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Infection Prevention and Control in Long-Term Care Facilities: Applying the Core Components

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ABSTRACT

Residents of long-term care facilities are particularly vulnerable to infections because of advanced age, chronic illness, functional dependence and communal living. At the same time, these facilities often have fewer specialist resources than hospitals. This review explains how the World Health Organization's core components of infection prevention and control (IPC) programmes, developed primarily for national programmes and acute care, can be adapted to long-term care. It discusses programme organisation, guidelines, education, surveillance, multimodal improvement strategies, monitoring and feedback, staffing and the built environment, and examines key practices including hand hygiene, standard and transmission-based precautions, outbreak preparedness and antimicrobial stewardship. The article concludes that effective IPC in long-term care depends on a designated responsible person, simple and consistent routines embedded in daily care, regular training of all staff, and a balance between infection control and residents' quality of life.

Keywords: infection prevention and control; long-term care; nursing homes; hand hygiene; standard precautions; WHO core components

1. Introduction

Long-term care facilities — nursing homes, residential care homes and similar settings — provide accommodation and care for people who can no longer live independently. Their residents are often older, live with several chronic conditions, and need help with daily activities. Close contact during personal care, shared spaces and frequent transfers to and from hospitals create conditions in which infections can spread.

Infection prevention and control (IPC) is therefore a central part of safe care in these settings. However, IPC guidance has traditionally been developed for hospitals, which typically have specialist infection-control teams and laboratory support. This review examines how established core components can be applied in long-term care.

2. The WHO core components

In 2016 the World Health Organization published guidelines on the core components of IPC programmes at national and acute health-care facility level, and in 2019 it described minimum requirements for implementing them. The core components are:

1. IPC programmes
2. Evidence-based guidelines

3. Education and training
4. Surveillance of health care-associated infections
5. Multimodal strategies for improvement
6. Monitoring, audit and feedback
7. Workload, staffing and bed occupancy
8. Built environment, materials and equipment

Although written primarily for acute care, these components offer a coherent structure for long-term care when adapted to its scale and resources.

3. Adapting the components to long-term care

3.1 Programme and responsibility

Every facility should have a designated person responsible for IPC, with protected time and access to external advice, for example from public health authorities or a partner hospital. Without clear responsibility, IPC tends to become everyone's concern and no one's task.

3.2 Guidelines

Facilities need short, practical procedures covering hand hygiene, standard precautions, cleaning and disinfection, laundry, waste, management of residents with specific infections, and outbreak response. Procedures should be written for the staff who will use them, many of whom are care assistants rather than nurses.

3.3 Education and training

All staff — including care, cleaning, kitchen and maintenance staff — should receive training at induction and regularly thereafter. Practical demonstrations, for example of hand hygiene and the correct use of gloves and aprons, are more effective than written material alone.

3.4 Surveillance

Simple surveillance — recording infections such as respiratory, urinary and skin infections and diarrhoeal illness among residents and staff — allows early recognition of clusters and outbreaks.

3.5 Multimodal strategies

Improvement is most likely when several elements are combined: system change (for example alcohol-based hand rub at the point of care), training, monitoring and feedback, reminders in the workplace, and a supportive safety culture.

3.6 Monitoring, audit and feedback

Regular audits of hand hygiene, environmental cleaning and use of protective equipment, with results discussed with staff, sustain good practice.

3.7 Staffing and workload

Understaffing and high staff turnover increase the risk of lapses. Staff who work across several facilities can also carry infections between them. Workforce planning is therefore part of IPC.

3.8 Environment and equipment

Adequate hand-washing facilities, accessible hand rub, appropriate storage, cleanable surfaces and equipment, and the ability to provide single rooms for residents who require isolation all

support IPC.

4. Key practices

4.1 Hand hygiene

Hand hygiene remains the most important single measure. The WHO guidelines on hand hygiene in health care (2009) describe the "five moments": before touching a patient, before clean or aseptic procedures, after body-fluid exposure risk, after touching a patient, and after touching patient surroundings. In long-term care these moments occur continually during personal care.

4.2 Standard and transmission-based precautions

Standard precautions — hand hygiene, use of protective equipment according to anticipated exposure, respiratory hygiene, safe handling of sharps, and cleaning of equipment and the environment — apply to the care of all residents. Transmission-based precautions (contact, droplet and airborne) are added for residents with specific infections (Siegel et al., 2007).

4.3 Outbreak preparedness

Facilities should know how to recognise a possible outbreak, whom to notify, how to cohort residents and staff, and how to communicate with families. Plans should be prepared and practised before an outbreak occurs.

4.4 Antimicrobial stewardship

Antibiotics are frequently prescribed in long-term care, sometimes for symptoms that do not indicate bacterial infection. Stewardship — appropriate diagnosis, prescribing and review — helps limit antimicrobial resistance and side effects.

5. Balancing IPC and quality of life

Long-term care facilities are residents' homes. Measures such as isolation and visiting restrictions can cause loneliness, distress and functional decline. IPC decisions should therefore be proportionate, time-limited and regularly reviewed, and residents and families should be involved in decisions where possible.

6. Conclusion

The WHO core components provide a sound structure for IPC in long-term care when adapted to the realities of these settings. A designated responsible person, simple routines embedded in daily care, regular training for all staff, attention to staffing and environment, and a balanced approach that protects both health and quality of life are the foundations of effective practice.

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