



Service Priorities and Programmes
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Contamination in Collecting Mid Stream Urine Specimen - How To Tackle?

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Introduction

Urinary tract infection (UTI) is the most common health care-associated adverse event and the leading nosocomial complication following joint prosthesis surgery (F.Stephan et al 2006). Retrospective data in 2011 revealed mid-stream urine (MSU) contamination rate (40%) was much higher than catheter-specimen urine (CSU) (16%). The nurses being surveyed were deficient in good practice that minimizes contamination of MSU collection. They had various practices on performing the genital cleansing before the MSU collection. Improper genital cleansing before collection of MSU specimens seemed to be a crucial contributing factor on contamination which lead to delay diagnosis and treatment; unnecessary antibiotic treatment or repetition of test.

Objectives

(1) to enhance knowledge and skill on proper genital cleansing and MSU collection procedure among nurses and patients; (2) to minimize the MSU contamination rate, thus, facilitate prompt treatment for patients having UTI.

Methodology

1. Nurses instructed patients to collect MSU themselves by a 'Chinese instruction sheet'. If patients were incapable, nurses would assist them by following the proper genital cleansing procedure. The outcome study was conducted by comparing the number of contaminated MSU specimens during the data collection period. 2. In-service training sessions were arranged for nurses to enhance knowledge on UTI and standardize skills on genital cleansing. A 'Work Instruction Sheet on MSU Collection' was formulated to emphasize the proper genital cleansing technique. Pre and post quiz of the in-service to assess their attitude towards MSU collection and knowledge level on UTI. Concurrent audit was conducted to assess nurses' compliance on instructing patients and their skills when assisting patients for MSU collection.

Result

From Aug 2012 to Jan 2013, there were 37 MSU specimens collected and 10.7% (6 samples) were contaminated. The contaminated MSU percentage was lower as compared to the half year of 2011 (26.2%). Nurses' knowledge level was enriched as

shown by the quiz result. Average correct answer for pre-quiz was 64.6% while 71.8% for post-quiz. Nurses had 100% compliance audit result on genital cleansing and MSU collection procedure. After the programme, all nurses use a standardized protocol to collect MSU specimen. Conclusions: The program is helpful to tackle the MSU contamination problem - a minor skill enhancement minimizes contamination of MSU specimens. It enhances nurses' knowledge on UTI and MSU collection procedure. It promotes nurse-patient communication on MSU collection.