Failure Rates of Automated External defibrillator (AED) and Implantable Cardioverter-Defibrillator (ICD)
By Samuel Annor

Abstract:
Two of the most common heart failures are Ventricular Fibrillation and Ventricular Tachycardia. In both cases, there is rapid irregular contraction of the heart that lead to non-matching heart beat and pulse beat. The process of rectifying these heart defects is to induce the heart with electrical charge to restore pace and normal heartbeat in a process called defibrillation and hence the name of the device used defibrillators. Although, most of the defibrillation process occurs successfully, there are failure rates in using defibrillators. On the average, defibrillators have failure rates of about 15% or more and this is due to malfunction, technology and several others. Hence, the objective of this project is to investigate the failure rates in defibrillators, the cause of these failure rates and how to minimize the failure rates in the two main types of defibrillators.

Introduction:
Beyond doubt, the very quintessential form of life in every Homo sapien is the heart. Although, the heart’s operation is mostly not felt, its cessation to function will cause immediate loss of life so the need of defibrillators is very relevant. While there are two main types of defibrillators; external defibrillators, which are in vitro and Implanted defibrillators, which are in vivo. AEDs just like ICDs will monitor the heartbeat and also shock it to resuscitation when the rhythm is irregular. However, AEDs are normally used in emergency situations where one-time heart resuscitation is needed before a rush to the emergency room. On the other hand, the ICDs are used when ventricular fibrillation and tachycardia are frequent and continuous defibrillation is needed. The importance of defibrillation cannot be over look and hence their ability to fail is detrimental. My research requires investigating the failure rates in defibrillators and what causes this these to occur.

References:
First 1/3rd Grading Sheet

Title
- independent/dependent variable
- message when appropriate

Abstract
- Objective
- Background
- Problem related to malfunction, technology and several others
- Methods
- Results/discussion
- or evaluation of hypothesis

Introduction
- Question/revised
- methods/experiments answer the question
- results found
- the answer
- how the question and answer fits in the previous work
- why question and answer are important

References
- reference in the text -> in the list
- vice versa

Comments
- The goal is not clear. The connection between AED and ICD is missing.
- There is no background information on about these failure rates. How are you going to evaluate your objective?