

AN INTEGRATED, REAL-TIME MONITORING BI SYSTEM FOR OVERSTAY INPATIENTS WITH EFFICIENCY AND QUALITY

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INTRODUCTION : A higher rate of overstay in the hospital is an important issue of medical utilization and quality. The problems are related with no follow up after discharged, lacking of information about prolonged hospitalization, patients and families worried about caring problems after discharge.

TEAM : The “overstay inpatients team” convened by the secretary of the director’s office, combined with medical departments, discharge plan, social work, referral, IT and medical quality

Clean up HIS, NIS, CIS, LIS, RIS, NHI and other clinical system data, integrate heterogeneous data, and build a unified cloud database.

Organize meeting for Abnormal Case.



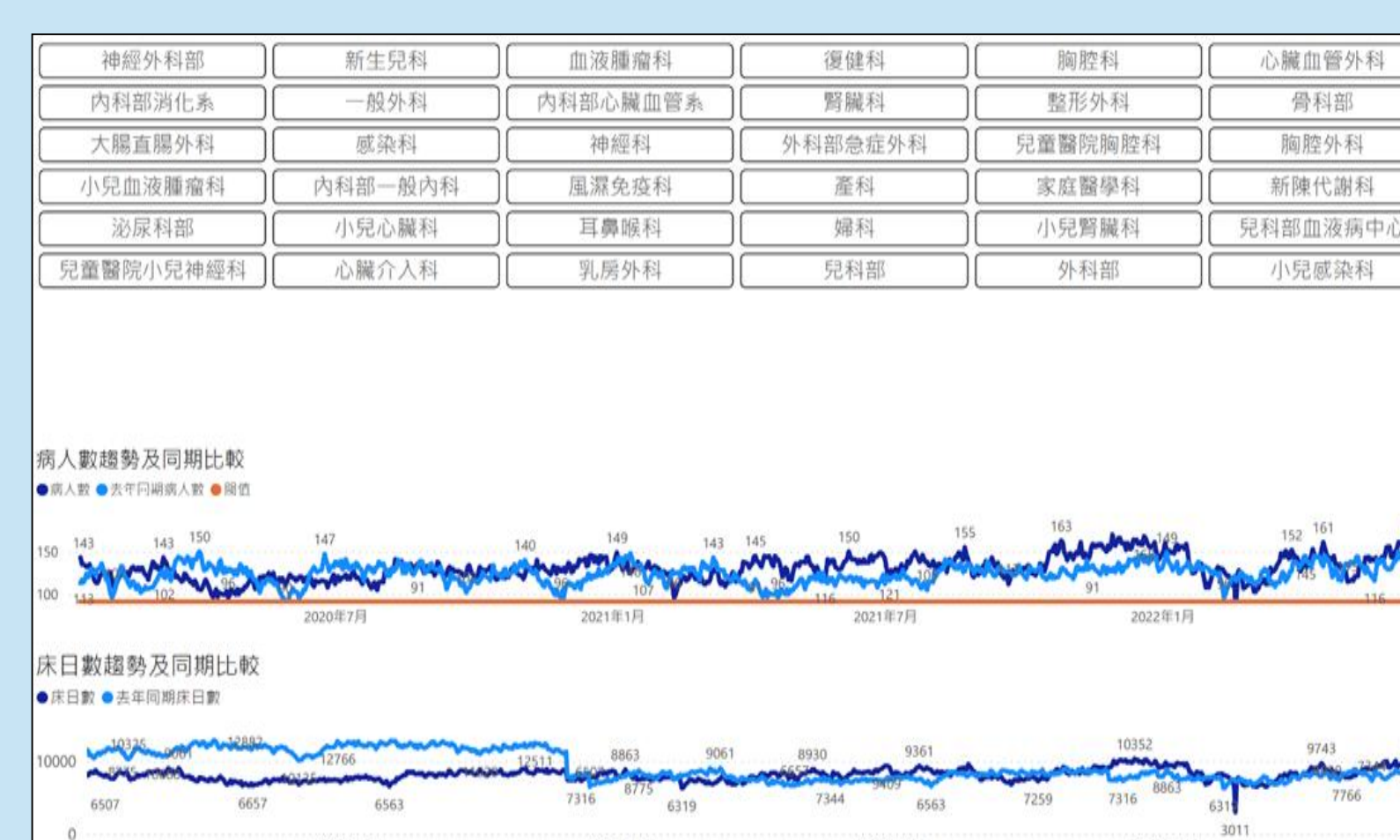
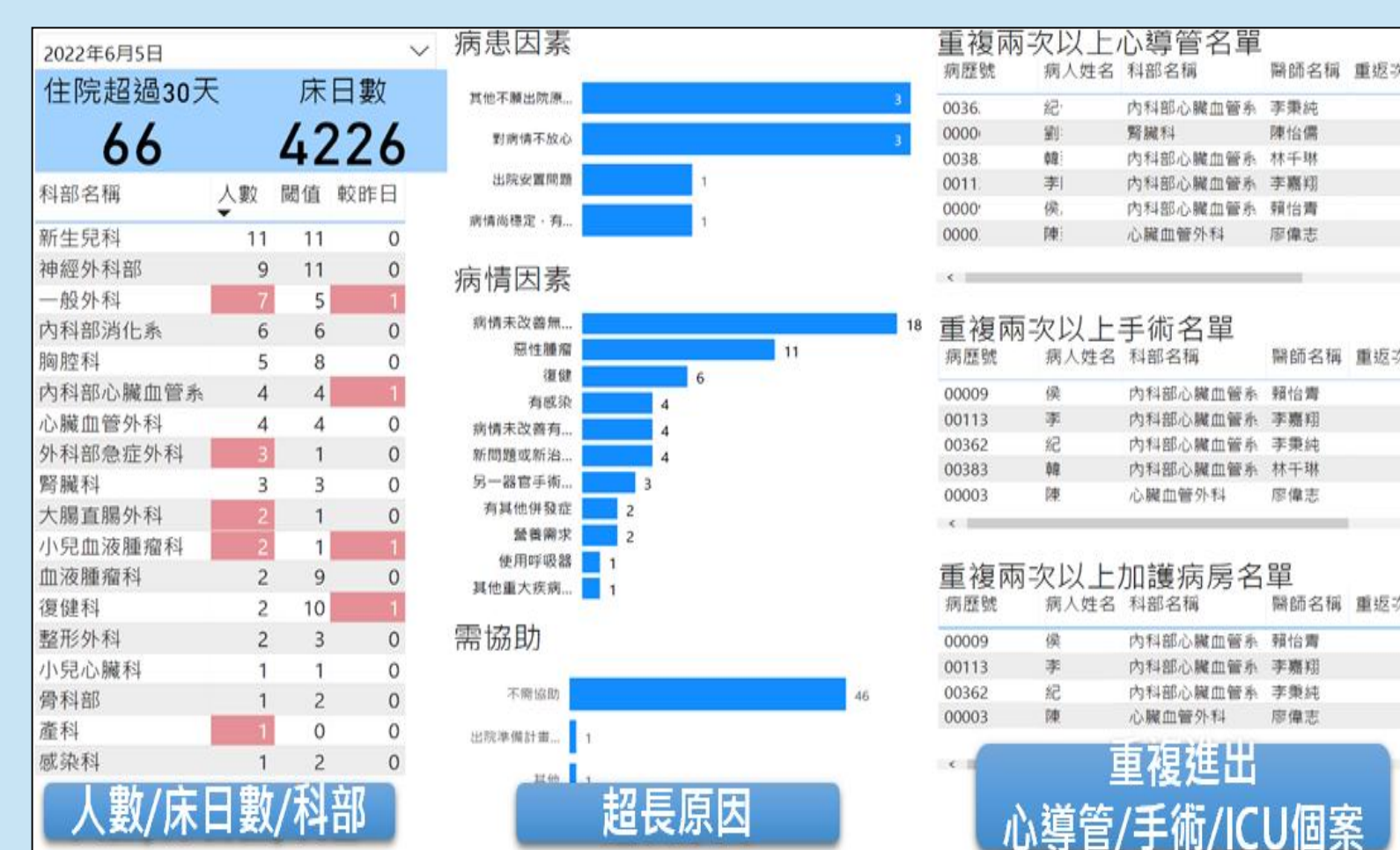
Use Microsoft Power BI tools to design the platform, REAL-TIME monitoring for overstay inpatients

Medical departments, discharge plan, social work and referral take the initiative to intervene

METHOD : The team improved the project and set up a “Overstay inpatients monitoring BI platform”: The team conduct a review and cause analysis of 113 overstay cases, draw up monitoring elements, and the hospitalization system actively prompts the attending physician to analyze the causes of overstay hospitalization and to assist in cross-team evaluation, which is immediately imported into the platform to assist cross- team members such as medical affairs and administration to intervene in time to provide patient-centered clinical care.

