Staff experiences of working on a new Critical Care Unit during the COVID 19 pandemic.

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Introduction

Intensive Care Unit (ICU) design impacts staff well-being[(1)] with relocation to a different ICU layout causing staff stress[(2,3)]. During the COVID 19 pandemic our new critical care centre was opened expediently allowing increased patient capacity and providing a purpose-built environment for ICU patients.

The new single-bed room layout differed to other open plan multi-bed ICUs in the hospital. New design features included large floor-to-ceiling windows with park views, modernised equipment such as computer screens on movable pendants and noise reduction features.

The pandemic accelerated the opening of the new unit and practice was adapted to address surge conditions (e.g., there were two patients in each 'single' room, and PPE could only be worn in specific areas of the unit, restricting movement).

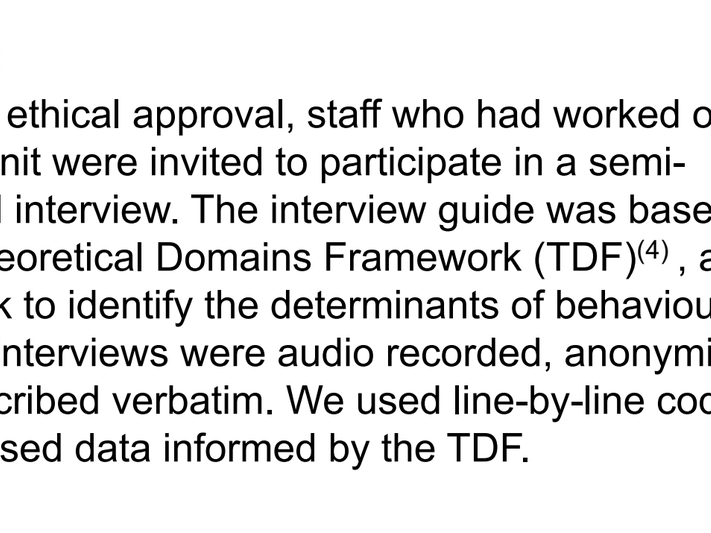
Objective and Methods

Objective:

We sought to understand the impact of the ICU design on staff experiences during pandemic conditions.

Methods:

Following ethical approval, staff who had worked on the new unit were invited to participate in a semi-structured interview. The interview guide was based on the Theoretical Domains Framework (TDF)[(4)] , a framework to identify the determinants of behaviour change. Interviews were audio recorded, anonymised and transcribed verbatim. We used line-by-line coding and analysed data informed by the TDF.



Results

Twenty-one participants captured experiences of a wide range of multi-disciplinary staff members. The most common domain identified within the data was 'Environmental context and resources', including data pertaining to barriers and facilitators of the new unit to effective working:

"Having large bed spaces is perfect for getting people out [of bed]. They are soundproofed as well, so patients were sleeping really well at night."

Also, the TDF domains 'social/professional role and identity' (including group identity, leadership), 'skills' (including competence, skills development), and 'beliefs about consequences' (perception of the effects of the new units) were frequently identified in positive and negative ways:

"….because of where it [the patient's room] is located you do not get to see people often. I got forgotten for rolls…..It was a constant struggle"

Medical staff and allied health professionals described advantages over the old unit design including improved team-working, oversight of patients, and mood from the design features. Participants perceived patient benefits from improved lighting and views and stimulation due to access to social media.

Conversely, nurse participants perceived less support, less team-working and increased levels of anxiety due to the single rooms. Nurse experiences improved as patient numbers reduced. However, changes in how nurse teams worked was an ongoing challenge:

"…staffing breaks and things is quite tricky. You need a permanent floater that is never allocated to patients, to try and help people, because they cannot leave their bays."

Discussion

Our findings support previous research[(2)] demonstrating increased nursing stress when transitioning to a single-bed room ICU layout.

Providing systems to alleviate nurse isolation, promote team-working and reduce stress in future relocations may significantly improve staff well-being (e.g., video-calling and messaging between patient rooms). A multi-disciplinary awareness of the impact on nurses is vital to support strategies to ameliorate the impact of changes during relocation.

Research grant awarded From King's College Hospital Charity

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