

Standard Operating Process for
Non-COVID-19 Dental Centres Providing Aerosol Generating
Procedures in Wales

All Wales Clinical Dental Leads COVID-19 Group – Reports to CDO Welsh Government

Dr Warren Tolley	Deputy Chief Dental Officer and Dental Director Powys Teaching Health Board
Dr Ilona Johnson	Reader and Hon Consultant in Dental Public Health Cardiff University
Dr Vicki Jones	Clinical Director of Community Dental Services Consultant in Special Care Dentistry Aneurin Bevan University Health Board
Dr Mick Allen	Consultant in Special Care Dentistry Aneurin Bevan University Health Board. Clinical Director for Community Dental Services Cardiff and Vale UHB
Mr Karl Bishop	Dental Director and Consultant in Restorative Dentistry PCSDU Swansea Bay University Health Board
Professor Ivor Chestnutt	Professor and Honorary Consultant, Dental Public Health, and Joint Acting Head of School Cardiff University School of Dentistry, Clinical Director University Dental Hospital Cardiff and Vale University Health Board
Dr Catherine Nelson	Associate Medical Director for Dental Hywel Dda Health Board
Dr Robert Davies	Dental Foundation Training Program Director Health Education and Improvement Wales (HEIW) and Primary dental care COVID lead Cwm Taf Morgannwg University Local Health Board
Dr Sandra Sandham	Clinical Director for North Wales Community Dental Service and Director of Dental Public Health Betsi Cadwaladr University Health Board
Dr Nigel Monaghan	Consultant in Dental Public Health Public Health Wales and Visiting Professor in Public Health, University of South Wales

Advice to the Group is provided when required by Dr Melanie Wilson, Lead and Senior Lecturer in Oral Microbiology, Health & Safety, Cardiff University School of Dentistry.

The Group is independent of Welsh Government but provides reports and recommendations directly to the Chief Dental Officer for Wales.

Executive Summary

This guidance is applicable to Wales. It is intended for dental care settings that are providing care involving aerosol generating procedures (AGPs) for patients who are Covid-19 (C-19) negative or who are not suspected of being C-19 positive.

Separate guidance is available for primary dental care settings for patients who require non-AGP¹ care and for centres providing support for people with suspected/ confirmed C-19.

Further documents will be developed in conjunction with Welsh national groups/ Managed Clinical Networks for specific areas of service provision (e.g. paediatrics, orthodontics, special care dentistry, conscious sedation, shielding, and domiciliary care) where indicated.

Primary care providers in other UK nations should refer to guidance produced by their own administrative bodies and regulators.

Background

The onset of symptoms after exposure (incubation time) to C-19 is currently estimated at between one and fourteen days.¹ Patients may be infectious for one to two days before the onset of symptoms, they may be most infectious when they are symptomatic and it is estimated that they may be infectious for up to two weeks.

C-19 symptoms can vary in severity from no symptoms, to having fever $\geq 37.8^{\circ}\text{C}$, flu like symptoms, persistent cough (with or without sputum), anosmia (loss of the sense of smell), ageusia (the loss of the sense of taste), hoarseness, nasal discharge or congestion, shortness of breath, sore throat, wheezing, sneezing, general fatigue, muscular pain and GI symptoms. Severe cases can develop pneumonia, acute respiratory distress syndrome, sepsis and septic shock.

These cases can deteriorate rapidly, often during the second week of disease, and this may lead to death.² As this is a novel virus there is no immunity in the population and current estimates indicate that C-19 has caused infection for between 5 and 10% of the UK population with the rest remaining susceptible to infection. For most patients the symptoms are mild and many may be asymptomatic.

Recent reports indicate that C-19 transmission is primarily between people through respiratory droplets and contact routes, this includes fomites on surfaces.³ The amount of viable virus in aerosol has not yet been confirmed and the amount of virus exposure which can result in infection is also unclear at this time. At present, the World Health Organisation (WHO) recommend airborne precautions for AGPs in conjunction with undertaking risk assessments. The WHO also recommends frequent hand hygiene, respiratory etiquette, and environmental cleaning and disinfection.⁴

¹ Official communications from the Welsh Government AWDPH pages: <https://awfdcp.ac.uk/covid-19/official-comms>

² European Centre for Disease Prevention and Control: Q and A on COVID-19 <https://www.ecdc.europa.eu/en/covid-19/questions-answers>

³ Modes of transmission of virus causing COVID-19: implications for IPC precaution recommendations (29 March 2020) <https://www.who.int/news-room/commentaries/detail/modes-of-transmission-of-virus-causing-covid-19-implications-for-ipc-precaution-recommendations>

⁴ Modes of transmission of virus causing COVID-19: implications for IPC precaution recommendations: <https://www.who.int/publications-detail/modes-of-transmission-of-virus-causing-covid-19-implications-for-ipc-precaution-recommendations>

The Welsh Government strategic approach since March has been to reduce community transmission through social distancing, protecting the most vulnerable and pausing all non-essential services. This has been supported by the introduction of a [Test, Trace, Protect](#) strategy for identification, isolation and containment (in Wales) on the 1st of June 2020.⁵ Patient advice and information is provided by NHS Direct Wales (online) and NHS 111 Wales (telephone).

⁵ Test Trace Protect: Our strategy for testing the general public and tracing the spread of coronavirus in Wales. <https://gov.wales/test-trace-protect-html>

Table of Contents

Executive Summary	3
Background	3
De-escalation in Wales	7
Relevant Guidance	8
Updates and information	8
Remote assessment resources	9
Conditions which require urgent medical/dental attention to save life	9
Advice on self-care	9
Remote prescribing.....	9
Prioritising Care	10
Urgent dental conditions which need face to face assessment, diagnosis or treatment	12
Providers of care during high to low amber phase of de-escalation	12
Scheduling Appointments	13
Record keeping	13
Preparing staff.....	14
Preparing the practice environment	14
Procedure for Patients (low risk of COVID) Requiring AGP	15
Before the patient enters the building.....	15
Pre-donning instructions	15
Donning PPE	15
Patient arrival	16
In the surgery	16
Additional procedures.....	16
AGP treatment protocols	17
At the end of the appointment	18
Doffing PPE	19
Decontamination	19
Post decontamination processes	21
Actions in the event of a patient being identified with C-19 in the surgery	21
Medical emergencies	22

Appendix 1: Prescribing Remotely	23
Appendix 2: Assessment for C-19 and Medical History	24
Appendix 4: Staff risk assessment, training, wellbeing and instructions checklists.....	29
Staff illness and wellbeing checklist	30
Uniform instructions for staff	30
Appendix 5: Areas and zoning and personal protective equipment.....	31
Counterfeit PPE products and checks that PPE is fit for purpose before use	31
Appendix 6: Preparing waiting and communal areas	32
Checklist to minimise the risk of transmission.....	32
Appendix 7: Preparing surgeries	33
Appendix 8: Visit information checklist.....	34
Appendix 10: Hand Hygiene	36
Appendix 10: C-19 clinical dental risk assessment considerations	38
Risk reduction and aerosol generation in dentistry	40
Appendix 11: Medical emergency procedure for when an AGP has commenced	43
Appendix 12: Care pathways	45

De-escalation in Wales

De-escalation of the C-19 response covers the phase when community transmission is decreasing.⁶

Aim

The aim will be to implement a phased, risk-based re-establishment of dental services to meet population needs.

Objectives:

Prioritise dental care for at-risk groups and people with symptoms/ urgent routine dental problems.

Increase practice-based dental care to meet the population's oral health needs.

Maintain emergency/ urgent dental care provision (COVID and non-COVID) to meet requirements.

Re introduction of routine dental care and dental prevention activities based on risk.

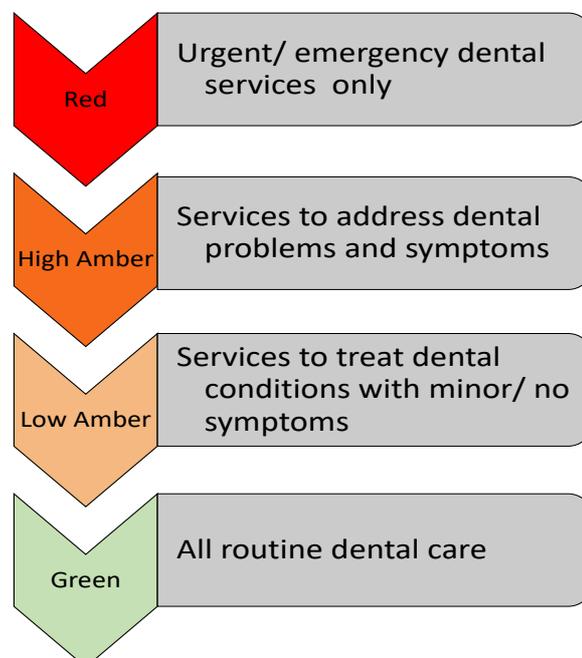
This approach will be based on risk assessment, to minimise the possibility of transmission of C-19 to patients and the dental team within the dental care setting or during dental care procedures.

De-escalation principles

Capacity for dental care may be limited by measures to reduce transmission risk particularly in the early stages of de-escalation. This approach aims to deliver dental services in a way that prioritises care for those most at risk of serious complications or significant deterioration. Services provided will increase as C-19 risk reduces. This SOP will support the delivery of AGP care and a stepwise increase in care to meet patient needs based on risk.

The Urgent/ Emergency Designated Dental Centres will continue to provide urgent and emergency dental care for patients with C-19 during the green phase of de-escalation until the point where this is no longer necessary.

De-Escalation Alert Levels and Dental Services



⁶ Official communications from the Welsh Government AWDPH pages: <https://awfdcp.ac.uk/covid-19/official-comms>

Relevant Guidance

This document should be considered alongside current advice, guidance and guidelines for dental care:

[COVID dental de-escalation plans and SOP](#)⁷

[COVID-10 infection prevention and control \(IPC\)](#)⁸

[COVID-19 personal protective equipment \(PPE\)](#)⁹

[Advice on PPE guidance implementation COVID-19: infection prevention and control \(IPC\)](#)¹⁰

Advice on [aerosol generating procedures](#)⁸ should be read alongside the [guidance for primary dental care](#)¹¹ on personal protective equipment. The situation is constantly changing and documents are being updated as new evidence becomes available. As such, it is important to continue to access information regularly, from recognised and reliable sources.

