Improvement in disinfection process
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Introduction
Wrong choice of disinfectant and inadequate disinfection time not only will lower the
disinfection efficacy, it will also bring harm to the patient. It is observed that nurses in
NNU are confusing in choosing the right disinfectant for different types of patients and
different purposes. It was evident by NNU central line insertion audit report in 2014 Q3
that wrong disinfectant was used by 6% of staff. Also, the disinfection time is generally
noted to be too short. However, there is no existing guideline/protocol to guide the
practice. As a result, there is a potential risk of increasing line related sepsis or
nosocomial infection. In NNU, needless device systems for central catheters, or
peripheral intravenous catheters are commonly used to reduce the frequency of
needle-prick injuries and reduce the time of exposure of the un-locked line in air.
However, meticulous disinfection of these devices before connecting it with
intravenous fluid including parenteral nutrition or other fluid is essential to prevent
nosocomial infection. Inadequate time for disinfection of these device surfaces might
increase the risk of catheter associated blood stream infections. Meanwhile as there
is no existing guideline or protocol describing the proper disinfection of these device
systems in NNU, nursing practice varies in choosing disinfectants and the disinfection
time. In order to enhance quality care to our patients, improvement in disinfection
process should be addressed.

Objectives
1. Enhance staff knowledge and alertness on appropriate choice of disinfectant for
different types of patients/equipment  
2. Ensure proper skill in disinfection of line devices connected to patients

Methodology
1. Evaluate nurses’ knowledge by pre talk questionnaire  
2. Prepare the
guideline/protocol on choosing appropriate disinfectants as well as recommending the
method of disinfection on line devices  
3. Prepare poster/signage/small information
card to alert staff to follow the recommended practice of disinfection on line devices
4. Provide education talks to strengthen staff’s knowledge on disinfection
5. Re-evaluate nurses’ knowledge by post talk questionnaire  □ Audit on staff compliance

**Result**
Knowledge test after the CQI program showed the improvement of the followings:
1. Correct choice of skin disinfectants improved from 59.1% to 83.7%
2. Appropriate time for rubbing on the needleless devices improved from 5.1% to 100%
3. Appropriate rubbing method on needleless device improved from 48.9% to 95.3%
Behavioral change (through unannounced observational audit) for appropriate time on rubbing on needleless device improved from 0% to 66.7%.