

Kaizen Activities in the Medical Field



SGC-PS is applicable to all types of business.

Quality is “most critical” at any type of manufacturing.

—It is the “people” that maintain quality. “Human development” is therefore the foundation for everything.

Our initial Kaizen engagement in the health care industry dates back to the year of 2002 when we started “Gemba Kaizen Seminar” for Virginia Mason Medical Center in Seattle, Washington, USA. In the “production shop floor” in the medical field, which is quite different from manufacturing plants we have been working with, we utilized our own SGC Production System (SGC-PS) to demonstrate how improvements are made. We believe that SGC-PS can be applied to any industry as a comprehensive management methodology which addresses quality, safety and operational aspects. We have extended SGC-PS to Canadian hospitals in addition to US hospitals that support the concept of SGC-PS.

**“Gemba Kaizen” begins with “human development”
of those who work there.**

We leverage the Know-How we cultivated from “manufacturing” for “human development” and the more human resources you develop, the more progress you can make.

Major Kaizen Objectives in the Medical Field

Quality Improvement (No defect)

Improvement of Patient Satisfaction

Improvement in Medical Service Capacity

Lead Time Reduction for Patients












Inventory Reduction

Analysis of Target Process ①

2) Show the flow in a process at a glance

Take detailed pictures and show them in the process at a glance

Date: _____	Process at a Glance						Takt time: _____
Care Process: _____							
Process Sequence	1	2	3	4	5		
Equipment Flow							
Process Step							
Location							
Staff							
Quality Check							
Cycle Time							
Tools							

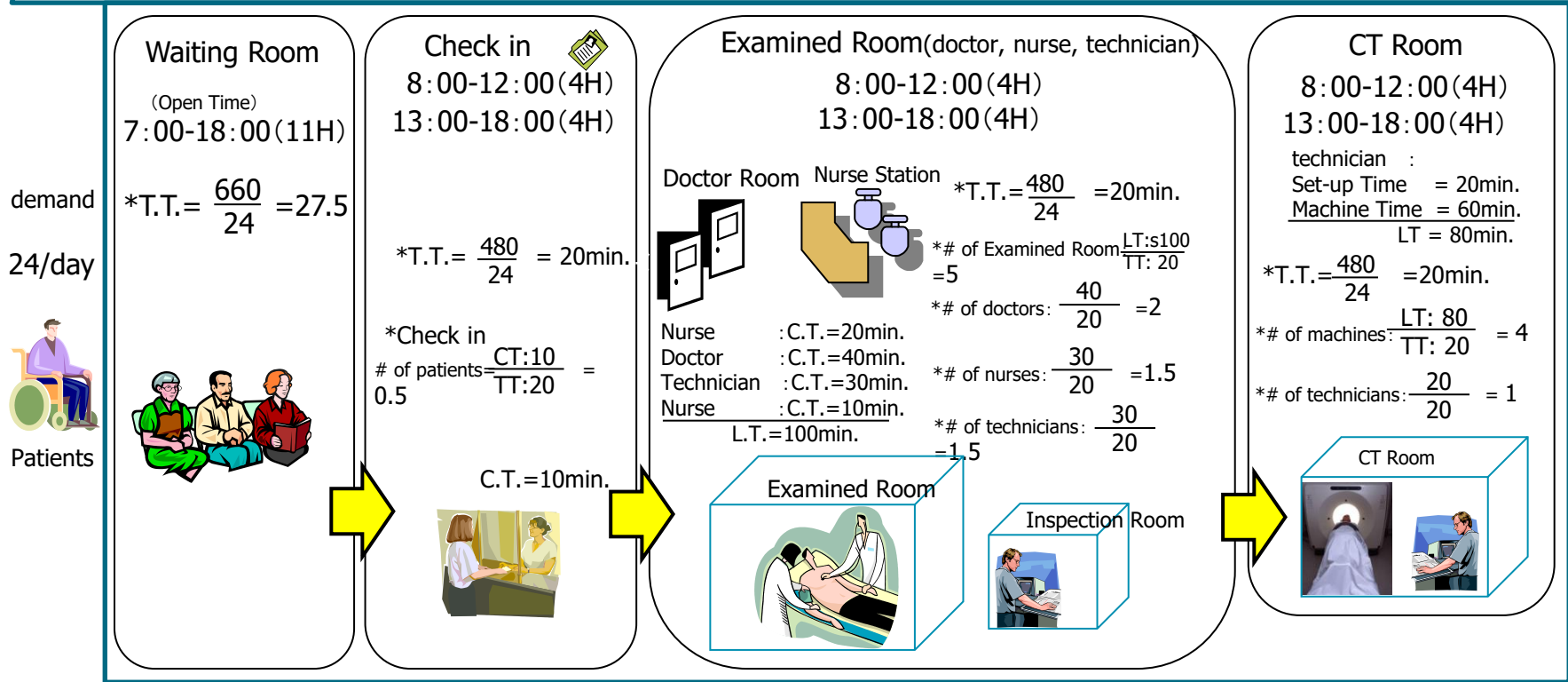
PROCESS AT A GLANCE: Building "C" Equ						
Process Sequence	1	2	3	4	5	6
Equipment Flow						
Process Step	Picks up copy of next day's Surgery Schedule	Highlights on the preference card the equipment needed	Looks at preference card for each case from Preference card	Returns Preference card to Case Cart	Locates equipment in building "C" for next day's cases	Walks to building "A" to find any additional equipment not found
Location	C	C	C	C	C	A
Staff	"C" Surgical Assistant					
Quality Check	self ✓					
Cycle time					01:00 - 20:00 mins	07:52 mins
Tools						

