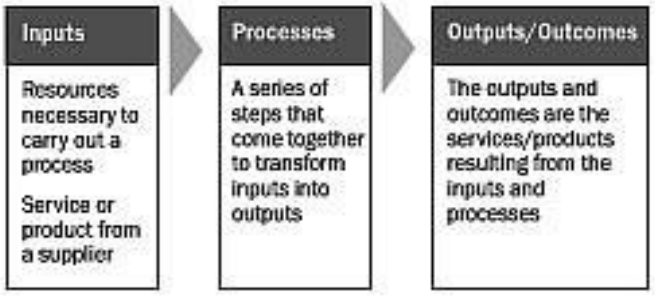
Wisconsin Hospital Association
QUALITY CENTER
A Resource for Hospitals, Clinics and Healthcare Practitioners

Understanding Systems and Processes

Quality management views all work in the form of processes and systems. Systems are arrangements of organizations, people, materials, and procedures that together are associated with a particular function or outcome. As shown in the figure below, a system consists of inputs, processes, and outputs/outcomes. A process is defined as "a sequence of steps through which inputs from suppliers are converted into outputs for customers." All processes are directed at achieving one goal or output from the system that encompasses the processes.

Conceptual Model of a System

There are different types of processes in health care. These include:



- **Clinical algorithms:** The processes by which clinical decisions are made
- **Information flow processes:** The processes by which information is shared across the different persons involved in the care
- **Material flow processes:** The processes by which materials (e.g., drugs, supplies) are passed through the system
- **Patient flow processes:** The processes by which patients move through the medical facility as they seek and receive care
- **Cross Functional flow processes:** Most processes are actually cross functional flow processes, whereby patients, materials, information, and others are involved simultaneously in the same process of care.

In routine health care delivery, many processes occur simultaneously and involve many professional functions in the organization. Processes can cause inefficiencies due to problems that occur in the execution or the transition of one step to the next. Inefficiency in a process often results from unnecessary steps that add complexity, waste, and extra work to a system, ultimately reducing the overall quality of care.

Tools such as a flowchart help people understand the steps in a process. Processes also may be unclear and/or missing steps, and therefore in need of clarification. By increasing understanding of the processes and systems of care, QI activities can identify weaknesses and change processes in ways that make them produce better results.