Updates and information

Dental teams are advised to keep up to date, regularly reviewing information and the latest updates:

- [Information for Health and Social Care Professionals – Wales](#) (including PPE);
- [Coronavirus \(COVID-19\): latest information and advice](#);
- [PHW COVID-19 interim guidance for primary care](#).

⁷ Official communications from the Welsh Government AWDPH pages: <https://awfdcp.ac.uk/covid-19/official-comms>

⁸ <https://www.gov.uk/government/publications/wuhan-novel-coronavirus-infection-prevention-and-control>

⁹ <https://www.gov.uk/government/publications/wuhan-novel-coronavirus-infection-prevention-and-control/covid-19-personal-protective-equipment-ppe>

¹⁰ <https://phw.nhs.wales/topics/latest-information-on-novel-coronavirus-covid-19/information-for-healthcare-workers-in-wales/advice-on-ppe-guidance-implementation/>

¹¹ Recommended PPE for primary, outpatient, community and social care by setting, NHS and independent:

sector https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/878750/T2_poster_Recommended_PPE_for_primary_outpatient_community_and_social_care_by_setting.pdf

Remote assessment resources

Patients should be assessed by a dentist by telephone or video, gathering enough information to identify whether the individual has:

- A serious condition requiring urgent medical/dental attention to save life;
- A condition which could be self-managed with appropriate advice and possible prescription;
- An urgent dental condition which needs face-to-face assessment, diagnosis or treatment.

A number of resources have been developed to support those making these clinical judgements. Video consultation information is available in the de-escalation SOP.

[Management of Acute Dental Problems During COVID-19 Pandemic](#)¹²

[Primary Care Dental Services COVID-19 Toolkit: Appendices 2 and 4](#): Appendices 1, 2 and 4¹³

[British Endodontic Society: COVID-19](#)¹⁴

[COVID19 BOS Advice](#)¹⁵

Conditions which require urgent medical/dental attention to save life

Patients with suspected life-threatening conditions should be immediately referred to the appropriate emergency medical services.

Advice on self-care

Some cases will only require advice to enable the patient to self-care.

NHS 111 Wales [Encyclopedia](#)¹⁶ has 31 pages on dental topics which have been adapted to include self-care advice for the duration of the pandemic.

Evidence-based principles of prevention should be used for all patients.¹⁷

Remote prescribing

Dentists may prescribe pain relief and/ or antimicrobials in situations where it is clinically appropriate, following a clinical assessment and consultation (including medical history and where possible virtual assessment).

In situations where cases are best managed through advice and prescribed analgesics and/ or antimicrobials it is possible to prescribe remotely. Antimicrobials should only be

¹² <http://www.sdcep.org.uk/published-guidance/acute-dental-problems-covid-19/>

¹³ <https://heiw.nhs.wales/files/covid-19-primary-care-dental-services-toolkit/>

¹⁴ <https://britishendodonticsociety.org.uk/>

¹⁵ <https://www.bos.org.uk/COVID19-BOS-Advice/COVID19-BOS-Advice>

¹⁶ <https://111.wales.nhs.uk/encyclopaedia/>

¹⁷ Delivering better oral health: an evidence-based toolkit for prevention:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/605266/Delivering_better_oral_health.pdf

prescribed for conditions where these are effective. An appropriate history should be taken and recorded in the clinical notes along with the outcome of the telephone triage including details of prescribing.

A flowchart example for prescribing remotely and other information relating to remote prescribing is available in Appendix 1.

Clinical advice in relation to remote prescribing is available at:

- [Drugs for the Management of Dental Problems During COVID-19 Pandemic](#);¹⁸
- [Primary Care Dental Services COVID-19 Toolkit: Appendices 2 and 4](#);¹⁹
- [FGDP COVID-19: latest guidance and resources for GDPs](#);²⁰
- [High level principles for good practice in remote consultations and prescribing](#).²¹

Advice must be given to the patient so that they know what to do if their condition starts to deteriorate and to call Dental Helpline, 111 or 999 should airway problems develop. They must be reminded of their need to declare their C-19 status to the ambulance service/A&E staff.

A C-19 and medical history should be taken in advance of care (Appendix 2) and this should be undertaken remotely. The option of testing for C-19 to confirm status should be considered where this is available. Patients who do not have C-19 i.e. who have confirmed antibodies or a confirmed negative test (and there is no possibility of infection at the time of treatment i.e. short time between test and treatment with no risk between) may be treated without additional airborne precautions for C-19. A face-to-face assessment may be deemed necessary in advance of providing care. Procedures for this are outlined in the de-escalation SOP.²²

Prioritising Care

Urgent/ emergency conditions should be prioritised. Care needs should also be prioritised in accordance of the stage of de-escalation to ensure that those most in need receive access promptly.

¹⁸ <https://www.sdcep.org.uk/wp-content/uploads/2020/04/SDCEP-MADP-COVID-19-drug-supplement-080420.pdf>

¹⁹ <https://heiw.nhs.wales/files/covid-19-primary-care-dental-services-toolkit/>

²⁰ <https://www.fgdp.org.uk/news/covid-19-latest-guidance-and-resources-gdps#Remote%20prescribing%20and%20advice>

²¹ <https://www.gdc-uk.org/docs/default-source/guidance-documents/high-level-principles-remote-consultations-and-prescribing.pdf>

²² Official communications from the Welsh Government AWDPH pages: <https://awfdcp.ac.uk/covid-19/official-comms>

Figure 1: Examples of severe urgent/ emergency dental conditions

Situations where leaving the dental condition without a clinical intervention may endanger the health of the patient/ would be likely to result in admission to hospital e.g.:

- Diffuse swelling / lymphadenopathy without a discharging sinus
- Suspected cancer
- Bleeding that cannot be controlled with local measures

Cases that have not responded to local management following local advice, antibiotics and appropriate analgesia e.g.:

- Severe pain that has not responded to painkillers after 48 hrs of use
- Severe pain or diffuse swelling that has not responded to antibiotics after 72 hours of use

A recent injury in a vital tooth which has resulted in pulpal involvement or trauma that has resulted in a deranged occlusion.

Practices should work to support patients with dental care problems, managing patient expectations and minimising the burden of dental problems on other health care services (e.g. working to prevent unnecessary patients attending at general medical practices, other NHS teams and helplines). Dental teams should support other services by providing dental telephone/ virtual consultations when asked, by other healthcare professionals.

Urgent dental conditions which need face to face assessment, diagnosis or treatment

Patients should be assessed for signs and symptoms of C-19 at the stage of telephone consultation using the latest criteria.²³

Cases/suspected cases would include one or more of the following in the previous 14 days:

- Confirmed C-19 (tested positive);
- Symptoms consistent with C-19 i.e. new continuous dry cough and/ or high temperature $\geq 37.8^{\circ}\text{C}$, a recent loss of smell or taste (sore throat, shortness of breath, difficulty breathing, nasal discharge and GI symptoms are also possible symptoms);
- Contact with a confirmed case (tested positive).
- Where an individual has been told to self-isolate as part of TTP.

Clinicians should also be aware of the possibility of other symptoms particularly in patients who are immunocompromised (including severe sore throat, loss of sense of taste).²⁴

Providers of care during high to low amber phase of de-escalation

Patient status	Dental condition	Dental Care Provider
Suspected or confirmed C-19 (high risk C-19)	Routine/ non-urgent	Treatment should be deferred for 14 days after symptoms have stopped/ until confirmed negative.
	Urgent/ emergency non-AGP/ AGP	U/EDDC for C-19
No history/symptoms of C-19 (low risk C-19)	Routine/ non-urgent non-AGP	Primary Care Dental Practice (Low Amber)
	Urgent/ emergency AGP	U/EDDC Non-COVID AGP centre
	Non-urgent AGP in accordance with stage of de-escalation ²⁵	Non-COVID AGP centre
Patients who are shielding ⁴ or who have a higher risk of complications from C-19 ²⁶	All care	Should be assessed for treatment and very high risk patients should be referred to a U/EDDC
Patients who require domiciliary care	All care	U/EDDC should assess for treatment in high amber. In low amber, patients identified through risk assessment as C-19 (possible/confirmed- to include circulating disease in care home or a high risk of complications from C-19) should be referred to a U/EDDC

²³ COVID-19: investigation and initial clinical management of possible cases: <https://www.gov.uk/government/publications/wuhan-novel-coronavirus-initial-investigation-of-possible-cases>

²⁴ <https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/symptoms.html>

²⁵ * This will depend on factors e.g. circulating disease, risk, capacity and PPE.

²⁶ Examples of high-risk individuals include: Older people, People who are shielding or who have health conditions which put them at risk, Pregnant women, People living in institutions e.g. residential care and prisons.

Scheduling Appointments

Appointments should be arranged in advance.

Patients must be spaced throughout the day to leave time for cleaning and to limit waiting /contact times. A recommended scheduling process is described in the table below:

Patient	Recommendations
Shielding/ in vulnerable groups	If appropriate to be seen in primary care with an appointment at the beginning of the day. Ensure social distancing and recommended decontamination processes ²⁷ before and after care to minimise risk.
AGPs	Space appointments to ensure social distancing. Book at the end of a session Schedule time for procedure <u>and</u> time for decontamination (to include air clearance in an appropriate room)
Non-AGPs	Space appointments to ensure social distancing. Schedule appointment plus decontamination to include a period to allow settle of splatter (15 -20 mins) ^{28,29}

Please note that the time for decontamination following AGPs will depend on the number of air changes in the surgery per hour (ACPH). For a more precise figure, testing is required for each surgery. Where the ACPH is not known, currently recommended times should be used (e.g. 1 hour after AGP). Windowless surgeries with no air changes should not be used. Expert infection control team advice should be sought when calculating times. If the patient has evidence of immunity (laboratory) or of being non-infected (laboratory) and there is no possibility of infection on the day of treatment, the patient may be treated with standard infection control measures with no additional settle time. Please note further advice will be provided as required as the evidence develops.