Analysis of Target Process ②

Preliminary investigation using Takt time

It is important to investigate by setting up Takt time.

1. Use Takt time and Cycle time, for the deployment of doctors, nurses, and technicians, and for the improvement of their processing capacities.
2. As for setting up an examination equipment and a consultation room, check the lead time for the examination equipment and the consultation room, and establish the required number in connection with Takt time.



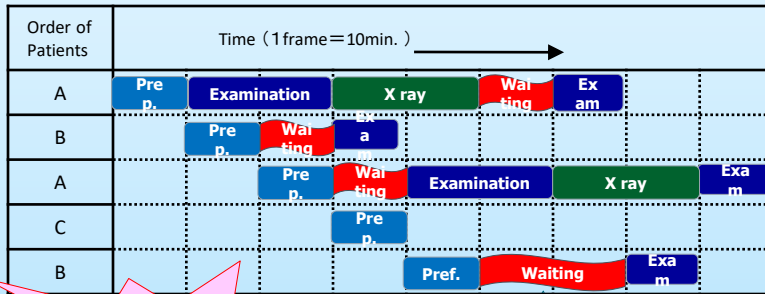
Kaizen Case Study : Creating Flow of Patients

Strategy·Method : Level Scheduling (or Level Loading)

Process	Prep. (Nurse)	Exam. (Doc.)	X ray	Exam. (Doc.)	Ratio
Patient A	10min.	20min.	20min.	10min.	20%
Patient B	10min.	10min.	—	—	60%
Patient C	10min.	—	—	—	20%

Exam. time for majority of patient types and its ratio to the entire time spent.

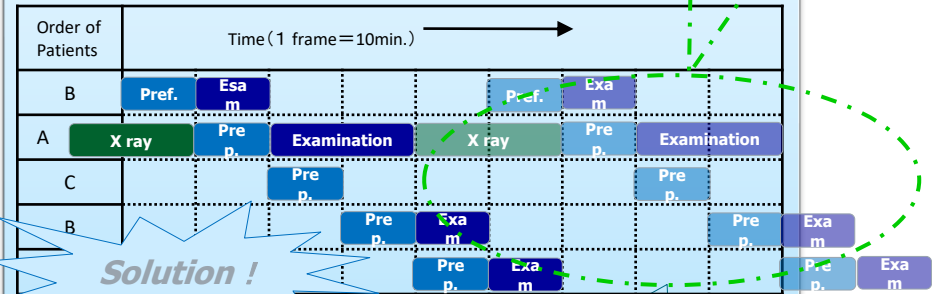
Before Kaizen



This is a problem!

Types of patients and their needs are not clearly identified when appointments are made, which creates a problem in the order the patients are scheduled. Consequently patients have to wait and there is a lot waste.

After Kaizen



Solution!

- ① Level scheduling for properly setting the order of appointments for the patients.
- ② Taking x-ray prior to examination- increased the number of patients examined from 3.3 to 5, and reduced the patient's waiting time from 10 min. to 0 min.

**Kaizen Effect: Improvement of Examination capacity.
Reduction of patient's waiting time.**

Kaizen Study Case : Inventory Reduction

Before the Kaizen (Current State)

Strategy • Method : Kanban

This is a problem !

