



Guidance on COVID-19

Guidance on Managing Infection Related Risks in Dental Services

V1.1 15.05.2020

Key Changes:

1. The introductory material has been updated in view of learning since the last version and has been reorganised to improve sequencing and to clarify a number of points
2. Information on pre-symptomatic and asymptomatic transmission
3. Reference to risk of infection associated with working with dental prostheses
4. Clearer definition of Standard and Transmission Based Precautions
5. Reference to new guidance on use of surgical masks in healthcare settings from the National Public Health Emergency Team
6. Recommendation that staff are asked to confirm absence of fever and respiratory symptoms on arrival at work
7. Recommendation to consider temperature monitoring for patients at reception
8. Removal of a recommendation to minimise AGPs
9. Removal of examples of AGPs
10. Recommendation to use respirator mask and eye protection when performing AGPs
11. Recommendation against use of pre-treatment mouth rinse
12. Brief recommendation on cleaning and PPE required for cleaning
13. Recommendation that room clearance time after AGP is not required unless a patient has known or suspected COVID-19
14. Recommendation on use of Perspex screen at reception
15. Recommendation against use of head covering and overshoes
16. Recommendation on duration of period of infectivity for COVID-19 patients
17. Recommendation on multi-chair dental surgeries
18. Recommendation to identify a lead person for infection prevention and control where possible
19. Recommendation that a process for recording and evaluating any incidents of COVID-19 infection that may occur associated with delivery of dental is developed

Guidance on Managing Infection Related Risks in Dental Services in the Context of the COVID-19 Emergency

Introduction & Scope

These guidelines are intended to support dentists and others working in dental services to manage risk of healthcare associated infection in the context of the current COVID-19 emergency. This document replaces a previous version issued on 03 April 2020. The situation continues to change rapidly both with respect to the scientific knowledge about the virus and virus transmission and the epidemiological situation therefore regular review of this Guidance Document will be required.

General Background on COVID-19

COVID-19 is a novel disease in humans. The virus associated with the disease is SARS-CoV-2. The virus is in many respects similar to other Coronaviruses in particular in relation to its structure and mode of transmission but there is still a great deal of uncertainty in a rapidly changing situation.

It is not possible to differentiate between COVID-19 and other common respiratory infections based on symptoms alone. At the present time COVID-19 should be considered as possible in anyone with new onset of fever, new onset of symptoms of respiratory tract infection or acute deterioration of existing respiratory disease.

The laboratory diagnosis of COVID-19 is based mainly on detection of virus RNA in a nasopharyngeal swab but testing of lower respiratory samples is important in certain settings. A positive test for SARS-CoV-2 on a nasopharyngeal sample is accepted as establishing the diagnosis. There is growing evidence to demonstrate that viral RNA may be detected in some people for long periods (weeks in some cases) after viable virus is no longer detected. Therefore detection of virus RNA does not indicate that a person remains infectious. It is important to note that failure to detect the virus on sample makes the diagnosis of COVID-19 infection less likely but does not exclude infection.

Incubation Period

People with COVID-19 generally develop signs and symptoms, on an average of 5-6 days after infection (mean incubation period 5-6 days, range 1-14 days).

Key Signs and symptoms of COVID-19

COVID-19 is a contagious viral infection that generally causes respiratory illness in humans.

The most common signs and symptoms include:

- Fever
- Cough
- Shortness of breath
- Other respiratory symptoms

It is increasingly accepted that some people with infection may not have either fever or respiratory symptoms. Some patients may have other symptoms (muscle aches) or may have infection that is minimally symptomatic or asymptomatic. Experience indicates that older people in poor general health are more likely than others to have atypical illness. In some cases the earliest signs of infection in frail older people are a very non-specific decline in their baseline ability to function. This pattern has been very striking in residential care settings.

As the understanding of different clinical features of infection has increased, laboratory testing for COVID-19 is now performed more often in people who have neither fever nor respiratory tract symptoms.

Clinical Course

Most people with COVID-19 will have mild disease and will recover. A minority will develop more serious illness. Based on current evidence it appears that children and younger people are less likely to develop serious illness.

One area of particular concern is high-risk patients. These include older patients and with those with pre-existing disease. High risk in this context means that those patients are at higher risk of developing severe disease if they develop infection.