Where PPE supplies are limited, dental teams should avoid unnecessary referral or use to ensure that supplies are maintained for those who are most in need of care (for example people who have pain or infection). Criteria for AGP procedures and for acceptance for AGP care at designated sites may be modified as the risk of transmission reduces and PPE becomes more available.

Record keeping

Good record keeping is essential. Notes should be completed before and after care on a remote computer out of the surgery with door shut while aerosol is settling. Do not write notes up in the surgery as far as possible (do not take any paperwork into the surgery). All paperwork must be signed by the dentist and, where relevant, signed on the patient's

²⁷ <https://www.gov.uk/government/publications/decontamination-in-primary-care-dental-practices>

²⁸Transmission routes of respiratory viruses among humans: <https://www.sciencedirect.com/science/article/pii/S1879625717301773>

²⁹The airborne lifetime of small speech droplets and their potential importance in SARS-CoV-2 transmission: <https://www.pnas.org/content/117/22/11875>

behalf by the dentist and marked with COVID-19. Radiographs can be printed off on paper so that the computer can be removed.

Records for each patient:	When	Example data management
A triage Urgent/Emergency Checklist/ Plan (Appendix 3)	Completed by phone before entering the surgery	Disposed of in the surgery following treatment
A full, written medical history form (Appendix 2)	Completed by phone before entering the surgery	Scan/ enter to computer same day
If necessary, a radiograph request form	Before entering the surgery if indicated	Scan/ enter to computer same day
A FP17 PRWe for NHS patients	If NHS	Scan/ enter to computer same day

Preparing staff

Practice policies, staff risk assessments, training needs, wellbeing arrangements and instructions (for example laundry and uniform) should be reviewed and measures put in place as required (Appendix 4).

Preparing the practice environment

The use of facilities and zoning should be considered in terms of infection control for C-19 and in line with guidance on social distancing. Instructions for each area and PPE should be clear (Appendix 5). For example:

Location	Facility /zone
Main Entrance	Patients enter.
Reception	Contactless payments/ over the phone payments
Waiting room	Not in routine use
Surgery 1	AGP treatment room
Surgery 2	AGP treatment room
Surgery 3	Non-AGP treatment room
Surgery 4	Storage of PPE
Surgery 5	Emergency Resus Kit Direct dispensing of prescriptions
Staff Entrance	Exit
Storeroom	Emergency kit including oxygen and defib /emergency drugs

Consider the patient flow, keeping foot fall to a minimum. A map of facilities can also assist with planning for infection control and zoning.

There should be a designated entrance which will remain closed to avoid patients “dropping in”.

Communal areas (Appendix 6) and surgeries should be prepared for care (Appendix 7).

Procedure for Patients (low risk of COVID) Requiring AGP

Surgery staff:

- 1 clinician,
- 1 chairside dental nurse
- 1 “buddy” dental nurse (does not need to be FFP3/2 fit tested) to be allocated to work outside the surgery on a rotational basis.

Suitable alternatives to a dental nurse can also be considered such as another dentist or a suitably qualified and experienced member of the dental team. **The clinician and chairside nurse must follow the current guidance in respect to fit testing of the relevant mask type (FFP3/2).** Copies of fit test certificates (where issued) and records of fit tests (pass and fail) for each staff member and each mask type should be retained by the practice. It should be made clear to staff that the test is only applicable to the type of mask that has been fitted.

The patient should be provided with information in advance of the appointment and should follow a specified agreed patient journey on arrival (checklist: Appendix 8).

Before the patient enters the building

Clinician and nurse to don new PPE

Pre-donning instructions

Ensure you are hydrated (you will not be able to eat or drink whilst in the room) and you have been to the toilet

Change into scrubs or spare uniform (including trousers)

Tie hair back and loop long hair to easily be able to keep it inside a surgical hat

Remove all lanyards and jewellery – 1 wedding band is permitted but take care to dry thoroughly underneath the band after washing hands

Check PPE in correct size is available – long sleeved water resistant theatre gown, FFP3/2 respirator that you have been fitted for, long visor/face shield, gloves, elasticated theatre hat, safety glasses/spectacles as required

Enter surgery and put on foot covers or dedicated surgery footwear (Crocs, wellies, plastic shoes that can be cleaned with Actichlor).

Donning PPE

Staff must adhere to the Donning and Doffing PPE techniques for C-19 (Appendix 5)

Wash hands (Appendix 9)

It is essential to wear a fit tested mask (respirator hoods with equivalent respiratory protection can be used where these are available). Place filtering face piece respirator (FFP3 /2) over nose and mouth, secure straps and smooth down from bridge of nose to adapt to face and provide a good seal – check by blowing out of a non-valve mask, or sucking in through a valved mask. Readapt to face if leaks are detected – Do NOT use if air is felt to leak around seal. Ask your buddy to check as you put on spectacles/safety goggles/visor, theatre hat (to cover ALL hair and ears), gloves, gown and then assist with tie straps.

Patient arrival

Buddy will don fluid resistant (IIR) mask, apron, visor/goggles and gloves

Patient will be collected

Patient will be told to step out of vehicle and approach entry point where they will be collected by the buddy.

Patient will be asked to confirm their identity and will then be instructed to use alcohol hand rub, directed to wear a FRSM and shoe covers.

If a radiograph (e.g. OPT) has been requested to be taken before entering the surgery, the buddy will escort the patient directly to the radiography room where a trained operator will take the radiograph.

The buddy will remain outside the radiography room and wait for the patient.

The patient will be escorted directly to the surgery.

Radiograph/ OPT should be printed and taken into surgery for clinician.

In the surgery

Maintaining social distance where possible

Withdraw to at least 2 metre distance when able.

The dental nurse should stand 2 metres away unless needed for chair side working.

Approach the patient only as necessary for treatment.

Disposable instruments should be used whenever possible and placed directly into the surgery sharps bin after use.

Equipment and materials required should be set out in advance. Drawers should be kept shut and covered. Please note all unused instruments must be re autoclaved.

The need for additional instruments or materials should be avoided. If they are required, these can be laid out ready or the buddy should have possible kit available on a trolley outside the surgery and they can be passed into the room.

Additional procedures

Radiographs

Intra-oral radiographs can be taken in the surgery but be aware that these procedures can cause coughing which may generate aerosolised saliva/ droplets.

The computer and digital reader should be set ready to process prior to the patient entering the room before the radiograph is exposed.

If scanner is outside of the surgery then a print off of the radiograph should be made available to the clinician.

The contaminated package should be opened by the gloved dentist and the film removed by a nurse with clean gloves on and placed IMMEDIATELY into the digital reader for processing so that only minimal light damage occurs. If scanner is not in the surgery then the clean radiograph can be handed to the buddy to develop.

AGP treatment protocols

Environment and ventilation

- The surgery door should be closed during treatment, settle time and decontamination with a notice on the door to indicate when in use and safe time for re-entry.
- Windows should be open where appropriate (this may not be appropriate where closed environment, negative pressure systems are in place).
- Air conditioning which recirculates air into the surgery should be switched off if it is linked to other practice areas.³⁰
- Air conditioning that removes air from the environment should be switched on (venting of extractor fans must be assessed alongside the risk of contamination of other areas) with notices placed at the vents. Seek advice in relation to air conditioning as required.
- Seek advice for windowless surgeries as these should not routinely be used for AGP while there is a risk of transmission.
- Leave the room for 1 hour after an AGP. Measurements can be taken by health and safety/ infection control teams to determine air changes per hour for each surgery and the exact time needed. If this has taken place, records of measurements and advice should be kept. The current recommended time for negative pressure rooms is 20 minutes.^{31,32}
- Consider using more than one surgery to support surgery downtime.
- Air purifiers and devices to improve air quality can be considered but there is insufficient evidence on their effectiveness in relation to C-19 at this time. If practices wish to consider these pieces of equipment, they should seek advice (contact the dental C-19 lead who will ask for advice from the local IPC Teams). Any decision should be clearly documented and retained by the practice for possible future reference. The default position otherwise is to follow the guidance described above.
- Fogging techniques (with e.g. hypochlorous acid) are not currently recommended as this has not been confirmed as effective for C-19 and the health effects e.g. respiratory issues and long-term health implications for staff are unknown. This guidance will be updated as the evidence develops. If practices wish to consider these techniques, they should seek advice from the local IPC Teams.

Treatment procedures

Teams should:

- Manage urgent/emergency issues as a key priority during red and amber phases;
- Plan treatment in accordance with the level of alert, taking in to consideration, the risk of transmission of C-19, risks of aerosol associated with procedures and treatment options to avoid aerosol generation (Appendix 10).
- Avoid aerosol generating procedures (AGPs) where there is a risk of transmission of C-19,) unless there is no other practical option.

³⁰ HSE- ebulletin 22.5.2020 Coronavirus update-Air conditioning

³¹ COVID-19: infection prevention and control guidance:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/881489/COVID-19_Infection_prevention_and_control_guidance_complete.pdf

³² Guidelines for Environmental Infection Control in Health-Care Facilities (2003):

<https://www.cdc.gov/infectioncontrol/guidelines/environmental/appendix/air.html#tableb1>

- Employ measures to reduce risk of aerosol e.g. high-volume suction wherever possible (Appendix 10).
- Use approaches to reduce contamination of the oral cavity and the working field e.g. the use of rubber dam (Appendix 10).
- Paediatric guidance should be used for children’s dentistry (Paediatric Dentistry SOP).
- Recommended guidance and SOPs (e.g. Orthodontics³³, domiciliary care, sedation etc) should be followed when providing care in accordance with the level of alert if available.

- Ideally, treatment requiring AGP should have been decided prior to the patient entering the surgery and the equipment set up in advance. This includes, 3 in 1, handpieces, LA, rubber dam equipment, disposable container with hydrogen peroxide to swab the tooth and single use equipment. The practice is advised to have an agreed system in place for the equipment required for specific procedures.

