PE2071/I: Take action to protect people from airborne infections in health and social care settings

Royal College of Nursing Scotland submission, 28 June 2024

Respiratory infections that spread and infect healthcare workers, patients and visitors in health and care settings result in staff becoming unwell and absent from work, outbreaks of infection, patient infection and deterioration in their conditions and delays to discharge. The Royal College of Nursing considers the prevention of infection a core element of patient safety that requires strong prevention and management actions.

The COVID-19 pandemic has shone a light on the risks faced by health professionals in all care settings and the need for rigorous and detailed health and safety procedures.

It is now widely accepted that both infectious droplets and smaller aerosols can be produced by people with a respiratory infection as part of activities of daily living (talking, breathing, coughing) in addition to care procedures described as aerosol generating procedures. This has resulted in a renewed focus on the role of air and 'airborne transmission' and its impact on the prevention of infection. The risk of airborne transmission is therefore a key aspect of health and safety risk assessment for health and care worker protection.

Statutory requirements

There is specific health and safety legislation and guidance, underpinning the issues raised in the petition, which the RCN expects employers to comply with at all times. This is detailed below with reference to approved codes of practice and guidance.

The first and absolute requirement to protect people from airborne infections in health and social care settings comes from the Health and Safety At Work Act etc 1974 which requires employers to protect employees and others from harm and to provide a safe working environment without risk, so far as is reasonably practicable. The specific sections which are relevant include:

- Section 2(1) It shall be the duty of every employer to ensure, so far as is reasonably practicable, the health, safety and welfare at work of all his employees.
- Section 2(2e) the provision and maintenance of a working environment for his employees that is, so far as is reasonably practicable, safe, without risks to health, and adequate as regards facilities and arrangements for their welfare at work.
- Section 3(1) It shall be the duty of every employer to conduct his undertaking in such a way as to ensure, so far as is reasonably practicable, that persons not in his employment who may be affected thereby are not thereby exposed to risks to their health or safety.

The Management of Health and Safety at Work Regulations 1999 place a duty on employers to assess the risks to workers and any others who may be affected by their work or business.

They must identify what can cause injury or illness at work (hazards), consider how likely it is that someone could be harmed and how seriously (risk) and take action to eliminate the hazard, or if this isn't possible, take action to control/ mitigate the risk. There is a requirement to identify groups of workers who might be particularly at risk, such as young or inexperienced workers, new and expectant mothers, night workers, homeworkers, those who work alone and disabled staff.

The regulations state:

Risk assessment:

3. (1) Every employer shall make a suitable and sufficient assessment of:

a) the risks to the health and safety of his employees to which they are exposed whilst they are at work; and
b) the risks to the health and safety of persons not in his employment arising out of or in connection with the conduct by him of his undertaking,

for the purpose of identifying the measures he needs to take to comply with the requirements and prohibitions imposed upon him by or under the relevant statutory provisions.

Exposure to biological agents (which would include airborne infections) is specifically considered under the Control of Substances Hazardous to Health Regulations (COSHH) 2002 which state:

'Every employer shall ensure that the exposure of his employees to substances hazardous to health is either prevented or, where this is not reasonably practicable, adequately controlled.'

Biological agents include bacteria, viruses, fungi, cell cultures, parasites. The Approved List of Biological Agents (see below) provides more information on the classification of biological agents for risk assessment purposes.

If it is not possible to prevent exposure, the hazardous substance should be controlled by applying the principles of good practice. The principles consider the use of effective control options and specifically relate to the issues highlighted in the petitioner's calls. The control options focus on:

- eliminating hazardous substances from the workplace e.g. requiring staff to test and stay at home if unwell,
- engineering controls i.e. local exhaust ventilation to remove contaminants from the air/ provide a higher number of air changes per minute,
- the use of PPE e.g. respiratory protection such as FFP3 masks,
- the provision of information e.g. updating staff manuals and public health information.

Control is adequate when the risk of harm is, 'as low as is reasonably practicable'.

The Approved List of biological agents provides the classification of biological agents as referred to in the Control of Substances Hazardous to Health Regulations 2002 (COSHH). It is approved by the Advisory Committee on Dangerous Pathogens (ACDP) and is relevant to risk assessment for work with biological agents and the application of appropriate control measures. The classification which ranges from hazard group 1 to hazard group 4 specifically relates to the level of risk of infection to humans. Hazard group 1 agents are not considered to pose a risk to human health whereas hazard group 4 agents present the greatest risk. For example, SARS-CoV-2 is classified as hazard group 3, and Mycobacterium tuberculosis is also hazard group 3.

As a basic requirement for all workplaces, suitable and adequate ventilation of the workplace is considered in the Workplace (Health, Safety and Welfare) Regulations 1992. In a health and social care setting it should be considered alongside the requirements of COSHH specifically in relation to respiratory illness (virus/ bacteria etc). The regulations state:

Regulation 6 Ventilation

(1) Effective and suitable provision shall be made to ensure that every enclosed workplace is ventilated by a sufficient quantity of fresh or purified air.

