

Establish people, things and process standards for endoscopy management through lean thinking

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INTRODUCTION

According to the results of the top ten cancers in Taiwan, cancer prevention screening, differential diagnosis, medical treatment and follow-up often need to be carried out by endoscopic technology, so the cleaning, disinfection, storage and management of endoscopic tubes is an important issue for hospital infection control and patient safety. After COVID-19, it is even more impactful of the work of front-line personnel, and the quality of endoscope reprocessing.

AIM

The purpose of this improvement project is to establish standards for people, things and processes of endoscope management through lean thinking, so as to improve the efficiency and quality of endoscope tube management.

METHOD

Practical observation and inspection through endoscopic operation with lean thinking, collection of work process, circulation line, manpower allocation, recording time spent and error rate, etc. The problems included the lack of effective manpower assignment and tasks in personnel flow, the lack of endoscopic operation format management standards for material flow, and the lack of relevant team support consensus in information flow, and then reassigned manpower tasks, built endoscopy management systems, and established support mechanism for people, things, and process standards.

RESULTS

1. It takes 20 seconds/time to manually log in the endoscope cleaning data, and it takes 9 seconds/time to scan the barcode and bring it into the record by using the endoscope management system, saving 11 seconds/time and improving the efficiency by 55%.
2. Before the improvement, the error rate of the login data due to handwriting was 5-8%, and it dropped to 0% after the improvement.
3. The utilization rate of the endoscope management system reaches 100%, saving 200 sheets/year of paper and storage space..