At the end of the appointment

Maintaining social distance where possible

- Patient should put mask back on should then be directed to leave the room after the treatment.
- Patients should be escorted by the buddy to the exit.
- Payment arrangements should be made in advance or procedures followed to minimise contamination.
- Arrangements for future appointments should follow appropriate procedures (telephone or a pathway minimising contamination).
- Patients should be directed to dispose of mask on exit.

³³ The AGP Question: Implications for Orthodontics:
<https://www.bos.org.uk/Portals/0/Public/docs/Advice%20Sheets/COVID19%20FACTSHEETS/Recovery%20Phase%20Advice/AGP%20BOS%20guide%20Version%20May%206th%202020%2016.30aw.pdf>

Doffing PPE

Doffing (local procedure example)
<p>PPE doffing procedure should be carried out as per the Appendix 5 and current recommended guidance It is helpful if the buddy observes and reads out the procedure to ensure that staff know exactly what to do.</p> <p>Wash/clean gloves with hand gel/ABHR</p> <p>The buddy will break waist and neck gown ties at the surgery door</p> <p>Lean forward over waste bag/bin and roll gown forwards from shoulders down arms to hands</p> <p>Wash/clean gloves with hand gel/ABHR</p> <p>Remove visor by pulling elastic backwards and lifting up and forward over the head – close eyes while doing this and place in bin</p> <p>Wash/clean gloves with hand gel/ABHR</p> <p>Remove hat by placing hand on top of head and pull off to the side – again close eyes while doing this and place in bin</p> <p>Wash/clean gloves with hand gel/ABHR</p> <p>Move to the surgery exit</p> <p>Gather lower then upper elasticated mask straps up and over head from the back forwards with head forward and immediately discard mask into clinical bag by surgery door</p> <p>Move to outside surgery room and clean gloves with hand gel/ABHR</p> <p>Remove glasses/spectacles and clean with wipes as per manufacturer’s instructions</p> <p>Remove gloves by rolling inside out and drop into clinical bin surgery door</p> <ul style="list-style-type: none">• Remove and discard shoe covers or if surgery footwear, place in 1tab/litre Actichlor solution (1000ppm Cl-) by the door• The buddy will also dispense hand gel/ABHR onto the hands of the surgery staff when appropriate• Clean hands thoroughly in adjacent surgery/decontamination room with soap and water

Decontamination

This must be carried out in accordance with the latest recommended procedures. The responsible person undertaking the cleaning with detergent and disinfectant should be familiar with these processes and procedures and must wear recommended PPE.

Decontamination of the surgery
<p>The room must be left for 1 hour* and then deep cleaned (place a notice on door for re-entry time). If a negative pressure room then with 12+ air exchanges leave for 20 minutes</p>

Collect all cleaning equipment and clinical waste bags before entering the room

Before entering the room, perform hand hygiene then put on a disposable plastic apron gloves and FRSM IIR mask

The window should be open for ventilation whilst you clean the room (unless there is an appropriate air conditioning extraction unit for which it is recommended that the window is not opened)

Double bag all items that have been used for the care of the patient as clinical waste, for example, contents of the waste bin and any consumables that cannot be cleaned with detergent and disinfectant

Close any sharps containers wiping the surfaces with either a combined detergent disinfectant solution at a dilution of 1000 parts per million (ppm) available chlorine (av.cl.) or a neutral purpose detergent followed by disinfection (1000 ppm av.cl.)³⁴

Use disposable cloths or paper roll or disposable mop heads, to clean and disinfect all hard surfaces or floor or chairs or door handles or reusable non-invasive care equipment or sanitary fittings in the room, following one of the 2 options below:

use either a combined detergent disinfectant solution at a dilution of 1000 parts per million (ppm) available chlorine (av.cl.) e.g. Actichlor (=1 x 1.7g tablet in 1 litre of water)

or a neutral purpose detergent followed by disinfection (1000 ppm av.cl.)

Follow manufacturer's instructions for dilution, application and contact times for all detergents and disinfectants

Wipe surfaces and leave for 2 minutes before drying with blue roll (**surfaces must stay wet for at least 60 seconds to be effective against SARS Cov-2**)

Clean all reusable equipment systematically from the top or furthest away point.

Do not use a spray bottle, but wet a cloth and wipe from clean areas towards the most contaminated zone.

Any cloths and mop heads used must be disposed of as single use items

On leaving the room

- Discard detergent or disinfectant solutions safely at disposal point
- Clean, dry and store re-usable parts of cleaning equipment, such as mop handles
- Remove all PPE before leaving the clinical room and place in the clinical waste bin (follow PPE doffing poster)
- Wash hands

³⁴ COVID-19: infection prevention and control guidance
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/881489/COVID-19_Infection_prevention_and_control_guidance_complete.pdf

Radiography areas should also be disinfected after use

- When dry, the room can be used again (**Cleaning of the surgery will take 20 minutes**)

WASH HANDS

Communal areas e.g. for example, a waiting area or toilet facilities may also need disinfection. These areas should be cleaned with detergent and disinfectant (as above) as soon as practicably possible, unless there has been a blood or body fluid spill which should be dealt with immediately. Once cleaning and disinfection have been completed, the area can be put back in use.

If there are carpeted floors or item cannot withstand chlorine-releasing agents, consult the manufacturer's instructions for a suitable alternative to use, following or combined with detergent cleaning.

* See further details on air changes and the environment.

Post decontamination processes

Procedures after decontamination

On leaving the room

- Clean, dry and store re-usable parts of cleaning equipment, such as mop handles – buddy can help
- Remove and discard PPE as clinical waste (see below)
- Perform hand hygiene
- Place new gloves, plastic apron and FRSM on and pour cleaning liquid down sluice dirty sink. Please allow for another staff member to open the door

Actions in the event of a patient being identified with C-19 in the surgery

In the event of a patient attending at the practice who is then identified as having signs, symptoms or a contact history which indicates suspected C-19, the patient should be assessed to determine if care could be carried out safely. If care cannot be carried out safely, patients should be signposted to care or sent home in accordance with procedures for C-19 patients. Cleaning should be carried out as required.³⁵

³⁵ (COVID-19) INTERIM Guidance for Primary Care Management of patients presenting to primary care:
<https://phw.nhs.wales/topics/latest-information-on-novel-coronavirus-covid-19/information-for-healthcare-workers-in-wales/180320-interim-primary-care-guidance-covid19/>

Medical emergencies

Primary care dental practices (GDS and CDS) should follow health board guidance for CPR where this is available. In the absence of local guidance, dental teams should follow Public Health England guidance³⁶

“Where possible, it is recommended that you do not perform rescue breaths or mouth-to-mouth ventilation; perform chest compressions only”.

Practices should provide defibrillation and should continue CPR until the ambulance (or advanced care team) arrives. If there are concerns about COVID-19, the advice is to place a towel/ cloth over the patients’ mouth². Staff are advised to wear available PPE and staff should avoid delays in delivering this life saving intervention.

(Appendix 11)

³⁶Guidance COVID-19: guidance for first responders updated 18 May 2020: <https://www.gov.uk/government/publications/novel-coronavirus-2019-ncov-interim-guidance-for-first-responders/interim-guidance-for-first-responders-and-others-in-close-contact-with-symptomatic-people-with-potential-2019-ncov>

Appendix 1: Prescribing Remotely



Pathway for CDS/GDS/On-call dentist/pharmacy to use for patients who require medication and are Suspected/Confirmed COVID 19

CDS/GDS/on-call dentist to determine whether patient requires a prescription following telephone triage. Determine how the patient can pick up a prescription. Either send in post, picked up from clinic, drop off by dental team to patient home or e-mailed to pharmacy.

If contacting pharmacy

CDS/GDS/on-call dentist to confirm with patient who will collect their medication from the pharmacy. It should be noted that medication will only be delivered to patients who are vulnerable and in self-isolation NB: there may be delays experienced regarding delivery – up to 72 hours

CDS/on-call dentist to telephone the pharmacy to advise a request to prescribe is being emailed – confirm email address. Also advising the pharmacy who will be collecting the medication on behalf of the patient (where necessary, advising that the prescription is for a suspected/confirmed COVID-19 patient)

In some instances prescriptions can be posted to patients, collected by a nominated person from the dental practice or can be delivered to patient's home address by a member of the dental team. Some practices may have own supply of medication to dispense

CDS/GDS/on-call dentist to scan and email a copy of the prescription to a local pharmacy (details attached)

Pharmacy to prepare medication

CDS/GDS/on-call dentist to contact the patient/carer to advise where to collect

Medication collected

This pathway has been developed to help support our Independent Contractors to care for our patients and is only to be followed during the COVID-19 phase.

Guidance on best practices for prescribing are available from:

<http://www.sdcep.org.uk/published-guidance/drug-prescribing/>

Appendix 2: Assessment for C-19 and Medical History

Example

ABUHB CDS MEDICAL HISTORY – PLEASE COMPLETE ALL SIDES

The Community Dental Service would like to know about the medical history of the person named on this form. Please would you answer the following questions to help provide safe dental care.