The Approved Code of Practice (ACOP) – L24 - Workplace health, safety and welfare outlines the following requirements:

47 Enclosed workplaces should be sufficiently well ventilated so that stale air, and air which is hot or humid because of the processes or equipment in the workplace, is replaced at a reasonable rate.

48 The air which is introduced should, as far as possible, be free of any impurity which is likely to be offensive or cause ill health. Air which is taken from the outside can normally be considered to be 'fresh'. However, air inlets for ventilation systems should not be sited where they may draw in contaminated air (for example close to a flue, an exhaust ventilation system outlet, or an area in which vehicles manoeuvre). Where necessary, the inlet air should be filtered to remove particulates.

49 In many cases, windows or other openings will provide sufficient ventilation in some or all parts of the workplace. Where necessary, mechanical ventilation systems should be provided for parts or all of the workplace.

51 In the case of mechanical ventilation systems which recirculate air, including air-conditioning systems, recirculated air should be adequately filtered to remove impurities. To avoid air becoming unhealthy, purified air should have some fresh air added to it before being recirculated. Systems should therefore be designed with fresh-air inlets, which should be kept open.

Additionally in Scotland there are Scottish Health Technical Memorandums on the Ventilation for Healthcare Premises (SHTM 03-01) which cover ventilation design, validation, operational management and performance verification. Part A makes

specific reference to airborne risks to staff ‘who routinely work in areas where they may come into close contact with patients who have respiratory symptoms will be at risk of exposure to the microorganisms causing the symptoms’. They also highlight the importance of the maintenance of air handling units to reduce the risk of exposure to other microorganisms including legionella.

The maintenance and testing of any form of local exhaust ventilation system used to control contaminants is a requirement of COSHH and further detail is provided in the guidance document Controlling airborne contaminants at work: A guide to local exhaust ventilation (LEV) - HSG258 (hse.gov.uk). There is a statutory requirement for thorough examination and testing by a competent person with a maximum time between tests of 14 months.

The RCN recognises that much of the NHS Scotland estate, and many buildings used in independent health and social care, need investment, including to improve ventilation. We believe that cutting the capital budget is a shortsighted response to the current financial challenges. Many of our members are working in outdated, and at time unsafe, facilities which are putting them and their patients at risk.

The RCN respiratory risk assessment toolkit

The RCN respiratory risk assessment toolkit supports members and employers on how to undertake a risk assessment to comply with health and safety legislation when a risk is present.

Designed to complement national and local guidance, this toolkit supports healthcare professionals manage infection risks associated with the transmission of common respiratory infections including COVID-19, Influenza, influenza like illness (ILI) and Respiratory syncytial virus (RSV). The toolkit also aids local decision making on the level of personal protective equipment (PPE) required to protect staff whilst at work.

As highlighted above, employers have legal duties and responsibilities to ensure they provide a safe and healthy workplace as far as reasonably practicable. The toolkit highlights both the duties of health professionals (health care workers, employers, health care leaders, and health and safety representatives) to support the identification and management of risks wherever health professionals' work.

The risk assessment process identified within the Risk Assessment Tool section is designed as a guide to help identify potential risks for the transmission of infection where staff work. Also within this section is a guide to identifying potential control measures including the correct level of respiratory protection that may be required. Another potential control measure which should be considered is whether engineering controls could be applied to reduce or remove the risk such as mechanical ventilation. It notes that ventilation is unlikely to be effective in removing the risk of COVID-19 transmission where care is provided when in close contact (within 2m) of a patient. The use of carbon dioxide monitors should be considered as an aid to the assessment of quality of ventilation in closed environments in addition to the use of air filtering/cleaning devices

If adequate control of exposure cannot be achieved by other means, suitable and sufficient Respiratory Protective Equipment (RPE), in addition to the other identified

control measures should be provided (note a fluid repellent surgical mask (FRSM) would not be considered suitable in this instance).

As part of the risk assessment process, employers should provide suitable and sufficient information, instruction and training to employees/persons who may be exposed.

Supporting staff to stay home when unwell

It is important to note that individual staff who work whilst symptomatic with an acute respiratory infection are at risk of transmitting this to others in the workplace wherever that is. National guidance outlines actions for health and care staff to take, including when to stay at home, if not well enough to work and local policies should support this.

Managers should support staff to stay at home if they are unwell and staff should not feel pressured to work until well enough to do so. However, data shows that nurses often feel impelled to work while sick to help plug gaps in rotas and ensure patients receive the best possible care. A recent RCN member survey found that almost two thirds (64.4%) of respondents in Scotland reported that they had gone to work at least twice in the previous 12 months, despite feeling too ill to do so.