E-BABE: Using lean healthcare to optimize day surgery protocol

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Introduction: As the improvement of medical quality and technology, patients expect high-quality medical service, comfortable environment and faster service efficiency during medical treatment. Day surgery has rapid admission to discharge process and short operation time. However, it requires long waiting time and lack of nursing health education. The aim of this study was to reduce waiting time and improve satisfaction of medical care.

Methods: The study was conducted from June 1, 2016 to June 30, 2017. There were 265 patients undergoing day surgery and surgery delay rate was 79%. The patient’s satisfaction to day surgery procedure was only 62.6%. The cognition to surgical precautions was only 56%; the postoperative unplanned return rate was 3.2%. The calculated process cycle efficiency (PCE) was 8.85% by examining value stream map. The improvement plans included (i) Introduce shared decision making (SDM): design posters including perioperative health education and process, make shared decision making manuals, revise universal health education handouts, produce a package with all health education information, remind patients with small cards and set up a platform for one-by-one health education by nurse specialists. (ii) Cross-team education and training: set up a health education workshop, organize a health education competition, arrange continuous education, practice simulation and online learning. (iii) Construct a lean healthcare day surgery process: process optimization, a series of service, I-PASS priority pass (I-PASS), ISBAR (Identify, situation, background, assessment and recommendation) handover, customized tourniquet and process map. (iv) Construct a case management tracking system, post-operative tracking, health education video in QR code, video teaching, a health education group in Line, multimedia digital signage, health education in robot (Zenbo), I-corner multi-function private room.

Results: (a) The waiting time from admission to the operating room was reduced from 357 to 177 minutes, reaching our target value of 50%. (b) The delayed delivery rate decreased from 79% to 21%. (c) The postoperative unplanned return rate improved from 3.2 to 1%. (d) Patient satisfaction to the day surgery process increased from 62.6% to 98.2%, and staff satisfaction also increased from 60.4% to 96%. (e) The PCE improved from 8.85% to 24.7% through lean healthcare.

Conclusion: Reduction of surgery waiting time with improvement of patient safety and satisfaction could be accomplished by lean healthcare and team resource management. Patients and their family members realized the value of hospital after identifying day surgery problem and modifying medical process. The implement of perioperative health education achieved understanding of surgery process and reduced anxiety.

Biography
Wang Yi hian has completed her Master degree at the age of 38 years from I-Shou University. Currently, she is working as a surgical nurse in the operating room of Kaohsiung City Hsiao-Kang Hospital. She had published more than 4 papers in Taiwan journals and published 10 posters.

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