Clinic:

Name of Person: _____ D.O.B: _____

Height _____ Weight _____ Gender _____

Please complete the following questions about COVID19 virus	Yes	No	Details
In the past 14 days have you had a fever or temperature that is over 37.8 degrees?	<input type="checkbox"/>	<input type="checkbox"/>	
Do you have (or have you had in the past 14 days) a new persistent cough?	<input type="checkbox"/>	<input type="checkbox"/>	
Do you have (or have you had in the past 14 days) a loss of or changes to taste or smell?	<input type="checkbox"/>	<input type="checkbox"/>	
Do you have (or have you had in the past 14 days) been in contact (i.e. 15 minutes in close proximity to) any known cases of COVID-19	<input type="checkbox"/>	<input type="checkbox"/>	
Do you feel unwell (or have you felt unwell in the past 14 days)?	<input type="checkbox"/>	<input type="checkbox"/>	
Have you had a positive test (laboratory) for COVID19 virus. If yes please give the date	<input type="checkbox"/>	<input type="checkbox"/>	
Have you had a negative test (laboratory) for COVID19 virus in past 24 hours?	<input type="checkbox"/>	<input type="checkbox"/>	
Have you had a positive test for COVID19 virus antibodies?	<input type="checkbox"/>	<input type="checkbox"/>	

Has this person ever had or suffered from any of the following:	Yes	No	Details
Heart murmurs, heart valve damage, heart defects?	<input type="checkbox"/>	<input type="checkbox"/>	
Cardiovascular disease (e.g. angina, atrial fibrillation)?	<input type="checkbox"/>	<input type="checkbox"/>	
Breathing difficulty, chest problems, asthma, pneumonia, bronchitis?	<input type="checkbox"/>	<input type="checkbox"/>	
Sleep apnoea, loud snoring, sleep disturbance?	<input type="checkbox"/>	<input type="checkbox"/>	
Bleeding disorders, take medication to “thin” the blood (e.g. Warfarin)?	<input type="checkbox"/>	<input type="checkbox"/>	
Blood Pressure or circulation problems?	<input type="checkbox"/>	<input type="checkbox"/>	
Stroke?	<input type="checkbox"/>	<input type="checkbox"/>	
Anaemia (Iron, B12 or Folate deficient)?	<input type="checkbox"/>	<input type="checkbox"/>	
Allergies (e.g. penicillin, latex, food products, etc)?	<input type="checkbox"/>	<input type="checkbox"/>	
Metabolic problems (e.g. thyroid problems, steroid treatment)?	<input type="checkbox"/>	<input type="checkbox"/>	
Jaundice, liver disease?	<input type="checkbox"/>	<input type="checkbox"/>	
Kidney problems?	<input type="checkbox"/>	<input type="checkbox"/>	
Diabetes (Type 1 or 2)?	<input type="checkbox"/>	<input type="checkbox"/>	
Fits, fainting, seizures, epilepsy?	<input type="checkbox"/>	<input type="checkbox"/>	
Mental health problems (e.g. depression, anxiety bipolar, schizophrenia, panic attacks)?	<input type="checkbox"/>	<input type="checkbox"/>	
Do you have memory problems or dementia?	<input type="checkbox"/>	<input type="checkbox"/>	
Feeding, swallowing problems (PEG, food supplements)?	<input type="checkbox"/>	<input type="checkbox"/>	
Arthritis, osteoporosis or other bone disorder?	<input type="checkbox"/>	<input type="checkbox"/>	
Artificial joints, shunts, heart valves, pacemakers or transplants?	<input type="checkbox"/>	<input type="checkbox"/>	
Any infectious diseases (e.g. TB, hepatitis, HIV, MRSA)?	<input type="checkbox"/>	<input type="checkbox"/>	

Has this person ever had or suffered from any of the following:	Yes	No	Details
Does the person drink more than 14 units of alcohol per week?	<input type="checkbox"/>	<input type="checkbox"/>	
Does the person smoke or use tobacco products?	<input type="checkbox"/>	<input type="checkbox"/>	
Does the person smoke, snort, inject or ingest any drugs?	<input type="checkbox"/>	<input type="checkbox"/>	
Does the person take any over the counter medication?	<input type="checkbox"/>	<input type="checkbox"/>	
Does the person have any physical disability?	<input type="checkbox"/>	<input type="checkbox"/>	
Does the person have a learning disability?	<input type="checkbox"/>	<input type="checkbox"/>	
Does the person have any sight problems?	<input type="checkbox"/>	<input type="checkbox"/>	
Does the person have any hearing problems?	<input type="checkbox"/>	<input type="checkbox"/>	
Does the person need an interpreter?	<input type="checkbox"/>	<input type="checkbox"/>	Language
Any further information :			

Has this person ever had to stay in hospital or have any operations? (including being put to sleep for dental extractions)	Yes <input type="checkbox"/>	No <input type="checkbox"/>	(Please give details below)
REASON FOR HOSPITAL ADMISSION		APPROXIMATE DATE	
Is this person taking any regular medication? (including inhalers, tablets, medicine, creams, injections, unprescribed or herbal drugs)	Yes <input type="checkbox"/>	No <input type="checkbox"/>	(Please give details below)
Name of Drug	Dose/day	Name of Drug	Dose/day

Please give contact details for person's doctor, and also consultant and support worker if relevant:

Doctors/GP Name Address Tel No	Consultant's Name Dept Hospital	Support worker's name Address Tel No
Healthcare worker's name Dept Hospital	Consultant's Name Dept Hospital	Consultant's Name Dept Hospital

To the best of my knowledge, the above information is accurate at the time of signing.

Name of person completing form _____			
Address _____			
Post Code _____ Tel No _____			
Relationship to person (if applicable) _____			
Signature:	Date:	Signature:	Date:
Signature:	Date:	Signature:	Date:
Signature:	Date:	Signature:	Date:

Appendix 3: Triage Checklist example



Triage Urgent/Emergency Dental Centre Checklist

Patient Name																																																													
Risk Assessment carried Out by																																																													
Senior Dentist Name																																																													
AGP <input type="checkbox"/>	Non AGP <input type="checkbox"/>																																																												
OPT <input type="checkbox"/>	OPT not required <input type="checkbox"/>																																																												
Appointment date and time	Surgery																																																												
<table border="1"> <tr> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>8</td><td>7</td><td>6</td><td>5</td><td>4</td><td>3</td><td>2</td><td>1</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td></td><td></td><td></td><td></td> </tr> <tr> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> </table>																						8	7	6	5	4	3	2	1	1	2	3	4	5	6	7	8																								
8	7	6	5	4	3	2	1	1	2	3	4	5	6	7	8																																														
Proposed Treatment plan	Items of Equipment/materials needed																																																												

Triage Urgent/Emergency Dental Centre Checklist/V1 / April 7th 2020

Appendix 4: Staff risk assessment, training, wellbeing and instructions checklists

Practices should risk assess staff and implement training as required.

Risk Assessments	Confirmed Complete by	Date	Date of Review
Risk assess “at risk” groups e.g. older people, pregnant ³⁷ , those who are shielding and those who have relevant health conditions ³⁸ which put them at particular risk from C-19. ³⁹			
Redeploy at-risk staff to duties without patient contact such as supporting the ‘remote contact’ preparing patients prior to appointments.			
Staff Training	Confirmed Complete by	Date	Date of Review
Information about C-19, recognition, screening, and risk			
Patient management and journey in the practice			
Management of a person with symptoms entering the practice			
Infection control			
Donning and doffing personal protective equipment			
Minimally invasive dentistry/ non AGP care			
Clinical assessment			
AGP care			
CPR/ management of emergencies			

Training needs should be reviewed as necessary.

Staff experience should be considered and more complex procedures should be carried out by staff with experience in order to minimise procedural time and possible complications.

³⁷ Advice on pregnant healthcare workers 21.03.2020 <https://www.rcog.org.uk/globalassets/documents/guidelines/2020-03-28-covid19-pregnancy-guidance.pdf>

³⁸ any person aged 70 or older, aged under 70 with an underlying health condition (i.e. adults who should have seasonal flu vaccination because of medical conditions)

³⁹ <https://www.gov.uk/government/publications/guidance-on-shielding-and-protecting-extremely-vulnerable-persons-from-covid-19/guidance-on-shielding-and-protecting-extremely-vulnerable-persons-from-covid-19>

Staff illness and wellbeing

Staff illness and wellbeing checklist	Confirmed Complete by	Date	Date of Review
Practice policy for staff illness			
Staff informed of latest advice ⁴⁰ and guidance on self-isolation if they or a member of their household develop signs of infection. ⁴¹			
Practices should consider processes to check for signs of possible infection for anyone entering the practice i.e. staff and patients			
Confirm arrangements for staff with symptoms to be tested. ⁴²			
Where agreed with Health Boards, have clear arrangements regular testing for staff involved in higher risk			
Implement measures to check and support staff well-being. ⁴³			
Rotas should be arranged to cohort staff (groups) to minimise the risk of transmission between staff members. This should include timings of breaks.			

Uniform instructions for staff	Confirmed Complete by	Date	Date of Review
Establish uniform policy			
Instruct staff to change into uniform on arrival to work this includes trousers			
Staff should wear a separate pair of (work) shoes in the surgery these should not be worn outside			
Staff instructed to change place uniform in a plastic disposable bag/ washable at the end of the day and taken home for laundry (or follow practice procedure if central laundry)			
Wash separately from household linen – do not shake the items before placing in the washing machine in a load not more than half the machine's capacity ≥60°C. At the maximum temperature the fabric can tolerate without fabric softener, dried then ironed.			

⁴⁰ COVID-19: management of exposed staff and patients in health and social care settings:

<https://www.gov.uk/government/publications/covid-19-management-of-exposed-healthcare-workers-and-patients-in-hospital-settings>

⁴¹ <https://www.gov.uk/government/publications/covid-19-stay-at-home-guidance/stay-at-home-guidance-for-households-with-possible-coronavirus-covid-19-infection>

⁴²Key (critical) workers testing policy: coronavirus (COVID-19) Policy sets out a needs based approach testing criteria for NHS and non-NHS workers (key workers). <https://gov.wales/critical-workers-testing-policy-coronavirus-covid-19-html>

⁴³ <https://leadershipportal.heiw.wales/playlists/view/c0abd55e-92ee-44d2-bcd1-33dd0221d1e3/en/1?options=oHXU%252BPmvHPR07%252FdPJvYij5sWo5wWqGQ3R4ZWzU%252B9vn1fRQkuHkJ53aCF%252F5pPA4NRIUrRdtEhtlc1iVmauiYg%253D%253D>

Appendix 5: Areas and zoning and personal protective equipment

Personal protective equipment must be worn in accordance with the latest guidance⁴⁴.

