



اَوْنِيُوْ سِيْنِيَقُوْ تِيْكْنُوْلُوْجِيْ مَارَا
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TECHNOLOGY BLUEPRINT (SMART MEDICAL BRACELET)

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1.0 EXECUTIVE SUMMARY

Smart Medical Bracelet (SMB) @ Smart Medical Wristband is defined as fashionable science ornamental hoop worn on the wrist. It acts as patient identifier. It has accurate health history, patient's medication history, medication reminder for elderly to take their medication and the best of all is a direct link to 999 if it detects abnormal sign. It also has basic health monitoring, Bluetooth for connection with handphone and GPS. Accurate medical history laid in this band and can only be access by medical staff. It has a barcode and need to be scan at the hospital to retrieve medical information. The target market is for client who require medical treatment in the healthcare setting. The interesting features are it is easy, comfortable, light and water proof which is convenient and suitable for patient to wear everytime. The profit of this product can increase healthcare sector.



2.0 PRODUCT OR SERVICE DESCRIPTION

Wristband or bracelet is a simple feature used during admission in hospital. It will be provided to the patient as a patient identity (ID) wristband in every admission. Even though it seems to be relatively a small problem, the failure to correctly identify patient's identification may result in errors such as blood transfusion error, medication errors, wrong procedure done to the patients and others. A study was done and showed 5 errors of drug administration by the nurses to the wrong patient (Fyhr, 2012). So, it is vital to have wristband in order to identify the patient in a hospital. The process of patient identification is a prerequisite for providing successful and safe healthcare. Improved training and better use of technology may improve the way health care workers verify patient identity (Ritwik, 2016). Through our group discussion, we conclude that wristband is important for correct treatment to the correct patient. Along with the improvement of technology in Malaysia as a developed country, we would like to recommend our technology which is a Smart Medical Bracelet @ Smart Medical Wristband

Purpose:

- Act as patient's identification which contain medical information. This medical information can only be access in the healthcare setting.

Product Concept:

- This product will be given to all patients in the Emergency Department, hospital department, all out-patients undergoing diagnostic or invasive procedures, any out-patients who is cognitively compromised or impaired and daycare patients excluding dialysis out-patients except when they are to receive blood transfusion or any procedures

Functions:

- On screen monitor – act as patient's identifier, an allergic card, emergency aid treatment because emergency information will be set up in the monitor for immediate attention.
- Sensor – to detect patient's hemodynamic status

- Medical information – previous and current medical information can only be access in the hospital setting as it has been embedded with a barcode. This is important because medical information is private and confidential. General information can be access by the public for life-saving treatment is there is an emergency situation.
- Medication information - previous and current medication information can only be access in the hospital setting as it has been embedded with a barcode. This is important because medical information is private and confidential. General information of current medication intake for life-saving treatment can be view by the public.
- Alarm - Coordinate medication intake, act as reminder for important date or appointment.
- GPS - Monitor location of the patient.
- Time, date and day – to help patient remember the day
- TCA or follow up – to help in coordinate follow up information
- Emergency contact number – link with the emergency line such as 999 if there is any abnormal sign detected. It will also link with family members via phone for immediate attention.
- Bluetooth – to link with phone and hospital program

Unique features:

- It is safe to be used as it is made of a rubber and did not cause any harm. This product also a waterproof product. This product will be loose enough for blood circulation and will be tight enough to avoid it from sliding off. It will be comfortable, simple, fashionable, light, easy to see and can be worn everywhere.