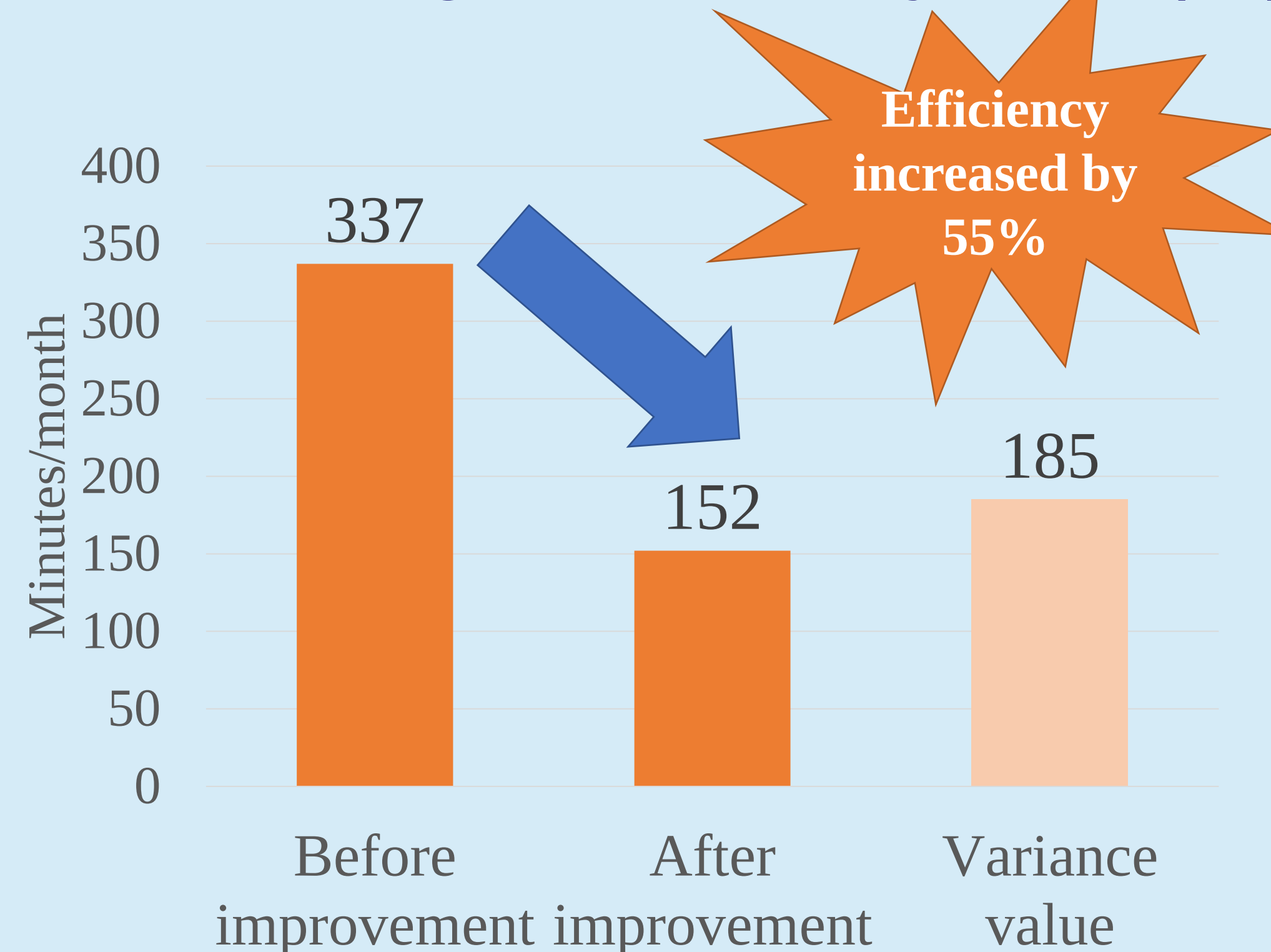


Figure 1: Comparing the time spent logging in data before and after improvement, the efficiency increased by 55% after the system was enabled