Dental practice

Area/Zone	Recommended PPE
Waiting Areas	<ul style="list-style-type: none"> ○ Good Hand Hygiene ○ Fluid Resistant Surgical Mask (IIR)
Dental Surgeries non-COVID (or confirmed non-C-19) (Non-AGP area)	<ul style="list-style-type: none"> ○ Good Hand Hygiene ○ Disposable Gloves ○ Disposable Plastic Apron ○ Fluid Resistant Surgical Mask (IIR) ○ Eye Protection (Disposable goggles or face shield. Where reusable this should be cleaned following manufacturer recommended process)
Dental Surgeries (AGP where C-19 status is not clinically confirmed with tests)	<ul style="list-style-type: none"> ○ Good Hand Hygiene ○ Disposable Gloves ○ Disposable Fluid Resistant gown (or non-fluid resistant gown and a Disposable plastic apron) ○ Filtering Face Piece respirator (FFP3/2) ○ Eye Protection (full face shield if FFP is not water resistant)

Environment Reduction of risk

Actions that may be taken to support decontamination and reduce risk include:

- Promotion of hand hygiene
- Clearing clutter
- Preparing clinical areas in advance (no opening of drawers)
- Not putting tips on the 3 in 1 to prevent accidental habitual use

Decontamination

- Training and use of correct procedures for donning and doffing of PPE to prevent contamination⁴⁵ (videos for [donning](#) and [doffing](#))
- Use of a spotter/ buddy for doffing.

Counterfeit PPE products and checks that PPE is fit for purpose before use

Teams should be alert for counterfeit/ substandard PPE. ^{46,47} Further information about appropriate PPE is available in the guidance⁴⁴ and from the HSE.⁴⁸

⁴⁴ COVID-19 personal protective equipment (PPE) Updated 20 May 2020: <https://www.gov.uk/government/publications/wuhan-novel-coronavirus-infection-prevention-and-control/covid-19-personal-protective-equipment-ppe>

⁴⁵ <https://www.gov.uk/government/publications/covid-19-personal-protective-equipment-use-for-aerosol-generating-procedures>

⁴⁶ Counterfeit Respirators / Misrepresentation of NIOSH-Approval <https://www.cdc.gov/niosh/npptl/usernotices/counterfeitResp.html>

⁴⁷ Clamping down on risk of unsafe PPE <https://www.gov.uk/government/news/clamping-down-on-risk-of-unsafe-ppe>

⁴⁸ Using PPE at work during the coronavirus outbreak: https://www.hse.gov.uk/news/using-ppe-at-work-coronavirus.htm?utm_source=hse.gov.uk&utm_medium=refferal&utm_campaign=coronavirus&utm_term=ppe&utm_content=home-page-popular

Appendix 6: Preparing waiting and communal areas

Checklist to minimise the risk of transmission ⁴⁹	Confirmed Complete by	Date	Date of Review
Providing handwashing facilities or hand gel on entry to the practice (and notices)			
Decluttering, removal of textiles that cannot be cleaned and all unnecessary items (including posters that cannot be wiped clean, toys and magazines) from waiting areas and surgeries			
Spacing chairs in waiting areas to accommodate social distancing (as per guidance e.g. 2m)			
Placing bathroom notices to close the lid before flushing to reduce risk			
Consider making bathroom facilities for emergency use only (ask staff to use) while there is a risk of transmission ⁵⁰			
Ensuring that there is a schedule of regular cleaning for the environment with specific attention to areas and objects frequently used or touched by the public i.e. door handles, chair arms, tablet devices used for medical histories and toilet facilities.			

⁴⁹ Rapid Review of the literature: Assessing the infection prevention and control measures for the prevention and management of COVID-19 in health and care settings: <https://www.hps.scot.nhs.uk/web-resources-container/rapid-review-of-the-literature-assessing-the-infection-prevention-and-control-measures-for-the-prevention-and-management-of-covid-19-in-healthcare-settings/>

⁵⁰ Liu, Y., Ning, Z., Chen, Y., Guo, M., Liu, Y., Gali, N. K., & Liu, X. (2020). Aerodynamic analysis of SARS-CoV-2 in two Wuhan hospitals. *Nature*, 1-6.

Appendix 7: Preparing surgeries

The surgery should be decluttered, cleaned and decontaminated and waterlines should be flushed. [WHTM 01 05](#)⁵¹ provides guidance for decontamination of treatment areas including:

	Confirmed Complete by	Date	Date of Review
Staff schedule with clear responsibilities and timings for general hygiene principles (Chapter 6)			
Staff schedule with clear responsibilities for cleaning between each patient (6.62)			
Staff schedule with clear responsibilities for cleaning at the end of each session (6.61)			
Staff schedule with clear responsibilities for Items of furniture to be cleaned each day (6.64)			
Staff schedule with clear responsibilities for managing dental water lines (See 6.84-6.86 and 19.8-19.17)			
Review date-limited items (e.g. emergency drugs) to make sure the practice is compliant and has all of the necessary items.			
Check supplies and place orders where necessary (as supply chains may be affected).			

⁵¹Welsh Health Technical Memorandum HTM 01 05: <http://www.nwssp.wales.nhs.uk/sitesplus/documents/1178/WHTM%2001-05%20Revision%201.pdf>

Appendix 8: Visit information checklist

Information on practice websites, online booking, appointment reminders/texts, voice mail/ telephone appointment protocols should be up to date. Messages should be in line with the extant public advice. Advice and visit information packs should state that patients should not turn up without an appointment.

Before the appointment the patient should be advised:	Completed by
To use the bathroom facilities at home before leaving	
To arrive alone or if needed with one escort	
To attend without bags or extra items	
To contact the practice by telephone when they arrive	
To wait in the car until practice contacts to say they are ready for the patient to come in (Should a patient not arrive in a car they should be asked wait outside before being called into the surgery).	
Of payment arrangements (contactless/ over the phone in advance)	
Of social distancing if using the waiting area	
To be aware of cough etiquette (Catch it. Bin it. Kill It)	
That someone will meet them at the door (provide details of person's name/ colour of uniform etc)	
They should wear the mask provided whilst walking through the corridor to the surgery	
Use hand gel as instructed on arrival	
Not to touch anything and follow the nurse when being escorted to the surgery	
To be aware that the dentist and nurse will already have the required protective uniform on (reassure the patient not be alarmed by their appearance as this is for the safety of our staff)	

Information resources are available from Public Health Wales:

- <https://phw.nhs.wales/topics/latest-information-on-novel-coronavirus-covid-19/coronavirus-resources/>;
- [NHS Wales Public Information Posters](#);
- [NHS Wales Social Media Assets](#);
- [NHS Wales - patient facing Information](#) .

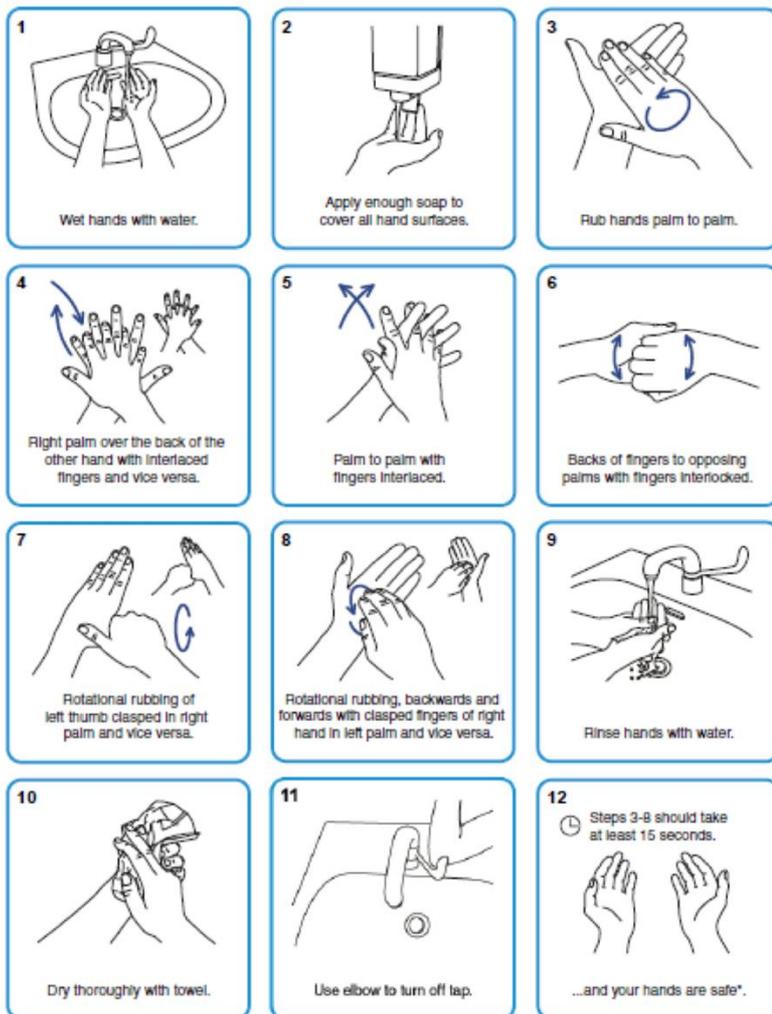
Checklist for patient discharge	Completed by
Remind patient to avoid touching anything, reapply mask.	
Escorted/ instructed to follow arrows on the wall as they did on the way in	
Return home immediately	
If the patient has attended alone please check if they need help with anything else particularly they are still following isolation rules.	
Confirm arrangements to collect medications etc	
Confirm arrangements for payments	
Confirm arrangements for further appointments	
Explain what to do if problems	
Record patient attendance and schedule follow up call for the following day	

Appendix 10: Hand Hygiene

Hand washing⁵²

Best Practice: how to hand wash

Steps 3-8 should take at least 15 seconds.



*Any skin complaints should be referred to local occupational health or GP.

From: COVID-19. Guidance for infection prevention and control in healthcare settings

Video demonstration from WHO

<https://www.youtube.com/watch?v=3PmVJQUCm4E>

⁵²https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/877530/Best_Practice_hand_wash.pdf

Best Practice: how to hand rub

Duration of the process: 20-30 seconds.



From: COVID-19. Guidance for infection prevention and control in healthcare settings

Video demonstration from WHO <https://www.youtube.com/watch?v=ZnSjFr6J9HI>

⁵³https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/877529/Best_Practice_hand_rub.pdf

Appendix 10: C-19 clinical dental risk assessment considerations

Patients should be managed as if they may be COVID 19 positive while there is community transmission and it cannot be confirmed otherwise.

