

# Study of Factors Related to Unplanned Patients' Return for Surgery and Planned Operations for Inpatient Care: Example from a Medical Center in Northern Taiwan

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# Li-Lin KUO

## Head Nurse

- Nursing Career Commencement: 1979
- Location: MacKay Memorial Hospital, Operating Room

- Achievements:

Completed Emergency and Critical Care Nursing Training Course (1979)

Service in Saudi Arabia Medical Team (around 1980)

Promotion to Head Nurse of Operating Room (1992)

- Certification:

Peri-operative Registered Professional Nurse (Taiwan)



# Purpose

The study aims to explore the differences between unplanned return operations and planned surgeries in terms of patients' length of stay in the hospital, in the intensive care unit (ICU), and mortality within 30 days after surgery.

# Methods

The study employed **a retrospective case-match design**.

The dataset included **15,024 hospitalized surgical patients**, comprising both **inpatient surgeries and emergency surgeries**, from a medical center in northern Taiwan.

The **experimental group (unplanned return)** was identified based on the type of surgery as indicated by physicians (**n=185**).

The **control group (planned surgery)** patients were matched sequentially to the experimental group's patients by **surgical department, sex, and age ( $\pm 2$  years) (n=352)**.

# Methods



The study utilized **STATA 11.2 software** to conduct **frequency distributions, percentage calculations, mean and standard deviation computations, chi-square tests, t-tests, ANOVA, logistic regression, and multiple regression analyses.**

# Results

Under the control of patient anesthesia type and operation duration, as well as wound classification variables, **unplanned return surgery** significantly affects the **length of hospital stay** ( $\beta=0.889$ ,  $p=0.000$ ) and **ICU stay days** ( $\beta=0.628$ ,  $p=0.001$ ) compared to planned surgery.

The likelihood of patients **dying within 30 days after surgery** is **significantly higher** for those who undergo **unplanned return surgery** compared to planned surgery (OR=3.39, P=0.026).

# Conclusion

These results confirm the differences in **length of hospital stay, ICU stay, and mortality within 30 days after surgery** between patients undergoing **unplanned return surgery** and those undergoing **planned surgery**.

**Unplanned return surgery rates could serve as valuable metrics for monitoring quality across hospitals and for identifying opportunities for local quality improvement.**

Submission for: Poster presentation

Keywords: **Unplanned return to the operating room, Quality of care**



**Thank You**

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