Evaluation of Guideline System and Sign Design of Public Space in Taiwan Emergency Department

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Abstract. In order to prevent the man-made error under stressful environment in the Emergency Department (ED), it is important to design the clear guidance of the sign. The anticipated goal of this study is to evaluate the emergency service in three major hospitals of southern Taiwan, especially to compare the strengths and weakness of guidance sign and the medical flow. By the focus groups with design professional and twice questionnaires, this study not only indicates the common problem of ED, but also redesigns the guideline system. The researchers consulted the strength in current emergency system and integrated color-coding to signal redesign. Guiding Line, Banner Design and Color Coding Integration were shown in the design stage. In the end, three factors (Guidance, Identification and Comprehension) were estimated the usability by Likert scale in questionnaire II. The design improvement might increase the efficiency and efficacy care of S.O.P in hospital emergency service, as well as quality of patient in future ED.

Keywords: Sign, Emergency Department, Public Area, Color Coding.

1 Introduction

In order to improve the patient safety and comfort, guideline system and sign design in medical field is very important, especially in the high-pressure Emergency Department (ED). In order to estimate and prevent the man-made error under fast and stressful environment in the ED of the hospital [1], the design of clear guidance of the sign to be easily allowing the patients to follow is extraordinarily important. A useful medical guideline system should allow for reliable and accurate interaction between system and the users in ED [2] [3]. Encoding, visualization and decoding is the process of information transmission [4]. According to the recently research [5] are three key points of sign design; (1) Arouse the reading motivation of user, (2) Attract the attention of users, (3) Increase the users’ comprehension (See Fig 1). The successful sign design should base on the human-center standard, and stand on the viewpoint of user.
Generally speaking, the medical flow of ED in Taiwan is working as Fig 2, when the patients arrive, the nurse or volunteer staff will start to triage the state of illness, and patient will ensure their triage station before the register. Then, the nurse will show the way for the appropriate consulting room and give the treatment. After seeing the doctor to decide receive the surgery, hold for continual observation or hospitalized for further treatment. The final stage is go to cashier and pharmacy and then discharge from the hospital.

This study aims to evaluate the guidance sign of emergency service in three major hospitals of southern Taiwan and compare their strengths and weakness of the working flow. On the other hand, the study points out the common problems found in Taiwan ED, and conclude the opinion from experts and user to redesign the guideline system.

2 Methods and Data Collation

This study aims to evaluate the emergency service in three major hospitals of southern Taiwan; we collect the basic profiles of three hospitals by observing the daily flows in National Cheng Kung University Hospital (NCKUH), Chi Mei Hospital (CMH) and...