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Simulation Training in Performing Subcutaneous Insulin Injection: A Local Pilot Nursing Study

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Introduction

Hyperglycaemia has become a common occurrence in hospitalized patients. Insulin therapy can be life saving, however, it can cause adverse effects if administered incorrectly. Nurses perform insulin injection in daily practice. Providing Evidenced-based Practice on subcutaneous insulin injection is of utmost importance to ensure quality and safe practice in hospital. Simulation training provides 'microworlds' whereby important patient and nurse interactions can be highlighted, illustrated, explained and replayed. Several studies confirmed simulation using manikins is an effective teaching and learning method when best practice guidelines are adheres to.

Objectives

1. To collect baseline data concerning staff knowledge and current nursing practice on insulin injection; 2. To empower and ensure nurses on correct and safe administration of subcutaneous insulin injection; 3. To measure any enhancement on nurses' knowledge on insulin injection after lecture 4. To evaluate any difference on improvement on insulin injection skills between lecture-based educational intervention and simulation training intervention

Methodology

The study comprising of theoretical and practical parts on subcutaneous insulin injection will be conducted in Department of Medicine & Geriatrics and its extended care units. All subjects will have pre-lecture insulin injection technique assessment and followed by lecture with pre and immediate post lecture knowledge test to evaluate the knowledge gained. The study utilizes a randomized experience control design. The group of simulation-based intervention will receive video-taped training on Subcutaneous Insulin Injection in Simulation Laboratory while the control group will attend the lecture only. After training, both groups will undergo scenario based assessment on insulin injection skill conducted by designated assessors.

Result

Correct deposition of insulin into subcutaneous tissue and correct injection technique not only ensure the efficacy of insulin but also minimize pain on injection. By using the above strategy, nurses are empowered on administration of insulin correctly and safely which is an important element on care delivery. 100% of nurses agree the usefulness. The study using simulation training which tailored made to meet nurses' needs; to provide situated learning within context in a safe environment and to develop technical proficiency through practice. Nurses can experience scenario based simulation training and practice on subcutaneous insulin injection. Knowledge and skills can be transferred to clinical practice and enhancing the quality of patient care.