People at higher risk of developing more serious illness include:

- Older people – the risk goes up progressively in people above the age of 60 and is particularly higher in the 70s and 80s.
- Those who are immunocompromised.
- Those with underlying medical conditions.

Sources of Infection with COVID-19

COVID-19 infection is acquired as a result of exposure to a person shedding viable virus. It is generally accepted that the highest risk of transmission occurs at about the time an infected person develops symptoms. Spread from symptomatic people is generally considered to be the primary driver of the pandemic. It is increasingly accepted also that infection can be transmitted from people with minimal symptoms, from people before they develop symptoms (pre-symptomatic transmission) and from people who never develop symptoms (asymptomatic transmission). There are differences of opinion regarding the frequency with which pre-symptomatic and asymptomatic transmission occur. HIQA have provided a useful summary of the evidence at <https://www.hiqa.ie/sites/default/files/2020-04/Evidence-summary-for-asymptomatic-transmission-of-COVID-19.pdf>.

Routes of Transmission

Contact Transmission

COVID-19 is transmitted through transfer of virus to the mouth, nose or eyes on hands following contact with surfaces contaminated with droplets, oral secretions or nasals secretions (Contact Transmission).

Droplet Transmission

COVID-19 is transmitted when larger respiratory droplets that do not remain suspended in the air for long periods impact on the mouth, nose or eyes of a person in close proximity to a person who is shedding the virus.

Airborne Transmission

Airborne Transmission refers to transmission as a result of exposure to very small water particles (aerosols) that remain suspended in the air for relatively long periods

of time and disperse throughout the room on air currents. COVID-19 is not considered to spread effectively by the airborne route in most settings however airborne spread of COVID-19 is a concern in the context of certain aerosol-generating procedures (AGPs) performed on people during the period when they are infectious.

In addition to exposure related to working directly on the oral cavity dental healthcare workers may be exposed to infection risk when working on dental prostheses that have been exposed to oral fluids. This work involves both contact with potentially contaminated materials and AGPs.

Managing the Risk of Transmission of COVID-19 in Dental Services

Standard Precautions

The foundation of managing the risk of infection of patients and healthcare workers in every situation is the application of Standard Precautions to all patients in all settings at all times. Standard Precautions are a series of measures that are intended to manage the risk associated with the possibility that any healthcare worker and any patient may have an unrecognised transmissible infectious disease. Key elements of Standard Precautions include hand hygiene, respiratory hygiene and cough etiquette. Personal protective equipment is not required as a routine component of Standard Precautions. For example is it not necessary to cover a uniform with an apron as a routine. However, use of personal protective equipment (for example gloves or apron) may be required as part of Standard Precautions, based on a risk assessment, for specific tasks for example when in contact with blood or body fluids.

On April 21st the National Public Health Emergency Team (NPHE) recommended that all healthcare workers should wear a surgical mask for all healthcare delivery therefore this is now also an element of routine practice for all patient care activities in Ireland at this time. Use of a surgical mask has in any case been routine for delivery or many dental treatments for years. In addition NPHE has recommended use of surgical masks by all healthcare workers in the healthcare setting when in contact with other healthcare workers for a period of more than 15 minutes and a distance of 2m cannot be maintained.

In the context of the COVID-19 pandemic additional precautions are also required to support hand hygiene and social distancing for all people attending any healthcare setting.

Transmission Based Precautions

Transmission Based Precautions are measures taken in addition to Standard Precautions to manage risk of transmission of infection when caring for people with known or suspected infectious disease for which Standard Precautions alone are not sufficient.

Transmission Based Precautions are appropriate when caring for people with known or suspected COVID-19 and for many other infectious diseases. Contact and Droplet Precautions are required for all healthcare delivery to people with COVID-19. This includes use of gloves and gown or apron and eye protection where there is a risk of splashing.

Transmission Based Precautions manage the risk associated with delivery of essential procedures and treatment to those with a known or suspected infectious disease including COVID-19. However, where it is safe to do so deferral of treatments (both AGPs and non AGPs) until the infectious period has elapsed avoids the risk and is preferred. For those who are COVID-19 Contacts operative dental treatment should be deferred when possible until the period of self-isolation has elapsed.

