Quick emergency response through digitally enabled app that can effectively streamline the existing Accident & Emergency (A&E) Response system

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AIM: To Improve the existing Accident and Emergency response system with a digitally enabled app by integrating it with our existing nationalised emergency number in order to improve survival rate of the patient in critical conditions.

Introduction: On a global basis, 5.8 million people die each year as a result of injuries, according to the World Health Organization which is 32 percent more than the number of fatalities that result from malaria, tuberculosis, and HIV/AIDS combined together.

- This is largely because emergency medical response systems and tools are lacking in most parts of the world.
- Emergency care in developing countries are still at its nascent stage and many lives are lost due to lack of well equipped medical care and emergency response time in critical situations.
- Our digital application in the event of medical emergency will alert the existing emergency response system where the person affected or a bystander will press the panic button which will continuously transmit the person's GPS location as a message which is sent to our system along with three registered contacts.
- Our system makes use of this GPS data to efficiently coordinate with the emergency response team near the emergency point and nearest located critical care unit will be notified to reach the site for assistance.
- This technology can significantly increase patient's chances of survival by getting early response from the dispatched critical care team by giving efficient route planning with real time traffic updates which will be crucial in the golden hour by acting rapidly.

WORKING MODEL OF APP

4 SIMPLE STEPS:

Every year thousands of people die during emergency situations like road accidents, sudden cardiac arrest (SCA), fire burns, serious health related conditions.
This app can enable us to save lives in critical conditions where odds of survival are completely dependent on the response time.

1 USER ACTIVATES THE EMERGENCY SERVICE WHEN NEEDED

User is the first point of contact where he sends the distress beacon using our app on a smart phone that transmits the distress call along with the GPS location to our system and three preferred contacts.

2 NETWORK COMPONENT

Network Component is the mobile network or internet which relays the information to our systems

3 MIDDLEWARE

It is our decision making unit which receives the emergency message and finds the nearest and best well equipped emergency response unit and dispatches it to the patient's location. The system takes in following parameters into consideration in it's decision making:

-> Geographic distance
-> Real time traffic conditions
-> Efficiency of the Emergency Response unit
-> Approximate response time

4 RESPONSE COMPONENT

Is the nearest and fastest well equipped emergency medical facility

Conclusion: Integrating this application with our present emergency response system can be of great help to our existing health care system. We can save many lives by availing these services to people and reduce the mortality rates by giving effective services that can improve the survival rate of the individuals significantly. This app can be used to optimize creaky ambulance dispatch system, which has left people waiting for shockingly long times (sometimes as long as 30 minutes or even more) for assistance in life threatening situations or Golden hour.