



**FIGURE 1-1:** Eskimo medicine man. (From the Library of Congress Prints and Photographs Division, Washington, D.C.)

### Pharmacological Advances Through the 19th and 20th Centuries

Over time, an increasingly scientific approach to the discovery and understanding of drugs was taken. During the 1800s, chemists were able to identify and then isolate the active ingredients (those pure chemicals in the plants that had the actual therapeutic properties). They were also able to determine how the drug acted on the body. This marked the beginning of modern pharmacology. Up until the early 1900s, preparing medicine was very labor-intensive; the pharmacist had to distill and prepare each medicine when it was ordered (Fig. 1-2). Not until World War II (1939 to 1945) did the mass-production of medicine begin (Fig. 1-3). More U.S. soldiers died in World War I from infection and accidents than from actual combat injuries; however, the mass-production of penicillin minimized the number of deaths from infection during World War II (Table 1-1). For instance, the death rate from pneumonia



**FIGURE 1-2:** Pharmacist preparing a prescription, 1939. (From the Library of Congress Prints and Photographs Division, Washington, D.C.)