Some procedures which are not deemed aerosol generating may be more difficult than others and may lead to the need for an aerosol generating procedure. Patient related factors and procedural factors may also increase the risk of aerosol generation. It is therefore important to risk assess each procedure to minimise aerosol and transmission risk.

As an example, for a dental extraction factors that **may** be considered in this assessment include:

Dental Extraction	Examples of simple and unlikely to become an AGP examples.	More likely to require AGP
Periodontal Status of the tooth	Mobile tooth >50% bone loss	Non-mobile
Caries/ tooth loss	Complete coronal structure	< 10% crown Extensive caries of coronal area
Tooth	Deciduous tooth Single rooted tooth (incisor or premolar)	Canine or molar tooth
Patient related factors	Young person	Older adult Dense bone structure Strong gag reflex Prone to/ likely to cough Significant behavioural issues which may increase risk. History of difficult extractions
Operator Skill and Experience	Highly skilled and experienced	Inexperienced dentist

Please note that this list is intended to support decisions and is not designed to be comprehensive or instructive.

If a tooth extraction is attempted, and fails, it may be appropriate to stabilise the area and leave remnants in situ (for retrieval as an AGP at a later date).

When assessing risk, for caries and other dental problems, consideration should be given to procedural and transmission risk:

- location of the tooth
- oral health and dentition
- extent of the lesion and possible complications
- difficulty of procedure
- the time taken to carry out a procedure (this should be as short as possible)
- medical justification e.g. bisphosphonate
- whether the tooth is predictably restorable with a good prognosis
- risk of transmission

Options to avoid AGP for the management of caries may include:

- Simple excavation, dressing/ temporisation to stabilise the tooth (potentially leaving caries in situ)
- Atraumatic Restorative Technique (ART)
- Extraction

The range of recommended treatments offered with AGP will be reviewed in relation to risk of transmission and current evidence. Where there is a risk of transmission, AGP treatments offered will need to be limited with priority given to people with urgent/ emergency problems.

Useful information:

- BSP Back to work- risks associated with steps of treatment⁵⁴
- BES COVID-19 return to work SOP⁵⁵
- British Orthodontic society orthodontic provider advice⁵⁶ and RCS guidance⁵⁷
- Paediatric Dentistry RCS guidance⁵⁷
- Special Care Dentistry RCS guidance⁵⁷
- Restorative RCS guidance⁵⁷
- Oral Medicine RCS guidance⁵⁷
- Oral Surgery RCS guidance⁵⁷
- Diagnostic imaging RCS guidance⁵⁷

Patient pathways are outlined in Appendix 12.

⁵⁴ <https://www.bsperio.org.uk/userfiles/BSP-Back-to-work-version-2-Risks-associated-with-steps-of-treatment-07.06-2020.pdf>

⁵⁵ https://britishendodonticsociety.org.uk/wp-content/uploads/2020/06/BES_SOP-080620-v1.pdf

⁵⁶ <https://www.bos.org.uk/COVID19-BOS-Advice/Orthodontic-Provider-Advice>

⁵⁷ <https://www.rcseng.ac.uk/dental-faculties/fds/coronavirus/>

Risk reduction and aerosol generation in dentistry

Aerosols are generated in a number of routine dental procedures and through patient behaviours (coughing and sneezing). Measures should be taken to minimise the risks of transmission of C-19 associated with aerosols from all dental procedures.

Principles

- Primary care teams should avoid all aerosol generating procedures.
- Employ measures to remove aerosols which are generated, in particular four-handed dentistry, high-volume suction and use of rubber dam.
- Decontamination of the environment which must be carried out following recommended decontamination procedures and timings (allowing time for air clearance)¹. It is essential for all members of the team to use recommended personal protective equipment PPE and ensure face protection during dental treatment care.⁵⁸
- Employ measures/ techniques to reduce amount, duration and contamination of aerosol while carrying out all care.

AGP care and U/EDDCs

- Where aerosol generating procedures (AGPs) cannot be avoided (during red and amber phases of de-escalation) patients should be referred to U/EDDCs

Aerosol Generating Procedures

AGPs are procedures that create aerosols (air suspension of fine ($\leq 5\mu\text{m}$) particles). These are reported to include: ^{59,60}

- Handpieces (turbine);
- Air abrasion;
- Ultrasonic scaler;
- Air polishing;
- Slow speed handpiece polishing and brushing;
- 3 in 1 syringe.

⁵⁸COVID-19 Safe ways of working A visual guide to safe PPE:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/877528/COVID-19_easy_visual_guide_to_PPE_poster.pdf

⁵⁹ Bentley CD, Burkhart NW, Crawford JJ. Evaluating spatter and aerosol contamination during dental procedures. J Am Dent Assoc 1994; 125: 579–584.

⁶⁰ Zemouri C, De Soet H, Crielaard W, Laheij A. A scoping review on bio-Aerosols in healthcare & the dental environment. PLoS One 2017; 12: e0178007.

Procedures that are reported as not considered to be aerosol generating procedures AGP and can be carried out during the amber phase of de-escalation⁶¹

- Examinations;
- Hand scaling with high volume suction;
- Simple extractions;
- Removal of caries using hand excavation;
- Using slow-speed (non-turbine) handpiece;
- Local anaesthesia.

Some non-aerosol generating procedures may increase the risk of aerosol (e.g. stimulate gag reflexes, saliva, sneezing and coughing). In these circumstances, procedures should be undertaken with care. Alternatives e.g. using extraoral instead of intraoral radiographs may be considered for patients who may be likely to gag or cough etc where this is deemed clinically appropriate.

Measures to reduce aerosols^{62,63,64}

Technique/ measure	Recommendation
High volume suction	Essential
Personal protection PPE: Face masks, visors/goggles, gloves and protective outwear in accordance with guidance	Essential
Use of recommended techniques for donning and doffing PPE including the use of a spotter for doffing	Essential
Time and procedures for decontamination and air change between patients as per guidance ¹	Essential
Using 4 handed techniques for dentistry	Strongly recommended
Reduce any unnecessary use of and time spent on procedures that may generate aerosol	Strongly recommended
Dry field operating (rubber dam,* cotton wool rolls)	Essential
Alternate procedures to reduce aerosol use via handpieces (e.g. ART/ Hall technique or chemotherapeutic caries removal)	Recommended as an option where clinically appropriate.
Resorbable sutures	Recommended as an option where clinically appropriate to reduce clinical contact

⁶¹ Aerosol generating procedures and COVID: <https://www.yumpu.com/en/document/read/63158133/aerosol-generating-procedures-v2>

⁶² Harrel SK, Molinari J. Aerosols and splatter in dentistry: A brief review of the literature and infection control implications. J Am Dent Assoc 2004; 135: 429–437.

⁶³ Leggat PA, Kedjarune U. Bacterial aerosols in the dental clinic: A review. Int Dent J 2001; 51: 39–44.

⁶⁴ Ge Z yu, Yang L ming, Xia J jia, Fu X hui, Zhang Y zhen. Possible aerosol transmission of COVID-19 and special precautions in dentistry. J Zhejiang Univ. Sci. B. 2020; : 1–8.

Extraoral radiographs (where appropriate)	Recommended as an alternative to intraoral radiographs
Pre-procedural mouthrinse	<p>The use of hydrogen peroxide mouth rinse and Povidone Iodine as a mouthwash has been suggested as a potential method to reduce amount of virus in aerosols but there is currently little direct evidence of the efficacy of this to reduce C-19 transmission. Potential benefits should be balanced against the risk of an allergic reaction/ generation of aerosol with rinsing). Clinicians should risk assess based on current available evidence.</p>

*Rubber Dam in combination with high volume saliva ejectors can significantly reduce the microbiological load in an aerosol. Pre-treatment disinfection swabbing of isolated teeth isolated with rubber dam may also reduce the viral aerosol load.

Appendix 11: Medical emergency procedure for when an AGP has commenced

Should a medical emergency occur once an AGP procedure has started, the following procedure must be followed.

1. Activate emergency alarm
2. Clinical team to communicate to runner nature of emergency and request exact Resus kit and emergency management poly-pocket.
3. DO NOT OPEN DOOR.
4. Runner to instruct another staff member to call for Ambulance - call XXX. Ambulance service to be informed that Emergency attendance is required and AGP procedure has started and/or suspected COVID patient.
5. Runner (in standard PPE) to knock twice to alert presence, quickly open door, place Emergency kit inside and close door. Immediately remove PPE.
6. Clinical team to provide emergency medical care in line with current Resus Council advice.
7. Early use of AED is recommended

Example procedure below:

**Management of suspected cardiac arrest when an
AGP has commenced (wearing FFP)**

Suspected cardiac arrest
Look for the absence of signs of life and normal breathing
DO NOT listen or feel for breathing by placing your ear and cheek close to the
patient's mouth

Call for help and press panic button, notify senior member of staff
Clinical team in surgery to immediately start chest compressions

Call 999,
advise ambulance
cardiac arrest

Runner to get Resus bag and AED from identified
location, quickly open door and place inside surgery,
shut door

Clinical team to attach AED and follow instructions
Clinical team to continue CPR
Airway interventions must be carried out using bag valve mask (n.b. only if
wearing FFP3/2)