If it is essential to perform AGPs on patient with suspected or confirmed COVID-19 or on COVID-19 Contacts the procedure should follow HPSC guidance on PPE use for AGPs (gown, respirator mask, eye protection and gloves) and should be performed in a facility with appropriately controlled mechanical ventilation such as an operating theatre.

The requirement for protection from airborne transmission when performing AGPs on material from the mouth of people with suspected or confirmed COVID-19 in a

laboratory or equivalent setting may be managed differently. For example it may be possible to manage the risk by decontamination of the item.

Critical to the application of Transmission Based Precautions is the identification of those people with suspect or confirmed infectious disease where Transmission Based Precautions are required in addition to Standard Precautions. In the context of COVID-19 a key part of this process is active surveillance for fever or respiratory symptoms before attendance and on arrival at the healthcare setting.

Concerns regarding transmission from people with unrecognized COVID-19

There have been multiple instances of transmission of infection in residential healthcare settings (acute hospital and Residential Care Facilities) from people with COVID-19 that was not recognised at the time of transmission. In many cases this represents situations where symptoms were present but they were not noted or were not recognised as suggestive of COVID-19. In other circumstances it appears likely that infection in the healthcare setting represents spread from people who were truly pre-symptomatic or asymptomatic. Managing this risk is therefore a significant challenge in all healthcare settings including dental services. Key elements in managing the risk are active surveillance for fever or respiratory symptoms before attendance and on arrival at the healthcare setting and the application of Standard Precautions when caring for all people in all settings at all times. In effect key elements of Contact and Droplet Precautions (use of gloves and a surgical mask) are also routinely applied in practice in dental practice.

There is a specific concern in relation to dental practice related to the potential for infection as a result of Airborne Transmission from people with pre-symptomatic or asymptomatic COVID-19 given the frequency with which AGPs are performed in dental practice and the duration of AGPs. This has led some experts and professional bodies to advocate for minimisation of AGPs in dental practice and for use of Airborne Precautions for all AGPs in the context of the COVID-19 pandemic. The risk of exposure to potentially infectious aerosols from a person with unrecognised COVID-19 is dependent on the extent of community transmission of COVID-19. When the previous version of this guidance was issued there was concern that community transmission was more widespread than was recognised and that it was increasing. This situation has changed in that there is now good

evidence that community transmission has fallen to a significantly lower level based on number of new cases detected per day through current testing pathways.

Transmission of COVID-19 from pre-symptomatic or asymptomatic patients to dental workers remains a valid hypothesis. However in the context of controlled community transmission, a lack of evidence that AGPs represents a significant risk in this setting and the importance of AGPs to delivery of dental services there is not a clear evidence base for a general restriction on use of AGPs or for requiring routine use of Airborne Precautions when AGPs are performed on people where there is no fever, no other symptoms suggestive of COVID-19 and no recent contact with a known case of COVID-19. When AGPs are performed note the Code of Practice regarding Infection Prevention and Control of the Dental Council regarding use of respirator masks. Eye protection (goggles or a visor) is also required.

Infection Prevention and Control Guidance

The following are guiding principles related to controlling the risk of transmission of COVID-19 in all healthcare settings

- i. Reduce footfall.
- ii. Minimise workplace contacts.
- iii. Maintain social distancing (for example use floor markings).
- iv. Avoid unnecessary physical contact or other exposure in the clinical environment.
- v. Follow **Standard Precautions with all patients at all times** in particular hand hygiene and appropriate use of personal protective equipment.
- vi. Note the NPHET recommendation on use of surgical masks for all patient care activities where a distance of 2m cannot be maintained and for all interaction between healthcare workers of more than 15 minutes duration where a distance of 2m cannot be maintained.

Note. Guidance on the safe use of PPE, including donning and doffing PPE including a video is available on www.hpsc.ie.

Responsibility for delivering safe and effective care

All healthcare workers in dental services must act to protect their patients, while also safeguarding their own health, and the health and wellbeing of colleagues.

All healthcare workers in dental services are advised to remain up to date on the COVID-19 public health and occupational health guidance, available from the Health Protection Surveillance Centre.

