Introduction
Capillary blood glucose monitoring (CBGM) is a point-of-care test providing instant results at bedside for clinical decision and treatment. In the current practice, blood samples are usually obtained from fingertips. However, this practice sometimes may not be feasible for certain patients such as those on intravenous infusion. Literature has suggested that blood samples can also be obtained from other alternative site, such as earlobe, but empirical evidence for its reliability is lacking.

Objectives
The study objectives were to compare the reading of blood samples obtained from the earlobe and fingertip of an individual subject for CBGM and the level of pain reported by the subject for the two pricking sites.

Methodology
A single-subject with repeated measurement design was conducted. To rule out if different health conditions would affect the reliability of CBMG at earlobe, Diabetes with stable control and Diabetes who were receiving care in hospital were recruited. Thirty healthy subjects were recruited from the DM Clinic (n=30) and another three groups of patients: 1) those who were either currently receiving intravenous infusion (n=30), 2) those with a diagnosis of chronic renal impairment (n=30) and 3) those aged 65 years or above and had been bedbound for at least 48 hours (n=30), were recruited from the medical wards in PYNEH on a voluntary basis between June and December 2014. Blood samples were collected consecutively from both fingertip and earlobe. Intra-class correlation coefficients (ICC) were used to determine the level of absolute agreement between the two readings of each individual subject. Wilcoxon
Sign Rank tests were used to compare the pain level between the two sampling sites. Ethical approval for the study was obtained from the HKEC Ethics Committee.

**Result**
A total of 120 subjects were recruited. Their mean age was 74.6 years (SD 13.8) and about two-thirds were female. The ICC between the readings of the two samples were between 0.966 – 0.994 with a p value < 0.001 across the four subject groups. Also, participants in all four groups generally reported a significantly lower level of pain when pricking the earlobes than the fingertips. Conclusions: This study aimed to provide evidence to an innovative practice for obtaining blood samples for CBGM at earlobe. The findings showed that earlobe is also a reliable site for CBGM and pricking earlobe would cause less pain to patients. One study limitation is that all the CBMG were performed before mealtimes or at fasting condition. Further study will be needed to examine its reliability if postprandial blood samples are obtained.