

CUMMING SCHOOL OF MEDICINE / Community Health Sciences

Barriers and Facilitators to the Use of Personal Protective Equipment in Long-Term Care

Executive Summary

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Background

In long-term care (LTC) facilities, residents are highly susceptible to infectious diseases due to factors such as age-related changes, functional and cognitive impairments, and the nature of congregate living. The importance of stringent infection prevention and control (IPC) measures, including the use of personal protective equipment (PPE), is amplified in these settings. Previous research has indicated a gap in knowledge and adherence regarding IPC practices among LTC healthcare workers (HCWs), which can contribute to infection transmission.

Objectives

This study investigated the barriers and facilitators influencing the effective use of PPE among HCWs in LTC facilities in Calgary, Alberta, to inform targeted strategies for improving IPC measures in the future.

Methods

A qualitative research design was used with semi-structured interviews to explore the perceptions and experiences of LTC HCWs regarding their use of PPE. The study recruited LTC HCWs from April to October 2022 using posters, presentations by the research team at staff meetings, and visits to interested facilities, followed by snowball sampling to identify further potential participants. Data were analyzed using the Theoretical Domains Framework (TDF) to categorize barriers and facilitators into relevant behavioural domains.

Findings

Seven interviews were conducted. The study identified key barriers and facilitators to PPE use across 13 of 14 behavioral domains within the TDF, with no new themes emerging after five interviews.

The study identified several key facilitators that enable PPE usage:

- **Training and Knowledge:** Effective training programs that are regularly updated to reflect the latest guidelines helped HCWs understand the importance of PPE and how to use it properly. Participants who received comprehensive training felt more confident and competent in their PPE usage.
- **Quality and Accessibility of PPE:** Facilities that maintained a consistent supply of high-quality PPE saw better adherence to IPC protocols. Participants noted that when PPE fits well and is comfortable, they are more likely to use it correctly and consistently.
- **Supportive Management and Policies:** Supportive leadership and clear, consistent IPC policies were critical in fostering a culture of safety. Facilities that implemented regular updates and clear communication regarding PPE guidelines helped ensure that HCWs felt informed and supported.
- **Peer Influence:** Positive peer influence played a significant role in promoting proper PPE use. HCWs who observed diligent PPE usage by their colleagues, especially those regarded as knowledgeable or experienced, were more likely to adopt similar practices.

- *Recognition and Incentives*: Some facilities had introduced recognition programs or incentives for diligent PPE use, which participants found motivating. These programs helped reinforce the importance of IPC measures and encouraged adherence among HCWs.
- *Feedback and Coaching*: Constructive feedback and coaching from supervisors or designated PPE champions helped correct improper PPE usage and reinforced good practices. Participants valued this immediate feedback as it helped them adjust their behaviors in real-time.

Key barriers to effective PPE use identified through the interviews include:

- *Availability and Quality of PPE*: Frequent shortages and poor quality of available PPE significantly hindered consistent and correct use. Participants reported issues such as the breaking of gloves or the poor fit of masks and gowns, which discouraged proper usage.
- *Inadequate Training*: Several HCWs reported insufficient or irregular training on the correct use of PPE. This lack of training led to uncertainties about when and how to use PPE correctly, contributing to improper practices.
- *Complex and Changing Guidelines*: The frequent updates to PPE guidelines and their complexity often confused HCWs. Participants expressed frustration with keeping up-to-date with changing protocols, which affected their ability to comply consistently.
- *Physical Discomfort*: The discomfort associated with wearing PPE for extended periods, such as heat discomfort from gowns or breathing difficulties with masks, particularly N95 respirators, was cited as a major deterrent to its use.
- *Time Constraints and Workflow Disruptions*: The time required to properly don and doff PPE was seen as a barrier, particularly in high-pressure situations where time is critical. HCWs noted that changing PPE between patient interactions was particularly disruptive and time-consuming.
- *Psychosocial Factors*: Fear of causing anxiety or distress to residents, especially those with cognitive impairments, sometimes led HCWs to modify or forego the use of PPE. Additionally, the stigmatization associated with wearing PPE, such as being viewed as carrying an infection, also discouraged its use.

Conclusion

The study highlights the complex interplay of individual, social, and organizational factors that influence PPE use in LTC settings. Addressing these factors through targeted interventions could significantly improve PPE adherence, enhancing infection prevention efforts. Future research should focus on developing and testing interventions tailored to the identified barriers and facilitators, with potential broader applications across similar healthcare settings.

Limitations

The findings are based on a small, homogeneous sample and may not fully represent the diversity of experiences among all HCWs in LTC facilities. The deductive approach of using the TDF may also limit the discovery of unanticipated themes not covered by the framework. However, the insights gained are valuable for informing targeted interventions and understanding the dynamics of PPE usage in LTC settings.