Before providing or accessing dental services

A key element in managing the risk of exposure to risk to healthcare workers and patients from an infected healthcare worker is that staff members are asked not to present for work if they have fever or symptoms of respiratory tract infection and are asked to confirm that they are free of fever and symptoms on arrival at work. Some healthcare services have found it practical and useful to monitor temperature of all healthcare workers on arrival at work and mid shift. This should be considered where practical.

Healthcare workers should be aware that they must go off duty promptly if they develop symptoms and should be asked to confirm that they remain well about mid-shift. Healthcare workers who develop fever or respiratory symptoms should seek medical advice by telephone at the earliest opportunity.

In relation to risk to patients and healthcare workers of infection from patients (for example while waiting for treatment) key elements of managing that risk are addressed as follows.

Identify all patients with new onset fever or symptoms of respiratory illness and all COVID-19 Contacts before they attend the practice (for example by telephone call or text) and defer the appointment for symptomatic patients if possible. Such patients should be directed towards appropriate medical care.

If providing dental services in a Residential Care Facility or to patients from a Residential Care Facility or similar setting establish in advance of attending if there is evidence of transmission of COVID-19 in the Residential Care Facility.

Place signage at the entrance to the practice and ensure a further verbal check for fever or symptoms of respiratory illness and COVID-19 Contact status at reception to identify symptomatic patients.

Non-contact based measurement of temperature at reception may be considered as an additional approach to identify people with unidentified COVID-19. Where temperature is measured at reception it is necessary to have a clearly criteria for interpretation and pathways for directing those identified with raised temperature.

There is no specific evidence that Perspex screens between reception staff and patients reduce transmission of infectious disease. They are not required but there is a rationale for their use to reduce exposure of reception staff and they may reassure staff.

Dental prostheses and moulds should be safely packaged and appropriately labelled for transport to laboratory with appropriate cleaning and disinfection before being sent to the laboratory and after laboratory work prior to placing in the patient's mouth.

Dentists should follow current Government decisions regarding those services that are permitted at a given time.

Environmental and administrative controls are paramount and all staff should be conscious that the role of good infection prevention and control practice including appropriate use of PPE is to mitigate risk that cannot be avoided.

Organisational Measures

Where practical identify a specific person to take a leadership role for infection prevention and control and support them with training and some protected time for this role.

Take full account of the use of the building and its environs.

Liaise with other users in the building and its environs to support social distancing.

For patients with dental symptoms, use a telephone based triage to identify patients with COVID-19 symptoms and to schedule attendance for care as appropriate.

Patients with COVID-19 are considered non-infectious 14 days after onset of illness provided they are clinically fully recovered and have had no fever for the last five days. Retesting is generally not appropriate in these circumstances however if there

is a specific concern about an patient, for example a patient with impaired immune function, it is appropriate to discuss with the patient's medical team.

Ask parents not to bring non-appointed siblings or other people to the appointment.

To limit walk in situations as much as possible, use signage and answering machine messages to ensure that all access is by scheduled appointment where possible.

Consider floor markings to demonstrate minimum requirement for social distancing

Promote hand hygiene at reception (signage, verbal reminders and provide alcohol hand rub).

Promote respiratory hygiene and cough etiquette (signage, provide tissue and bins).

Reduce use of waiting areas and arrange for patients to attend the surgery directly at the appointed time.

Promote social distancing to the greatest extent possible while waiting treatment.

Consider asking the patient to wait in their own vehicle rather than in a waiting area where appropriate.

Ask the patient to establish phone contact on arrival to help manage attendance and check in.

Ask patients and any accompanying person to perform hand hygiene with hand sanitizer on arrival. If the person is wearing gloves ask them to remove and discard the gloves before performing hand hygiene.

Ensure that scheduling of appointments is managed to reduce patient contacts and allow appropriate time for any cleaning and disinfection required before the next patient.

Minimise non-essential interaction (especially physical contact) between staff members and patients and between staff members.

Monitor supplies of materials required for good infection prevention and control practice including supplies required to support hand hygiene and supplies of PPE.

Ensure that processes for instrument cleaning and decontamination are reviewed and appropriate to manage the associated risks of infection to patients and to staff performing the cleaning and decontamination.

Consider longer opening hours, staggering rest breaks and weekend opening to support social distancing.

Surgery Preparation

Remove non-essential items from surgeries and waiting areas.

