

The Seven Wastes in Healthcare

Recognizing waste when it occurs and vowing to deal with it is a major step in moving towards becoming a Lean organization. If a process does not add value, as seen through the eyes of a patient, then it is either pure waste or non-value-added-but-necessary. Seven wastes were first developed by Taiichi Ohno, Toyota's chief engineer over half-a-century ago, as part of the Toyota Production System, now more recently known as Lean Manufacturing. The following list highlights some of the issues that healthcare workers face every day.

Wastes	Examples from Manufacturing	Examples from Our Experience in Healthcare
Overproduction	Producing more products than are required to meet current customer demand.	The worst waste in healthcare in our minds. Inpatient remains longer in an acute medical bed than is necessary. Few weekend discharges often add 3 additional days to length of stay. Lack of discharge planning catches nurses off guard when physician discharges patient. Weekly instead of daily rounds by physician builds up patient discharge queue.
Waiting	When goods are not moving through the plant often because of batch-and-queue practices between machine centres. Looking for tools.	Emergency patient waiting for initial treatment. Patient waiting for tests and then results from tests. Inpatient waiting to be discharged. Inpatient waiting on Emergency stretcher for bed on ward. Staff waiting for callback by consulting physician.
Transportation	Excessive product travel and handling.	Perhaps the most affected departments are lab and pharmacy that require timely deliveries to meet patient care requirements.
Inappropriate Processing	Over-designed product ultimately diminishing its value in the eyes of the customer.	Relocating emergency patient to another bed stall because of monitoring requirements necessitating a second or third move of other patients. Retesting due to misplaced results. Use of expensive drugs or consumables when cheaper alternatives are available. Misallocation of valuable and scarce resources, i.e. not spending the money where it's needed.
Unnecessary Inventory	Excessive Work in Progress (WIP) and Finished Goods inventories.	Batching of blood draws as well as lab tests. Oversupply of point-of-use stock leads to great excesses throughout the system.
Unnecessary/ Excess Motion	Poor ergonomics at the workstation. Searching for tools, help, variation in process steps, sharing of tools and equipment, etc.	Looking for meds, consumables, charts, equipment, staff and patients. Variation to standard methods and procedures. Sharing of equipment. Inconvenient locations for point-of-use storage.
Defects	Product that needs to be scrapped, reworked, or reconditioned.	Medication errors. Incorrect patient information. Wrong attending physician entered into emergency patient computer record upon discharge. Restarting patient IV. Poor clinical outcome.