## Sigma's 30th International Nursing Research Congress

## Using Statistical Process Control Charts to Reduce the Incidence of Inpatients Fall Accident

### Mei-Lan Cai, BSN

Department of nursing, Mennonite Christian Hospital, Hualien, Taiwan

### Purpose:

In hospital accidents, the most common is the fall. A patient will lengthen hospital stay, it will also increase the cost of medical care and social resources. The fall rate is one of the important indicators of patient safety in improving the quality of medical services and not allowing medical errors. The purpose of this project is to use the continuous monitoring of **statistical process** control charts to reduce the incidence of falls for inpatients.

#### Methods

According to the annual indicator of the previous year, the annual threshold and statistical process control chart are set to monitor the trend and variation of monthly fall incidence Judging criteria: Use the mean  $\pm 2\sigma$  as the warning boundary (internal boundary), 0f the standard deviation exceeds two standard deviations, a Quality Management Cycle (PDCA) is required, and quarterly audits and monitor

#### Results

The 2016-2017 **inpatients fall accident statistical process control** chart shows that the incidence of falls is stable. Strengthen nursing staff to prevent falls awareness during the period, statistical process control chart interpretation, Timely intervention measures, the incidence of falls fell from 0.11% in 2016 to 0.07% in 2017. In 2018, added individual health education leaflets to patients and raised their awareness of preventing falls. Jointly maintain patient safety, As a result, the incidence of falls from January to September fell to 0.06%. The **inpatients fall accident statistical process** control chart for 2016-2018 is shown in the figure 1.

### **Conclusions**

Strengthening the prevention of falls through the integration of educational resources, at the same time, the drug evaluation is carried out early by monitoring the control chart. Linked Discharge Preparation Service (DP) for follow-up care, Promote cross-team communication effectiveness, to improve medical quality and patient safety. In the future, we will regularly monitor and review changes in inpatient fall indicators. Let patients have safer and quality of medical care.

# Title:

Using Statistical Process Control Charts to Reduce the Incidence of Inpatients Fall Accident

# **Keywords:**

fall, inpatient and statistical process control chart

### References:

Agency for healthcare research and quality(AHRQ).(2013). Prevention falls in hospital: A toolkit for improving quality of care. Retrieved January 5, 2013, from tp://www.ahrq.gov/professionals/systems/hospital/fallpxtoolkit/index.html

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## **Abstract Summary:**

Linked Discharge Preparation Service (DP) for follow-up care, Promote cross-team communication effectiveness, to improve medical quality and patient safety. In the future, we will regularly monitor and review changes in inpatient fall indicators. Let patients have safer medical care.

#### **Content Outline:**

- I. Introduction
- A. In hospital accidents, the most common is the fall. A patient will lengthen hospital stay, it will also increase the cost of medical care and social resources.
- II. Body
- A. Main Point #1 Methods
- 1. Supporting point #1\_ annual indicator of the previous year
- a) the annual threshold and statistical process control chart are set to monitor the trend and variation of monthly fall incidence
- 2. Supporting point #2 Judging criteria:
- a) Use the mean  $\pm 2\sigma$  as the warning boundary (internal boundary),
- b) a Quality Management Cycle (PDCA) is required, and quarterly audits and monitor
- B. Main Point #2 Results
- 1. Supporting point #1
- a) the incidence of falls fell from 0.11% in 2016 to 0.07% in 2017.
- b) As a result, the incidence of falls from January to September fell to 0.06% in 2018.
- III. Conclusion

Strengthening the prevention of falls through the integration of educational resources, at the same time, the drug evaluation is carried out early by monitoring the control chart. Linked Discharge Preparation Service (DP) for follow-up care, Promote cross-team communication effectiveness, to improve medical quality and patient safety.

First Primary Presenting Author

# **Primary Presenting Author**

Mei-Lan Cai, BSN Mennonite Christian Hospital Department of nursing Supervisor Hualien Taiwan **Author Summary:** My name is MEI LAN CAI. I was graduated from Tzu Chi College of Technology in 2007 and thereafter been served in Mennonite Christian Hospital for 19 years. I am currently appointed as Supervisor of the Department of Nursing. During this experience of working In this hospital, I become to love the atmosphere here that is mixed with kindness, Cooperation. I always remind myself to learn and look after the patients with Professional knowledge.