

# Quality Improvement Activities at Samsung Medical Center to Make “Outside-image CD Input Flow” better

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## Objective:

Due to medical delivery system since 1989, most of patients have visited Samsung Medical Center (herein after referred to SMC) with image CDs which had been made in the first or second level hospitals. However, there had not been consistent image embodiment flow in SMC. For this reason, we tried to improve the medical quality with quick data input and correct image check, by unification of the flow and the development of data input program.

## Methods:

The study was performed at SMC, located in Seoul, Korea, which is one of the biggest general hospitals with 1,931 beds and was established in 1994.

Quality Improvement (QI) activities which were started in November of the year 2007, were raised because continuous inconvenience happened whenever outside-image was checked. Every medical department checked “Outside-image” according to its own way and image had been checked not automatically but manually.

As most outside-image inputs happened in the department of Neurosurgery, we decided to appointed the department of Neurosurgery as a central point and have tried to find a best flow with doctors, nurses, the personnel at the patient affair, and the personnel at image library. As a result, we introduced visit flow for the patients visiting SMC which was that they come to image library carrying their CDs prior to moving to the nurse station, and then consulted the doctor. The movement line of the patients was minimized

Though outside-image input didn't need doctor's reading, it has been regarded as a kind of prescription, so the right of outside-image input has been given to only doctors. Accordingly, the image library in charge of practical affairs has been in difficulties for doing it. After inside consideration and taking legal advices, SMC determined to reallocate the right through “The medical department administration conference”, the highest conference.

SMC has operated dual systems to ensure security. Image input has been ordered only in SMIS and checked only in PACS. It took much time to arrange medical treatment because images were prohibited from being checked without individual image checking whether all imaged had been inputted or not. Therefore we developed the program where all image input condition could be checked in SMIS without being checked in PACS.

The QI activities were enforced by three phases to minimize unexpected trouble. (First step- Neurosurgery, second one-Neurology, Orthopedics and internal medicine, the last one-all department)

## Results:

Introduction consistent outside-image CD input flow from dual systems enabled the medical treatment time to be shortened wonderfully and the image to be checked correctly.

Flow	Before(in November 2007)	After(in October 2008)
The time required for input flow	63mimute 19second	16minute 22second
The rate of input completion	64.3%	87.8%

□The number of average new patients to SMC a day: 1,706 patients

At present, most of outside-images except ones themselves errors within CDs have been inputted in PACS and we have monitored consistently to make the QI activities better.

## Conclusions:

The QI activities didn't simply mediate the outside-image input flow but reflected the requests of various users on it while acting. Through speeding image input up and including moving pictures of ultrasonography and endoscope, they made a considerable contribution to the quality improvement of new patients and to the increase of the customer satisfaction

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