁶ This projection has already proved true comparing the more affluent American Samoa with Independent Samoa.⁷ Thus, it would seem that in certain cultural contexts, the Millennium Development Goals are at odds with the proposed roadmap to reduce chronic disease.

To examine the extent of this potential disparity between the Millennium Development Goals and the proposed roadmap, a series of correlation analyses were performed. New tuberculosis infection rates² and average systolic blood pressure were used as an indicator of infectious disease and the predisposition to two of the chronic diseases included in the roadmap: heart disease and stroke. These two disease markers were correlated with the total spending on health care per person per year (which includes foreign aid) and the 2002 human development index for each country.

Figure 1B shows the inverse correlation ($p < 0.001$; $r = -0.698$) between the human development index and the number of new tuberculosis infections per year. Intuitively, these data showing that more developed countries have less new cases of tuberculosis per year are reasonable; generally, most infectious diseases are undesirable, evident, and treatable (or manageable) in more developed countries. In contrast, figure 1C shows there is no correlation ($p > 0.05$) between the average systolic blood pressure in a country and the human development index. These results show that a central risk factor

Figure 1 (A) As less developed countries develop, there is greater access to previously unavailable resources. In certain contexts, such as Independent Samoa, these resources include foods, such as *pisupo*. (B–E) A series of correlations shows that while more developed countries may experience less infectious diseases, the development status of a country does not dictate susceptibility to chronic diseases. Open circles represent African countries and show lack of ethnic disposition.

for two of the chronic diseases in the roadmap has no apparent relation to the development status of a country. To illustrate the lack of ethnic based variability in the average systolic blood pressure measurements,⁸ countries in Africa (which have a comparatively homogenous black population⁵), were plotted as open circles.

It could be argued that the human development index is a lagging measure and thus obfuscates a correlation because of recent development efforts. To address this potential discrepancy, the number of new tuberculosis infections and average systolic blood pressure were examined in relation to the average total spending on health care per person per year (fig 1D and 1E). These relations were similar to the values for the human development index.

The intention to reduce the global chronic disease burden is noble and these data support the claim that chronic disease is not correlated with affluence.⁹ Furthermore, these data suggest that typical development schemes, which aim to drive up the human development index, are likely to be effective for infectious diseases, but not effective in reducing the burden of chronic disease.

As developed countries will have the largest percentage increase in chronic

disease,⁹ and a marker for chronic diseases is independent of the development status of a country, why focus efforts to reduce chronic disease on less developed countries? The countries with a higher human development index support a more developed infrastructure, and permit a more cost effective implementation of the proposed chronic disease roadmap. For example, it would be easier to coordinate efforts in countries such as Germany (HDI = 0.925; average systolic blood pressure = 132) than in countries such as Kenya (HDI = 0.488; average systolic blood pressure = 113). Certainly this approach does not have the same altruistic impact as "saving" poorer countries. However, through the increased cost effectiveness of working in more developed countries, there would be a greater chance of reaching the goal of reducing the global burden of chronic disease by 2%.

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THE JECH GALLERY

Loving culture for a better life

Cultural liberties are an important tool for human development.¹ A wide approach to development cannot forget this human right. However, ethnicity continues to be a reason for social exclusion.² Moreover, a lot of groups are suffering a kind of exclusion based in their way of life.¹ Cultural neo-colonialism acts in the countries themselves and between them. But perhaps, one of the most important aspects to increase peace is to promote multicultural democracies. The degree of cultural representation could contribute to achieving more equity in power. Also to respect the personal and communitarian identity, people's own beliefs and the way to express them. The policies addressed to the improvement of people's health and life should necessarily include the cultural dimension.

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