Medical Alert System

Presentation

Introduction

- This presentation addresses medical alert systems for the aging people because they get sick most frequently.
- According to Brouhard (2012), most aging people living alone utilize medical alert systems to help them live their lives without limits.
- Brouhard (2012) argues that each medical alert system comes with an alert button that the holder presses in case of an emergency to alert the emergency operators.
- The holder of a medical alert system is able to receive immediate attention from the emergency operators shortly after informing them about an emergency.

Description of Medical Alert Systems

- Most medical alert systems contain features such as emergency buttons, GPS tracking system, controls, inbuilt batteries, fall detection, speakers and friendly user interfaces (Trimmer, 1999).
- According to Trimmer (1999), there different flavors of alert buttons including that of wearing around the neck, wrist, or on a belt clip.
- Trimmer (1999) states that there are also water-resistance alert buttons that the holders can move around with them into the shower.
- The GPS tracking system assists the emergency operators in locating the holder of the medical alert device.

Photos of Medical Alert Systems

Purpose of Medical Alert Systems

- The purpose of these systems is to notify the emergency operators about the medical emergencies of their clients (Brouhard, 2012).
- The emergency operators are supposed to respond to the emergency alerts instantaneously to save the live of the device holder.
- In short, medical alert systems are live-savers that link their holders with the emergency operators such as nurses, doctors, and fire brigadiers.
- Brouhard (2012) argues that the core purpose of the medical alert systems is assisting their holders to solicit help from the relevant agencies in cases of emergencies.

Purpose of Medical Alert System

- The photo below shows a person pressing an alert button to solicit for help.

What Triggers the Alarm?

- Brouhard (2012) states that the device holder is responsible for triggering the alarm during an emergency.
- Just a click of an emergency button is enough to trigger the alarm.
- However, some types of medical alert systems contain fall detection features.
- A medical alert system with fall detection feature is able to trigger the alarm itself when the device holder falls (Trimmer, 1999).
- These alert systems detect motions that resemble a fall before triggering the alarm.

Employee’s Response to the Alarms

- Firstly, the medical alert system sends a wireless signals to the emergency operators after a press of an emergency button.
- Secondly, an emergency operator conducts a remote testing to confirm that victim’s alert button is properly synchronized with in-home medical system.
- Thirdly, an emergency operator uses the GPS tracking system to identify the current of the victim’s mobile alert system.
- Finally, an emergency operator sends help to the device holder after identifying and confirming the location of the mobile alert system.

Impact of Human Variability on the Design of Displays and Controls

- The controls of the medical alert systems are large and protruding to enable people with vision deficits to use them efficiently.
- Most medical alert systems contain speakers that enable their holders to talk directly to the emergency operators (Trimmer, 1999).
- The controls are labelled with simple words to increase learnability of the systems because people have different intellectual capabilities.
- Furthermore, the texts in the displays are also simple to understand and they are learnable and quick to read.

Analysis of Quality

- The medical alert systems are made of high-quality materials that observe the ergonomic issues of the holder (Ikhu-Omoregbe & Azeta, n.d).
- For instance, there are waterproof alert buttons that cannot be damaged if soaked in water. Therefore, the holders can comfortably bath or swim when wearing them around the neck or wrist.
- The alert buttons especially that worn on wrists and neck are made of rubber materials to ensure that the holders are comfortable (Ikhu-Omoregbe & Azeta, n.d).
- Lastly, the alert button devices are light and the holders can move around with them comfortably without getting tired.

Analysis of Usability

- The alert buttons are large and soft enabling the users to use them comfortably.
- The controls and displays of medical alert systems contain simple texts and labels that are easy to learn (Ikhu-Omoregbe & Azeta, n.d).
- The medical alert systems contain few controls so the users are able to locate the controls easily and without struggling in cases of emergency.
- The fall detection feature of the medical alert systems increases the usability of the devices especially to the users that fall regularly.
- In fact, these users are not required to press an alert button to trigger an alarm because the system triggers the alarm itself.

Conclusion

- Medical alert systems are indispensable tools that link users with the emergency operators.
- Anyone can use medical alert systems including aging people and epileptic people.
- There are various models of alert buttons including wearable and pocket alert button devices.
- The wearable alert button devices are worn around the wrists, necks, or on the belt clips.

References

Brouhard, R. (2012). *Life's little emergencies: A handbook for active independent seniors and caregivers*. New York: Demos Health.

Ikhu-Omoregbe, N., & Azeta, A. (n.d.). Design and Deployment of a Mobile-Based Medical Alert System. *E-Healthcare Systems and Wireless Communications Advances in Healthcare Information Systems and Administration,*210-219. doi:10.4018/978-1-61350-123-8.ch010.

Trimmer, H. W. (1999). *Understanding and servicing alarm systems*. Boston: Butterworth-Heinemann.