

DOES SITE MATTER? COMPARING PATIENT COMFORT AND ACCURACY OF BLOOD GLUCOSE SAMPLES TAKEN FROM THE FINGER AND PALM OF ADULT DIABETIC PATIENTS IN THE PREOPERATIVE SETTING

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Introduction/Identification of Problem: In our unit, blood glucose samples via finger stick are standard practice. Inquiry from patients regarding less pain with an alternative site test (AST) led us to review literature and question if a less painful method existed. Also of interest was the accuracy of the blood glucose results obtained from AST compared to standard practice of finger stick.

Purpose: To compare pain/discomfort of obtaining blood glucose via finger stick (standard practice) with that from the palm (AST). The accuracy of the blood glucose result obtained from both sites will also be compared. Our hypothesis is that the patient will experience less pain with blood glucose stick from the AST (palm) when compared to standard method (finger stick) and glucose values will not differ significantly.

Methodology: Prospective interventional study design. Subjects deemed eligible via medical record review of inclusion/exclusion criteria. Qualifying subjects verbally consented. Subjects received both methods of blood glucose sampling to compare comfort and accuracy; however, clinical treatment based on standard site result. Computerized randomization determined which site sampling performed first. Glucose samples required drop of blood from each site. Subject demographics, diabetic/site sampling history, pain experience (rating 0-10), and both glucose results were documented.

Results: Preliminary findings: 82 patients enrolled (41 male, 41 female); mean age of 61. Randomization of subjects yielded 39 patients to receive standard site testing first and 42 patients to receive intervention (AST) first. Statistical analysis revealed mean pain score of 2.83 for standard finger stick sample and mean pain score of 1.65 for the intervention group (AST). Mean glucose value for standard site was 150 mg/dl compared to 149 mg/dl with AST. No significant difference in glucose measurements between standard care and intervention. Overall perception of pain/discomfort with AST was statistically significantly less compared to standard method

Discussion: Findings support AST as an accurate and less painful method of obtaining blood glucose results on diabetic patients.

Conclusions and Implications for Practice: Study findings may be generalized to any practice setting where point of care testing for blood glucose is performed. Discussion regarding house wide practice change in progress.