- Not clear which part of inventory is unnecessary or where there is shortage.
- Expiration dates of drugs are not being monitored.
- Cash flow deteriorates.



Kaizen Study Case : Inventory Reduction

Strategy · Method : Kanban

After the Kaizen (Rapid Process Improvement Workshop/ RPIW)



- Supply a day's worth of drugs to the treatment room.
- Reduce unnecessary inventory by supplying from the store only the "Kanban" items which had been used the next day.

Kaizen Effect: Quality improvement, inventory reduction, space reduction, and elimination of shortage by First-In First-Out(FIFO).

Kaizen Case Study : Lead Time Reduction for Patients

Strategy - Method : Kitting

Before Kaizen (Current State)



**This is a
problem !**

They are not organized so the treatment takes time. Conventional payment for consultation fees kept the patient waiting too long.

Kaizen Case Study : Lead Time Reduction for Patients

Strategy • Method : Kitting

After the Kaizen (Rapid Process Improvement Workshop/ RPIW)

Terminal cart for payment of examination fees



Kit cart for treatment



Kitting the tools frequently used.
A portable terminal can take care of payment and does not keep the patient waiting.

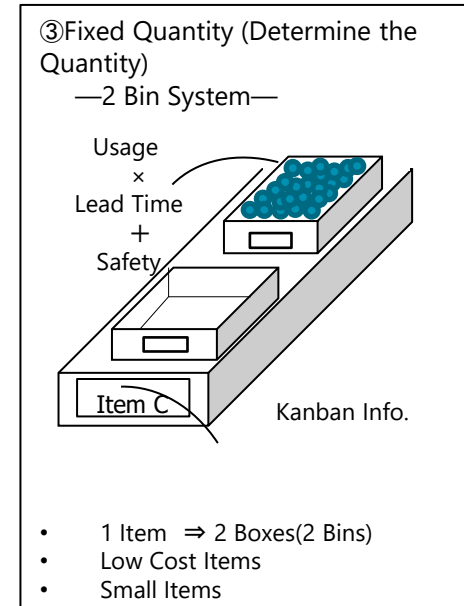
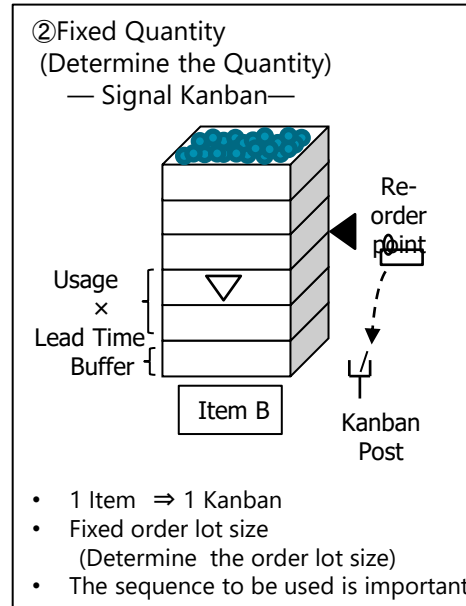
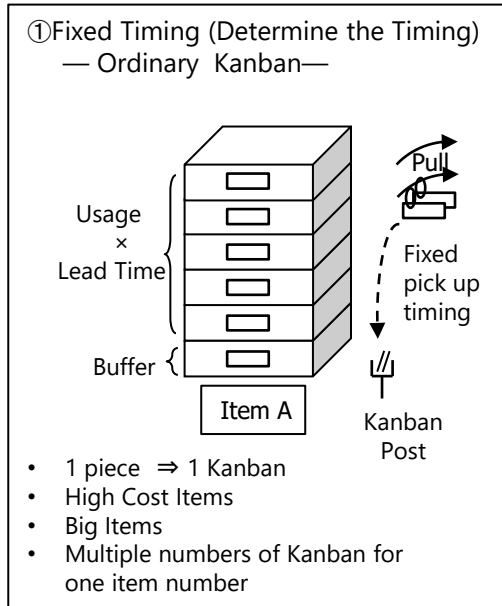


Kaizen Effect:
Reduction of walking distance by staff.
Reduction of Cycle time.
Reduction of patient's waiting time.
Improvement of patient satisfaction.

Healthcare : Kanban Operations



● Constructing the Pull System with Kanban Operations



Pre Kaizen



Post Kaizen



- Inventory reduction
- Reduction of defects due to expiration
- Application of FIFO
- Simplification of inventory restocking work

If you would like more information please contact us.