

CHAPTER IV.1 INTRODUCTION TO THE COST OF RESPIRATORY ILLNESS AND SYMPTOMS

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CHAPTER IV.1 INTRODUCTION TO THE COST OF RESPIRATORY ILLNESS AND SYMPTOMS

IV.1.1 Overview

Section IV of the Cost of Illness Handbook provides direct medical cost estimates for respiratory illness and symptoms, excluding cancers of the respiratory system. Cancers are discussed in Section II, and at the time of this writing includes one respiratory illness, lung cancer.

This introductory chapter contains a brief summary of respiratory illness definitions and duration that are relevant to estimating the costs of respiratory illness and symptoms (referred to subsequently as “illness” for simplicity).¹ The illnesses included in this section are those that were being evaluated by EPA in a manner that required cost estimates (e.g., for policy evaluations, benefits assessments, comparative illness reduction strategies). Although the specific applications of the cost data vary, basic cost information is provided for each illness. There is considerable variation in both the level of detail that was required for the illness in this section and the type of information that was available for the illness.

IV.1.2 Illness Definition and Duration

Respiratory illnesses involve the upper or lower respiratory system, which usually includes the nose, tonsils, throat, mouth, trachea (wind pipe), and all the structures of the lungs (bronchi, alveoli, etc.). Respiratory illnesses also are usually defined to include ear infections, sinusitis, and related illnesses (Oski et al., 1994). Often the illnesses involve multiple parts of the respiratory system.

A characteristic of the respiratory illnesses that are discussed in this section is that they are commonly treated by primary care physicians. This is in contrast to the illnesses discussed in Sections II and III, which were more likely to be treated by a physician or team of physicians with subspecializations, such as oncology and pediatric surgery, neonatal pediatrics, etc. The illnesses in this section may be very serious and even life-threatening. They usually are not, however, and are often treated with medications and minimally invasive procedures. Most illnesses of this type can be treated on an outpatient basis, rather than requiring hospitalization. Consequently, the costs of the illnesses, which are estimates of the average costs, are generally much lower, on an annual basis, than costs for illnesses that require more intensive treatment.

¹“Cost” refers to direct medical costs unless otherwise noted.

All direct medical costs presented in the Handbook are estimates of the “average” cost for patients, so that the extremely high and low cost treatments that may be required in a small number of cases have been averaged into the overall distribution of care costs to yield an average cost. For most illnesses, the circumstances that would lead to unusually high or low costs are noted in the individual illness chapters.

This section includes cost estimates for both acute and chronic illnesses. An acute illness generally has a rapid onset (hours or days) and is sufficiently intense to cause someone to seek medical treatment. A chronic illness, such as asthma, is also assumed to require medical attention, but may continue over months and years, with a requirement for continuous or intermittent medical supervision and care. Symptoms are observed pathological responses in the body that may be associated with numerous causes, including illnesses or other stimuli (e.g., a cough in response to smoke).