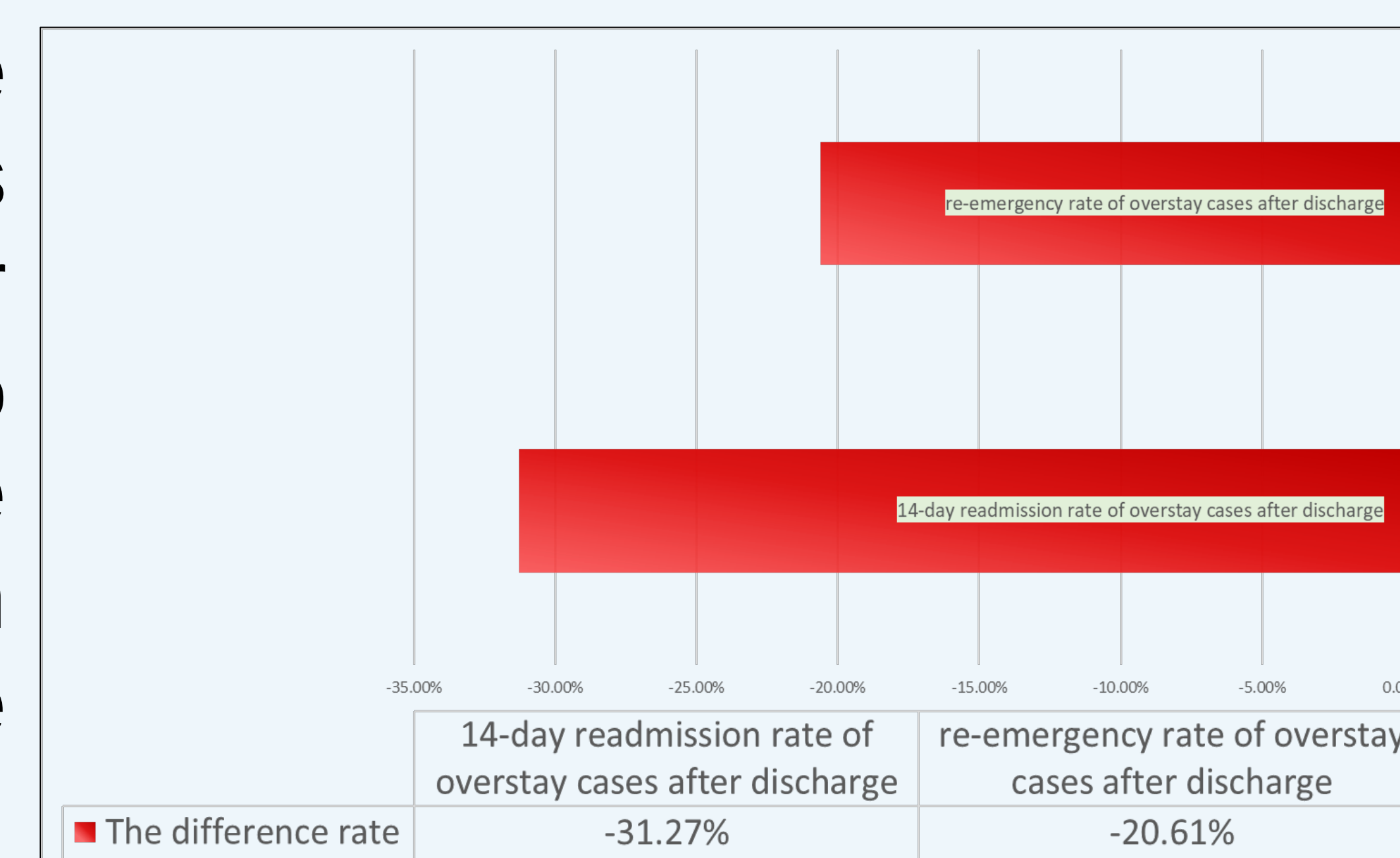
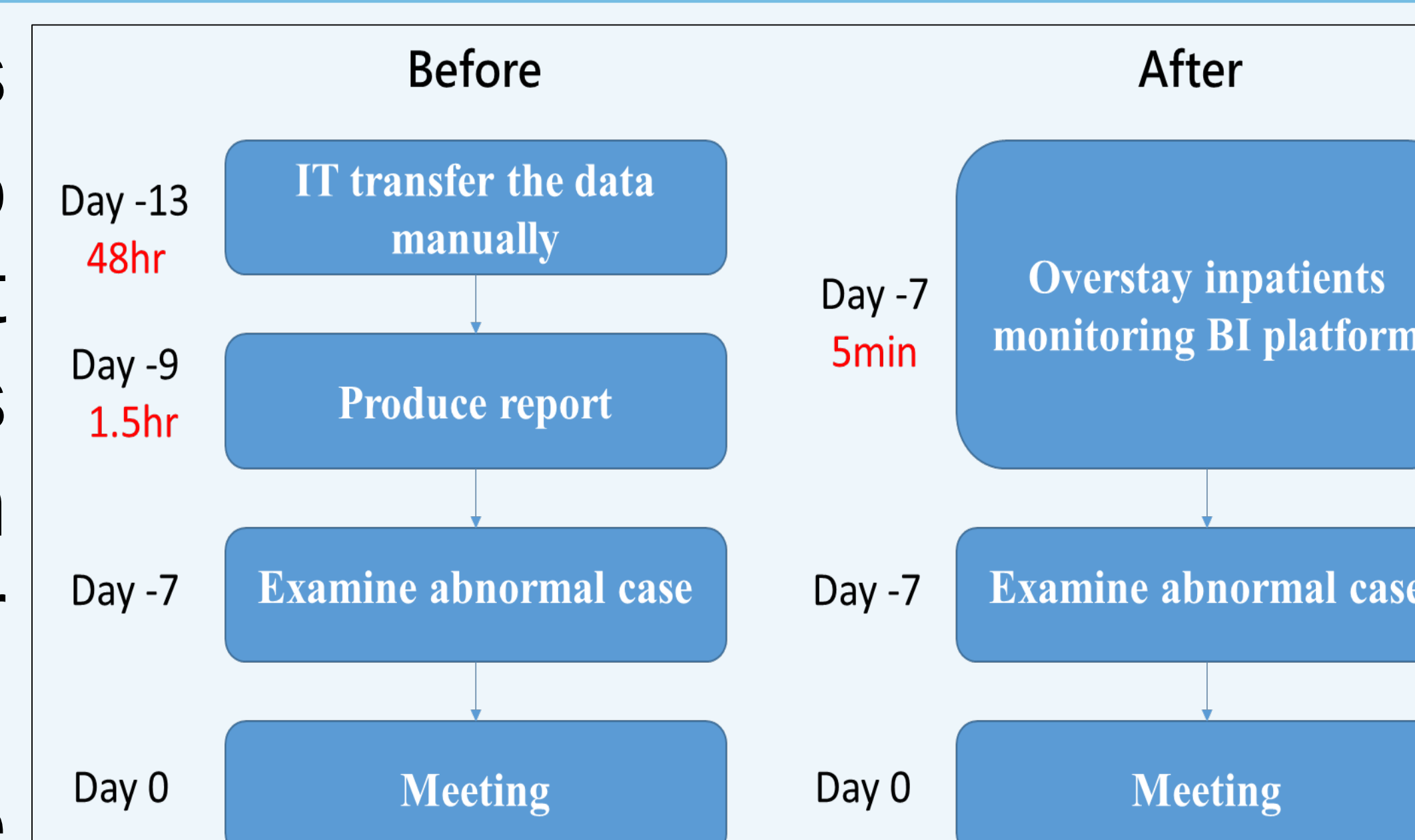
Microsoft Power BI tools to design the platform, integrate the information related to the hospitalization process of patients, and provide in-depth analysis and visual interactive reports, so as to achieve automated monitoring and more effective management of overstay inpatients.