Ensure that all furniture, fittings and floor coverings in the reception and waiting area are made of materials that are easy to clean and decontaminate.

Ensure hand sanitiser is available.

Ensure that an environmental cleaning protocol is available to ensure that appropriate cleaning and disinfection.

Ensure that members of staff are clear on the distinction between routine cleaning required after all patients and any specific additional requirements after care of patients with suspected or confirmed infectious disease including COVID-19.

In the event that treatment is provided to patient with suspected infectious disease including COVID-19, standard cleaning agents used in healthcare settings are appropriate for cleaning however more extensive cleaning of surfaces is required and disinfection of surfaces is also appropriate.

If an AGP is performed on a patient with known or suspected COVID-19 in a room that is not mechanically ventilated the room should be vacated for 1 hour after completion of treatment before cleaning commences.

For cleaning the environment use of plastic apron and household gloves are generally appropriate.

All touch surfaces should be cleaned at a minimum of once per day and whenever visibly dirty.

Toilets should be cleaned at least twice per day and whenever visibly dirty.

Surfaces in the treatment room that are touched by the patient, patient's body fluids, and equipment or by dental staff should be cleaned and decontaminated between patients.

Infection Prevention and Control during Clinical Assessment and Treatment

Observe adherence to the Dental Council's Code of Practice regarding Professional Behaviour and Ethical Conduct and the Code of Practice regarding Infection Prevention and Control.

Observe strict adherence to infection prevention and control standards, including dealing with clinical waste. For information, the HSE's IPC standard operating procedures are available here:

<https://www.hse.ie/eng/about/who/healthwellbeing/our-priority-programmes/hcai/resources/dental>

Limit personnel in the treatment room to the minimum required and ensure that the door remains closed throughout.

Non-essential personnel should not enter the treatment room during the procedure to address other issues.

Single treatment room dental surgeries are preferred from first principles however, it is not clear that multiple-chair dental surgeries are associated with increased risk. There should be adequate space between chairs to ensure that there is not physical contact between either patients or staff working at different chair and staff caring for patients in separate chairs should work independently of each other.

If an AGP is being performed on a patient with known or suspected infectious disease there should only be one patient in the room.

Increased ventilation helps to disperse aerosols generated. Increased ventilation may be achieved naturally (for example opening a window where practical) or by mechanical ventilation.

Use of dental cuspidors may be minimised by use of high volume suction and disposable cups.

If dental cuspidors are used minimise physical contact between the patient and the cuspidor and ensure that they are effectively cleaned and decontaminated between patients.

PPE should be used as per Standard Precautions when performing a procedure associated with contact with body fluids (oral fluids) and risk of splashing (gloves, plastic apron, surgical mask and eye protection).

Use of head covering and overshoes is not recommended.

FFP2 masks should be used in accordance with section 2.3.1.4 of the Code of Practice related to Infection Prevention and Control of the Dental Council as updated 6th of April 2020.

The risk of aerosol exposure applies to all people in the room when an AGP is performed.

Where there is a practical and equally effective alternative to AGPs is it is appropriate to use this.

Where practical to do so aerosols should be minimised through use of suction, cotton rolls and damp gauze.

Where practical to do so use a rubber dam with high volume suction during aerosol generating procedures to reduce aerosol generation.

Where possible use absorbent materials, e.g. cotton rolls, damp gauze to minimise prolonged washing/rinsing as part of treatments.

There is no requirement to vacate a room after a AGPs is performed unless the patient is known or suspected to have a specific infectious disease such as COVID-19.

Pre-treatment mouth rinsing is not recommended. There are reports of the antiviral activity of certain compounds used (including povidone iodine and hydrogen peroxide) but no clinical evidence to indicate that they are effective in reducing transmission of infection.

Testing of patients without fever or respiratory symptoms to assess infection status in advance of essential treatment is generally not appropriate for routine dental treatment however in keeping with evolving practice in other domains of healthcare it may be appropriate in certain specific contexts for example complex or lengthy treatment in patients who may have had specific exposures.

Continuing Review

As in all healthcare delivery, there are risks of infection associated with delivery dental services in the context of the COVID-19 pandemic. Dental practices should record and evaluate any incidents of COVID-19 infection that may be associated with delivery of dental services and should inform the Department of Public Health.

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