醫院負壓隔離區用後評估之研究

Post-Occupancy Evaluations of Negative-pressure Isolation Area in Hospitals

中文摘要

本研究旨在了解醫療照護提供者對負壓隔離區之用後觀感及各樣本醫院在負壓隔離區設置後之益本比是否具顯著差異，並探討其相關之影響因素。本研究透過 4 場的焦點團體座談、9 場次的實地訪查，及問卷調查方式進行。使用者用後觀感調查有效樣本為 286 份，有效樣本回收率為 71.5%，益本比分析調查有效樣本為 31 份，有效樣本回收率為 31.31%。另收集加拿大、英國、美國、澳洲及臺灣有關負壓隔離區設計指引彙整討論。

本研究之主要結果如下：

一、使用者用後觀感部分

(一)經濟面：評鑑別、權屬別、地區別、人員類別及感染症防治醫院等」變項，會造成用後觀感的差異。

(二)功能面：在評鑑別、權屬別、地區別、性別、教育程度、人員類別及感染症防治醫院等變項，會造成用後觀感的差異。

(三)技術面：在權屬別、地區別、教育程度及人員類別等變項，會造成用後觀感的差異。

(四)行為面：年齡、教育程度及人員類別等變項，會造成用後觀感的差異。

二、益本比分析部分：影響益本比值之因素，主要不在於醫院特性上，而是在於建置負壓隔離區所投入之新增軟硬體費用及醫院後續之經營績效。

三、負壓隔離區設計指引：我國可能因訂定時剛遭受 SARS 疫情期之嚴重衝擊，故與其它各國相較，設計指引顯得較為較嚴謹。但為符合此標準，卻需付出較高之維護及營運成本，值得再進一步研究相關設計及規定之必要性。

根據研究結果，本研究之建議如下：

一、衛生主管機關對補助款之對象的選擇，除以防疫動員徵用為主要考量外，建議有較高使用率之單位為優先補助，以免資源閒置。並主動提供最新之設計指引及執行成效卓著醫院的感染控制作為給院所參考；且應定期督導考核，以確保各項設備與建築單元，仍有原規劃之功能。

二、對醫院管理者而言，應對護理人員的工作環境的需求再做探討，以符合實際需求，提高其環境滿意度與工作績效。並對作業流程予標準化、定期辦理教育訓練及演練、維護監控系統之準確性，並以測量設備及發煙管實際測量。平時亦應確實遵守感染控制作業流程。

三、對後續研究者而言，該領域實證研究文獻極少，後續研究者可針對此議題進一步探討。

英文摘要

The major purposes of this study were to performe post-occupancy evaluations and cost-benefit analysis of negative-pressure isolation rooms in Taiwanese hospitals. The researchers held 4 focus group discussions, performed 9 field observations, and questionnaire surveys. A total of 286 questionnaires for the post-occupancy evaluations were collected, yielding a response rate of 71.5%. A total of 31 hospital questionnaires for the cost-benefit analysis were collected, yielding a response rate of 31.31%. In addition, the guidelines for designing negative-pressure isolation rooms of Canada, United Kingdom, United States of America and Taiwan were also compared for further suggestions.

Post-occupancy evaluations were carried out from 4 different perspectives, economic, functional, technical, and behavioral. The major findings were listed below:

1. From the economic perspective, the staffs in non-government hospitals tend to have a better understanding of the performance of negative-pressure isolation rooms.
2. From the functional perspective, staffs who had more experience in using the negative- pressure isolation rooms were able to evaluate the function of the negative-pressure isolation rooms.
3. From the technical perspective, staffs from hospitals, which are belong to the Infectious Disease Control Network, and non-government hospitals tend to have more knowledge on the technical performance of the negative-pressure isolation rooms.
4. From the behavioral perspective, age and educational levels of staff were associated with staff's satisfaction in working environment of negative-pressure isolation rooms.
5. Results of the cost-benefit analysis showed that there was no significant difference in the cost-benefit ratio in terms of hospital accreditation levels, hospital locations and membership of the Infectious Disease Control Network.
6. The Taiwanese government set up the design guideline of negative-pressure isolation rooms just after the SARS epidemic of 2003. Therefore, compare to other countries, Taiwanese guideline has the highest standard in many aspects.. In order to abide by the guideline, hospitals will need to spend more operational expenses. Therefore, the current guidline should be reviewed to construct negative-pressure isolation rooms in the most cost-effective way.

Based on these findings, the suggestions were listed as follows:

1. The Taiwan CDC should subsidize those hospitals which are more cost-effective in operating negative-pressure isolation rooms.
2. Hospital administrators should further understand the needs of the staff and improve the working environment of negative-pressure isolation rooms.
3. Future researchers may test actual pressure differentials to examine the function of the negative-pressure isolation rooms.