Introduction
Insulin is being ranked the top five medication incidents in Hospital Authority and worldwide. Safety issues related to insulin administration is not only confined to the right patient, drug, route, dose and time of administration, but also to ensure a proper injection technique, this includes having adequate and correct re-suspension of cloudy insulin before use, giving the injection at a right angle specific to individualized body built, having regular injection site rotation and monitoring for injection site for abnormalities. In addition, with the increase popularity of using pen injectors for subcutaneous insulin administration (SIA) in clinical settings, this also poses a high needlestick injury (NSI) risk to the nursing staff. In a recent study, NSI risk in using pen injectors is 6 times higher than using conventional insulin syringes for SIA. It was found that nursing staff were unfamiliar with insulin pen injector operation and the way to dislodge used pen needles safely from the pens. In 2014 PWH NSI incident data, there are 2 out of 42 incidents related to SIA. It is anticipated the related incidents may be escalated if the nursing staff have knowledge and skill deficit on insulin administration related safety issues. In addition to the recent implementation of In-patient Medication Order Entry (IPMOE) Project in our hospital, there is a change in the form of insulin dispensing from the Pharmacy for in-patients, at such nurses have to be alert on specific skill is required for insulin preparation for cartilages by insulin syringes and pen injectors. In light of all these issues identified, an on-site subcutaneous insulin administration skill enhancement training programme is developed for ward nurses.

Objectives
(1) To enhance safe insulin prescription and administration. (2) To update various insulin types, its actions, preparations and common usages (3) to educate on proper technique on SIA via insulin syringes and various pen injectors with hands-on skill
training (4) to cover the safety issues related to using pen injectors / insulin syringes

Methodology
Literature review was done to identify NSI related causes and safety issues. We incorporated all these issues in the training programme together and also introduced the latest SIA guidelines. This is a 30-min on-site / classroom training programme run by 2 diabetes nurses. The schedule of the programme is aligning with the IPMOE implementation timetable in the PWH wards. All the related training materials and videos are being uploaded at ihospital for reference.

Result
Since the implementation of the training programme from July 2014 to Feb 2015, we have provided 27 on-site and 8 classroom teaching sessions. So far a total of 452 nursing staff from Medical, Surgical, Private, Gynecology and Orthopaedic wards have been trained. A total of 423 evaluation forms were received. Approximately 55% and 45.5% of staff rated strongly agree and agree respectively on gaining the knowledge and skill on the operation of both assembly and disposable type insulin pen injectors, they expressed having gained knowledge about the safety issues and precautions related to the usage of insulin pens. With the availability of various insulin formularies, complex insulin regimens and administrative devices and methods, care of diabetic patients is becoming challenging. Having regular update training is necessary for ward nurses to enhance the knowledge and skill so as to reduce medication incidents and NSI related to insulin administration. The effectiveness of this programme will be evaluated by capturing the data on insulin related medical and NSI incident 1 year later.