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#### 【摘要】

醫療院所之正壓隔離病房因收容具有免疫力較差之病患，因此在隔離病房空調設計上均有特殊之規範，例如室內溫濕度規定不盡相同，常會造成空調系統設計上之爭議；因此本研究以數值模擬之方式，作為設計上之輔助工具。本研究及舒適度之分佈情形，模擬對象為國內某醫院之實際設計案例；模擬中分為有病床與無病床，模擬案例分為兩種病室顯示正壓隔離病室內之流場主要受到循環風車運轉速度的影響，高風速之過濾效果較佳但舒適度較差；而在所比較之網出風面略有出風不均之問題(末端面板風速較高)，可考慮調整內部配置以達出風均勻之目的。在正壓隔離病室中末端角落、病床末端。

#### 【英文摘要】

Pressurized isolation rooms are designed for patients, who are vulnerable to infection, such as bone marrow transplant patients. The change rate of isolation rooms have been defined differently in different countries. For the purpose of preventing infection in the pressurized isolation room, the present study developed a numerical model to simulate the air flow in the pressurized isolation room. The code, AIRPAK, has been used to compute the air flow distribution and comfort level of isolation rooms. In the present study, two cases are simulated. Their sizes are based on actual isolation rooms for bone-marrow transplant patients in a hospital. Simulation is performed for each room with or without bed. The results show that the flow rate, controlled by fan speed, is the major factor affecting the air flow in the isolation room. A higher air flow rate results in a greater air filtration efficiency but lower comfort level. The results of the present work. The re-circulations may occur in the corner of the room without a bed. The four corners of the room are the most uncomfortable in the isolation room.

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