



epidemiology of chronic disease, but little on its economic implications. This chapter reviews recent microeconomic and macroeconomic evidence. The economic implications of specific strategies should be the main or only guide when making health care decisions, but purpose of any intervention must be to improve health cost effectively. Clearly, policy makers often target economic variables such as savings, greater labour productivity or economic growth, but these should not be the main criteria for evaluating specific strategies in chronic disease management. In order to understand the implications of chronic conditions and diseases, the economic implications should be examined. Education and human capital formation are accepted as a powerful determinant of future earnings and future health. A full assessment of the costs of chronic disease should include the impact on education; current evidence shows that it affects educational performance. The death of a parent can reduce school enrolment. Several studies have reported an association between maternal smoking and impaired cognitive and behavioural development, which in turn affects the academic performance of children [7]. Alcohol abuse is related to poor performance. This applies to young people in developed countries, where excessive drinking among younger age groups is relatively widespread. Overweight or obese children are more likely to suffer from low self-esteem as a result of stigmatization and to absence from school. The effects of chronic conditions and diseases on labour market outcomes and education are especially pronounced in low- and middle-income countries. In Europe, health insurance mitigates some of these effects. Nevertheless, the consequences remain negative in terms of the impact on labour supply, productivity, education and the accumulation of human capital. Overall, the evidence shows that chronic conditions and diseases have a negative effect on the labour market and on the formation of human capital. However, the causal linkages are far from clear and these gaps need to be filled by further research. The macroeconomic perspective looks at the overall effect in terms of GDP or the GDP growth rate. Health as measured by life expectancy or adult mortality is a robust predictor of economic growth [8]. Chronic disease constitutes a major part of the global health burden. Mortality, DALYs and reduced life expectancy from chronic disease can be expected to depress economic growth. However, research on this has been limited, partly as a result of data and methodological challenges. There is evidence that health is a significant determinant of economic growth for high-income countries [9]. A study estimated that a advantage in life expectancy explains a higher annual GDP growth rate in subsequent years. Although this study does not focus on chronic disease, these results suggest a significant relationship between health and growth. More recently, cost illness studies showed that the cost of chronic diseases and their risk factors had a sizeable impact on a country GDP. They looked at the worldwide impact of cardiovascular mortality on economic growth among the working-age population. In high income countries, they found that an increase in the mortality rate decreased the growth rate of per capita income. This may appear a small figure in terms of growth, but it becomes quite substantial when calculated over the long term [10]. Similar policies have been developed for alcohol abuse. Raising prices with higher taxes reduce consumption. Bans on advertising are thought to reduce social acceptance of excessive drinking. Sales of alcohol may be restricted to licensed retail outlets or during limited hours, and minimum age restrictions applied. Strict driving laws discourage excessive drinking and prevent traffic accidents. The dominant approach in