

BHE-020

Human Factor / Integrated Design of a Non-invasive Glucose Monitor

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Abstract

The objective of this research proposal is to design the enclosure for a non-invasive glucose sensor that will be used in a hospital environment (intensive care unit, cardiac unit or operating room). Important considerations include: human factors, ergonomics, ease of use, readability of the displays. The material chosen for the enclosure must tolerate occasional fluid spills. Display should be readable from a distance of 6', as the glucose monitor will likely be mounted on an IV pole. The major advantage of this non-invasive glucose monitor is to eliminate finger sticks (blood draw) and provide a continuous glucose measurement in the critical care environment complete with trending information for the nursing staff.