



IPRO 319:
Tech for Cardiac Arrest

Problem

- Causes brain damage and death
- Can happen anywhere
- Can happen any time
- Damage is done fast

Goals

- Mitigate damage and death
- Portable and easy to use
- Treat victim before paramedics arrive

Progress to Date

- Research on previous IPRO's done
- Technologies selected
- Preliminary designs created
- Parts ordered

Organization of the Team

- The team works well together
- Assigned roles limit creativity
- We are dynamic!
 - All members help in all areas they can
 - Loosely defined cooling and shaking teams

Solution

OPTIMUM DESIGN

- Shaker
- Cooling system

SOLUTION

- Hand shaking
- Wheel with torsion spring
- Plastic bed with form mattress
- Refrigerant emission system through a bed
- R152a for refrigerant

CHALLENGES

- **More optimum design**
- **Control the mass flow rate (refrigerant)**
- **Test for confirmation**

BUSINESS ETHICS

- Moral Principles
- Utilitarianism
- Justice Model
- Human Rights

BIOETHICS

- Universal declaration of Human Rights
- The Nuremberg Code
- The Belmont Report
- International Ethical Guidelines for Biomedical research Involving Human Subjects
- Public Act 096-0748



Questions
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