6. Priority diseases and reasons for inclusion

6.0 Introduction

This chapter provides an in-depth review of the various diseases or conditions that have been selected as part of this priority-setting exercise based on the methods described in Chapters 4 and 5. These conditions have been grouped according to the nature of the pharmaceutical gap(s) associated with them. Many conditions such as cancer fall into multiple gaps as mentioned in the Executive Summary.

The first series of conditions, infections due to antibacterial resistance and pandemic influenza, are associated with a pharmaceutical gap in that many pharmaceutical treatments for them are already ineffective and many others will soon become ineffective. Both pose enormous threats to global public health which will require major multisectoral responses.

The second series of conditions, cardiovascular disease (CVD), HIV/AIDS, cancer, depression, diabetes, pneumonia/diarrhoeal/neonatal conditions, malaria, tuberculosis, neglected tropical diseases and postpartum haemorrhage include chronic diseases with a clear "commonality of interest" in both Europe and the world (e.g. CVD, cancer, depression) and infectious diseases which mainly affect people in low- and middle-income countries (e.g., HIV/AIDS, malaria, tuberculosis). The characteristic that is common to all these conditions is their pharmaceutical gap. For these conditions, treatment exists but the delivery mechanism or the formulation needs to be more appropriate for patient use. For example, there continues to be a need for paediatric dosages of cancer medicines; antidepressants often cause side-effects; oxytocin, which is used to prevent postpartum haemorrhage, is not heat-stable, and nor is insulin — making them both difficult to use in developing countries, where they are needed most.

The next series of conditions are characterized by the third pharmaceutical gap: a treatment does not yet exist or the existing treatment(s) is insufficiently effective. These conditions are stroke, osteoarthritis, Alzheimer disease (AD) and other dementias, chronic obstructive pulmonary disease (COPD), hearing loss, low back pain and rare (orphan) diseases. Despite substantial investments in research, progress towards developing curative treatment or medicines to slow or reverse the progression of these conditions has been disappointing. In addition, these are diseases where basic research is needed to establish biomarkers.
The final group consists, not of diseases *per se*, but global risk factors for disease. These risk factors are amenable to pharmaceutical treatment but such treatment is either non-existent or inadequate. These are treatments for cessation of tobacco use, alcohol use disorders and obesity.

This chapter should be read in conjunction with the background documents which provide additional details for all of the statements made in this summary chapter. In addition, some themes are revisited in Chapters 7 and 8.