

**ICQCC 2011-Yokohama**  
**To Overcome The Problem Of Existing Aids That Burdening**  
**Patients With Lower Limbs Fracture**

**Rehab Charger**

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The existing treatment for fracture of the lower limb included the provision of ambulatory aids such as axillary crutches, walking stick and quadripod. Those equipment provide equipment that assisted in transmitting body weight and providing support for the patient. Patients were required to buy three types of ambulatory aids (axillary crutches, walking stick and quadripod) in order to participate in rehabilitation actively.

The problems with the existing ambulatory aids were that they were 1) expensive (USD 43.61), 2) difficult to find with local suppliers, 3) limited in function, 4) the size of the aids were unsuitable for most Malaysians and 5) the aids were difficult to handle. The ICC group from the Rehabilitation Unit, 'Rehab Charger', identified these problems through patient and staff feedback. Using ICC Tools PDCA, Matrix brainstorming, 5W's+2H as well as Cause and Effect Diagrams, the problems were analyzed and the root causes for the rejection of the existing ambulatory aids by patients were identified and verified. Using the Tree Diagram on suggested solutions as well as the Process Decision Program Chart, alternative remedial actions were considered. 'Rehab Charger' then chose to innovate a unique ambulatory aid named EZi-CRUTCH consisting of a three-in-one ambulatory aid that combined the functions of the axillary crutch, walking stick and quadripod.

The results of the project following corrective actions were significant. EZi-CRUTCH was well accepted by patients and the cost at USD 12.64 was cheaper than purchasing the three conventional ambulatory aids. Cost saving per aid is USD 30.97. The circle successfully achieved 92.3% of our goal, exceeding the initial target of 86%. The project has been well received among professional communities.

The circle held several briefing sessions with medical personnel from other hospitals to promote the application of EZi-CRUTCH to their patients. The number of patients using EZi-CRUTCH today continues to increase rapidly and sales have exceeded 296 units until October 2010.

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## 下脚部骨折患者を苦しめる既存の救済における問題の克服

### REHAB CHARGER

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下脚部骨折者の既存治療では、松葉つえや、歩行用杖、4脚ステッキなど歩行補助を用います。これらの器具は体重を伝達する補助として患者の支えとなります。患者がリハビリ活動に参加するためにはこれら3つのタイプの歩行補助(松葉つえ、歩行用杖、4脚ステッキ)を購入する必要性がありました。既存の歩行補助の問題として、それらは1)値段が高く(USD43.61)、2)通常のお店では見つけにくく、3)機能が制限されており、4)マレーシア人の体格に合っておらず、5)取扱いにくいものです。

そこでリハビリテーション課の Rehab Charger サークルでは、患者とスタッフのフィードバックに基づき、これらの問題を特定しました。PDCA ツールやマトリックス図法、ブレインストーミング、5W+2H や特性要因図などを使って、問題を分析し、既存の救済が患者に受け入れられない真の原因を突き止め、実証しました。樹系図や PDPC 法を使って解決策を導き出し、代替是正案を考え出しました。Rehab Charger はその後、松葉つえ、歩行用杖、4脚ステッキの機能を1つにまとめたユニークな歩行補助器 EZi-CRUTCH を開発しました。

このプロジェクトと是正処置は大きなもので、EZi-CRUTCH は患者に広く受け入れられ、費用も従来の歩行補助3点を購入するのに比べ、USD12.64 安価に済みました。救済1件につき、USD30.97 のコスト削減にもなりました。当初目標としていた86%を超え、92.3%の成果を達成できました。専門家コミュニティの間でも広く受け入れられました。

サークルは他病院からの医療従事者への説明会もたびたび行い、EZi-CRUTCH の採用を推進しています。EZi-CRUTCH 使用の患者数は急激に増え、2010年10月までに296台が販売されました。