The "Platform" is further improved and extended to the management of cases after discharge, combined with the cross- analysis of the situation of "re-emergency three days after discharge" and "re-hospitalization on the 14th day after discharge



RESULTS : The "overstay inpatients monitoring BI platform" strengthens the management efficiency, reduces the administrative work time by 99% by automatically importing data, and the leadership can get the latest information immediately. Provide in-depth analysis of monitoring elements and rapid identification of focus cases, a total of 113 overstay cases from January to June 2021, and a total of 161 overstay cases from November 2021 to April 2022 (case discussion rate increased by 36%).

Team members can immediately understand the needs and take the initiative to intervene through the platform, provide appropriate care services, and establish a good communication channel between doctors and patients. The average re-emergency rate of overstay cases after discharge decreased from 3.75% from January to June in 2021 to 2.98% from November to April 2022 (the difference rate was-20.6%). The average 14-day readmission rate of overstay cases decreased from 9.17% from January to June in 2021 to 6.30% from November 2021 to April 2022 (the difference rate is-31.3%).



CONCLUSIONS : Through the establishment of the "overstay inpatients monitoring BI platform", we can immediately update the case information every day, focus on and in-depth case review to find out the potential causes and needs, improve the care quality and efficiency of overstay inpatients, and provide cross-team services immediately. Strengthen tiered medical care and improve medical quality and patient safety.