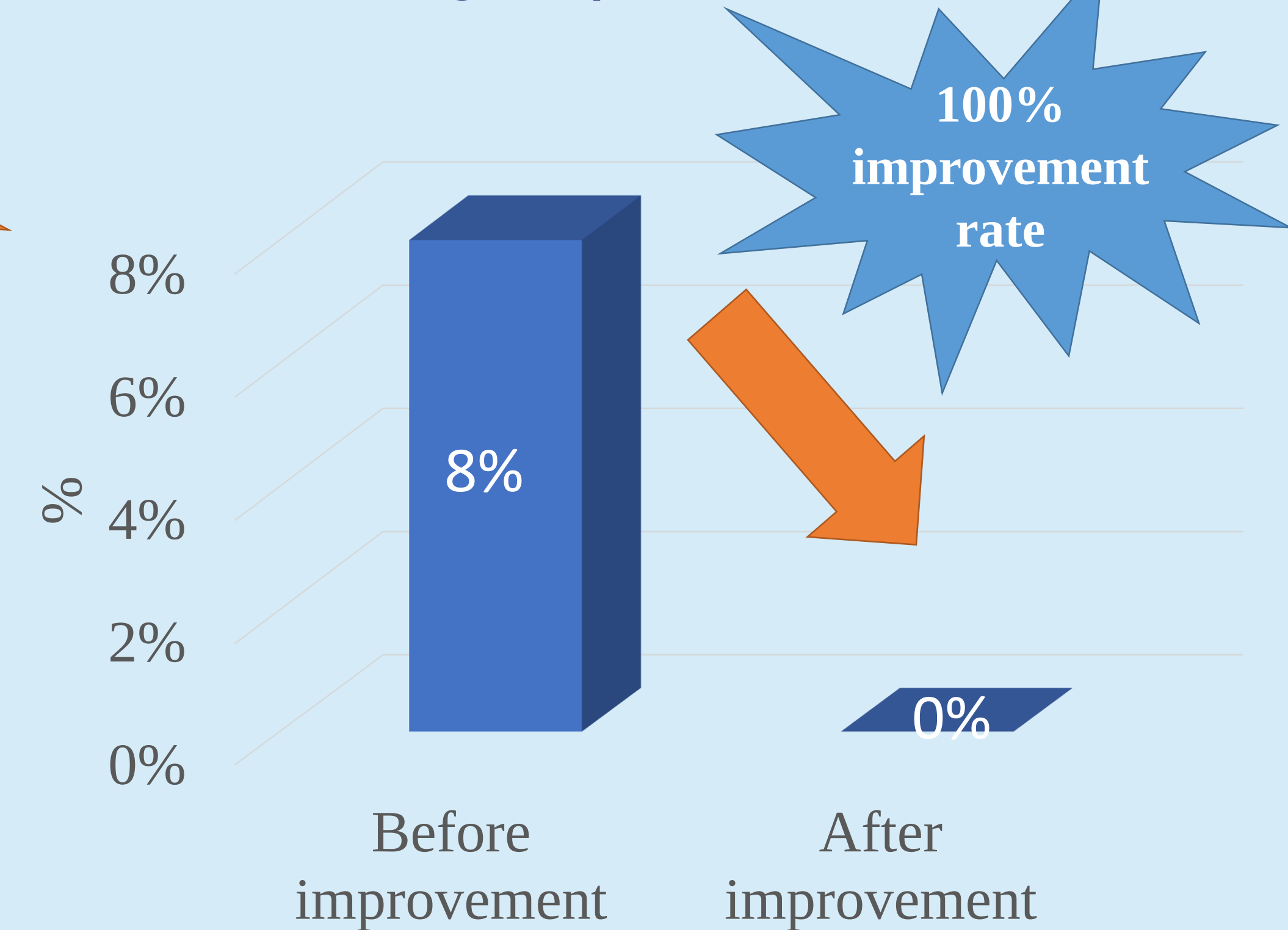
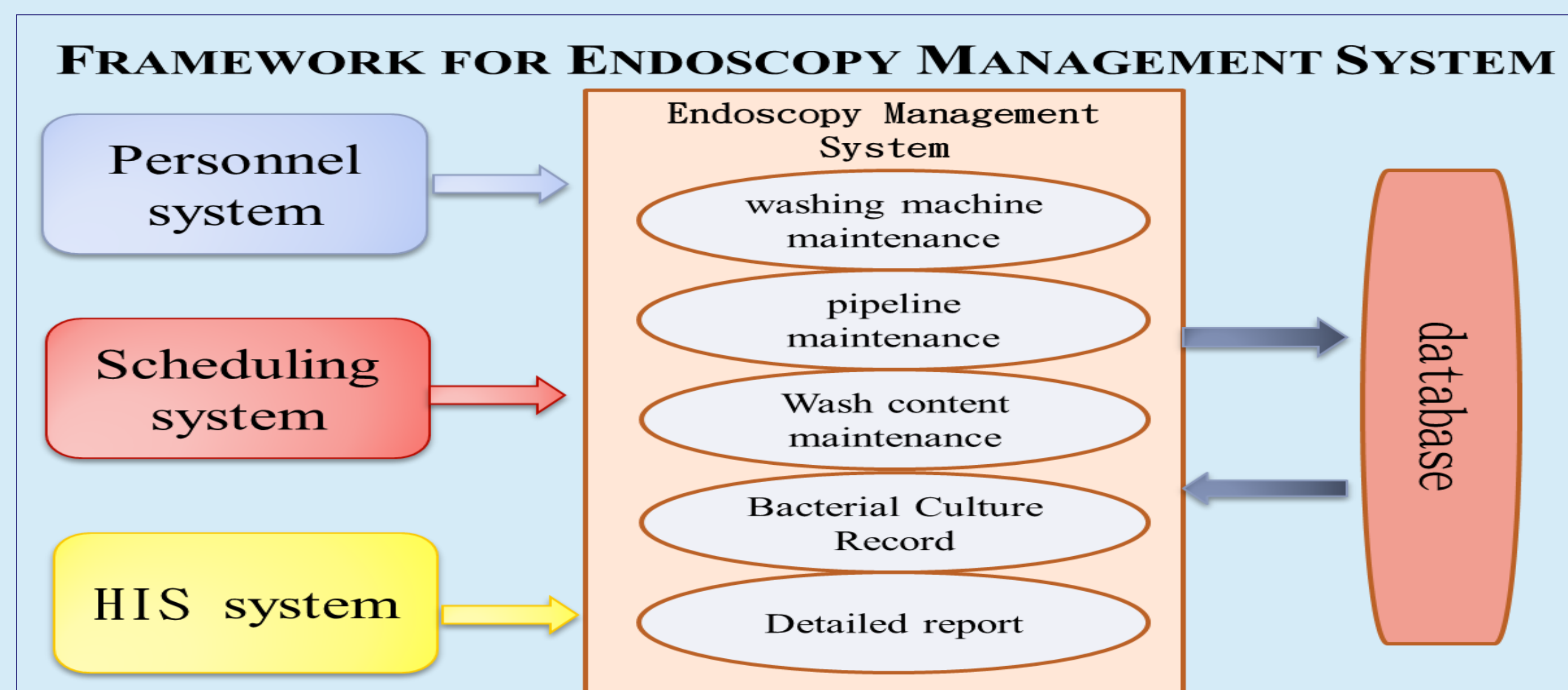


Figure2: Comparing the error rate of login data before and after improvement, the error rate after system activation is 0%



CONCLUSIONS

Through the analysis of lean thinking, the establishment of endoscope management standards, supplemented by the construction of an intelligent endoscope management system, saves manual operation time, and will be extended to the health management center in parallel, so as to improve the efficiency of endoscopy management and meet the quality requirements of infection management.

REFERENCES

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