This chapter provides a general background, culled from the literature and our interviews, for the discussions that follow. It describes basic issues and activities that can be involved in technology-adoption decisions by MCOs. As will become apparent, decision processes are often much less orderly than might be inferred from this general overview, and the processes that are used vary both across MCOs and within MCOs, depending on the particular technology or context.

For a technology to be eligible for payment or reimbursement by a managed care organization, usually the technology must not be excluded by the language of the health insurance contract between the MCO and payers,\(^1\) which generally means that the technology must contribute to provision of one of the broad categories of services specified as being covered (e.g., hospital services, physician office visits, durable medical equipment), must be “medically necessary” under the particular circumstances of the case,\(^2\) and must not be “experimental” or “investigational.”\(^3\) In addition, many contracts

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\(^1\)Sometimes care is provided despite contractual limitations, e.g., for fear of legal action. See, for example, Hall and Anderson (1992), Anderson (1992), Anderson et al. (1993), Ferguson et al. (1993), Havighurst (1995), and Adler (1996).

\(^2\)See, for example, Havighurst (1995, pp. 125–132).

\(^3\)See, for example, Havighurst (1995, pp. 132–135). Medical devices are generally considered experimental or investigational prior to FDA approval for U.S. marketing, and may be considered experimental or investigational for all or selected uses well after approval.
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exclude or limit coverage for various more or less specific services.\(^4\) The contractual framework is typically determined through negotiations between purchasers (e.g., employers) and personnel operating on the business or marketing side of an MCO.

Within this framework, MCO personnel, such as a medical director and utilization review staff, interpret contracts to make decisions about coverage and payment for emerging technologies. Sometimes an MCO undertakes a formal process to determine whether a technology should be covered under any circumstance. Such decisions can require judgments about whether the technology pertains to a covered benefit or is investigational, or about the conditions under which its use is safe and effective. Many of these issues can be informed by a “technology assessment.” Precisely what different people mean by this term varies. Generally, the term is used to describe somewhat structured efforts to judge the clinical effectiveness, and sometimes also the cost-effectiveness, of medical technologies. Technology assessment usually involves critical evaluation and synthesis of evidence available from clinical studies and other systematic evidence; often, expert opinion is incorporated.\(^5\)

If medical directors, committees, or other staff determine that a technology is covered, patient-selection criteria are often developed. Broadly speaking, these criteria specify the circumstances under which use of the technology is viewed as medically necessary. These criteria guide decisions about eligibility of particular patients for coverage—for example, in response to requests for pre-authorization (i.e., a commitment by the MCO to pay) from a physician who wants to use the technology.

\(^4\)For example, contracts often exclude “dental care, sexual reassignment surgery, in vitro fertilization, reversal of voluntary sterilization, treatment for morbid obesity, and cosmetic surgery solely for the purposes of beautification . . .” (Havighurst, 1995, p. 141, fn. 19). See Booske (1994) for a very detailed analysis of provisions for covered benefits, coverage exclusions, limitations on use, and cost-sharing specified in contracts between health insurers and state employees in several states.

\(^5\)Technology assessment has been defined by one author as “the evaluation of the safety, effectiveness, and appropriateness of the many devices, medical and surgical procedures, and pharmaceuticals promoted to improve a patient's condition or quality of life” (Matuszewski, 1997). This report focuses more narrowly on technology assessment of medical devices and related procedures. Rettig (1997) studies technology assessment for pharmaceuticals, procedures, and devices. For studies of technology assessment of pharmaceuticals, see Lyles et al. (1997).