DO NOT CARRY OUT MOUTH TO MOUTH

Only clinical team wearing enhanced PPE should be present in the surgery

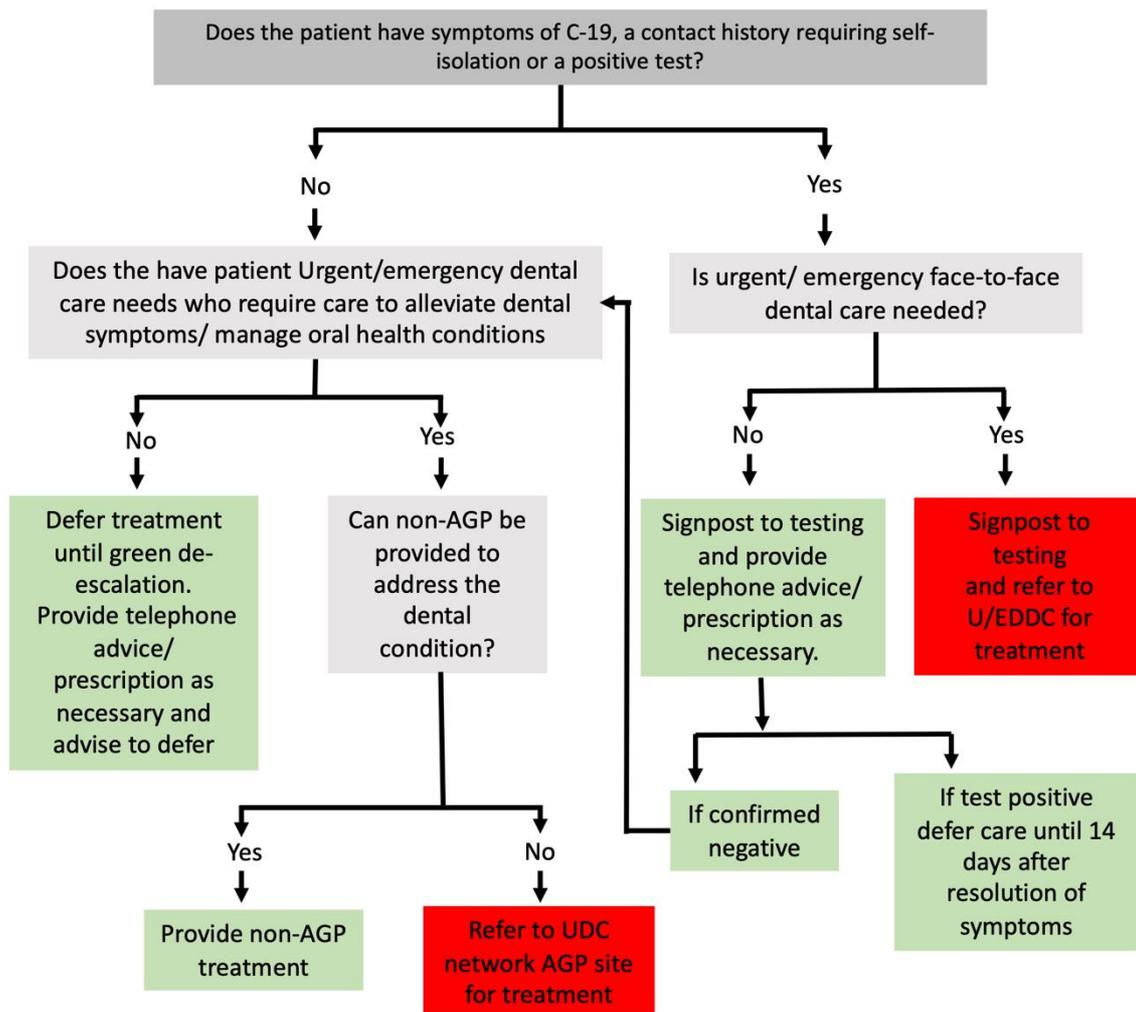
Continue CPR until paramedics arrive
Any additional helpers must be wearing enhanced PPE to enter surgery

Once patient has been transferred out of the surgery, dispose of or clean all
equipment used during CPR

Doffing of PPE and decontamination of the surgery shall be carried out in
accordance with AGP SOP

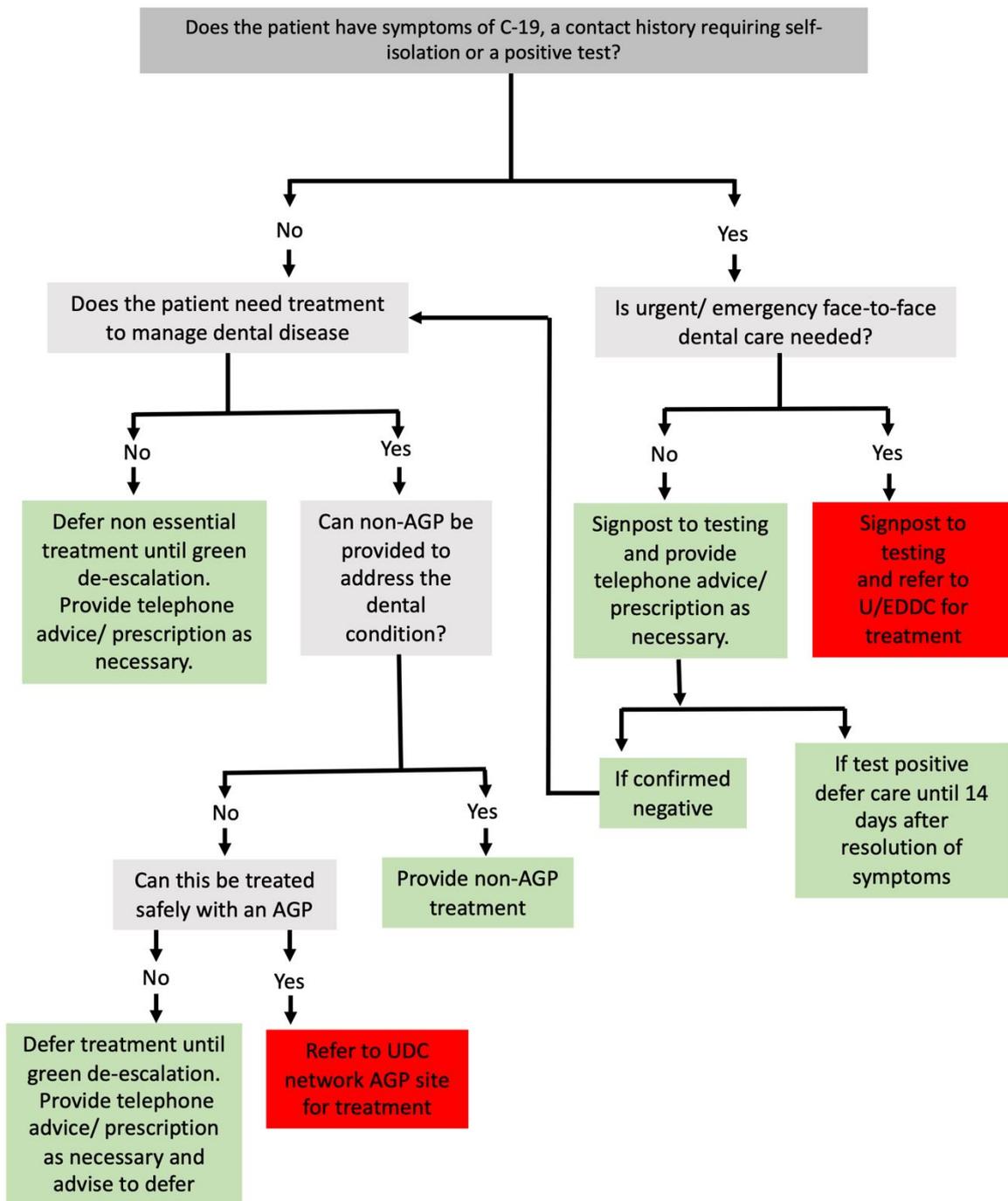
Appendix 12: Care pathways

High amber de-escalation High risk of transmission



High risk of transmission: e.g. UK Alert Level 4 (raise to high amber from green or low amber if there is evidence of high or rising transmission in local/ regional area).

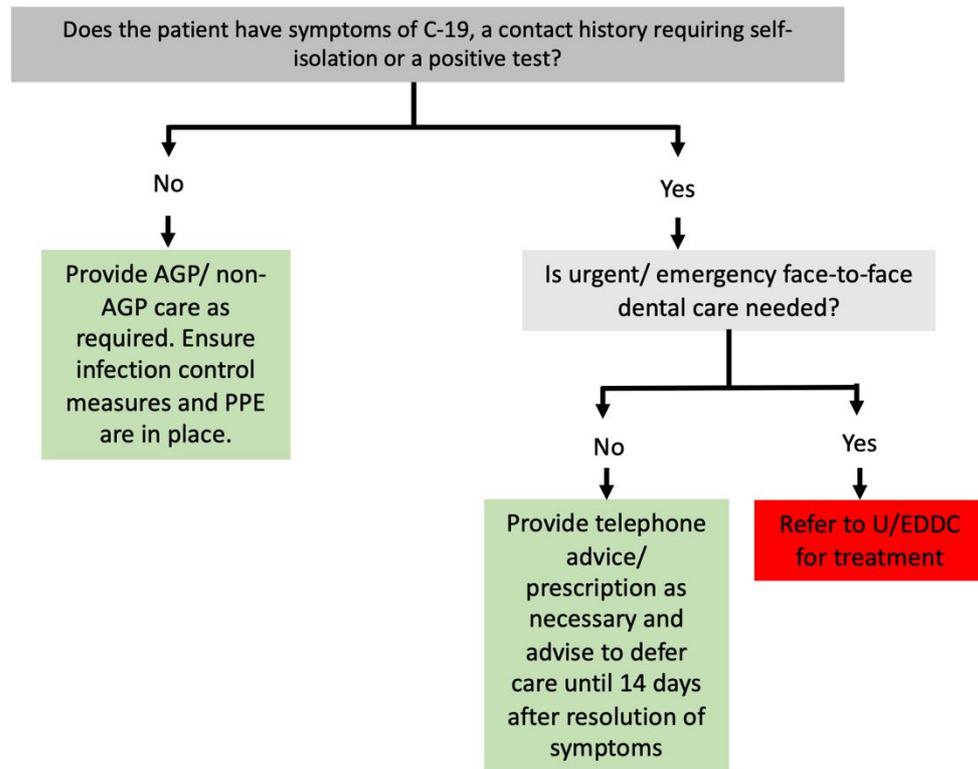
Low amber de-escalation Risk of transmission C-19



Risk of transmission: e.g. UK Alert Level 3 (raise from green to low amber alert level locally if there is evidence of virus in general circulation in local/ regional area)

n.b. AGP treatments may be considered in primary dental care for patients for whom it is confirmed conclusively at the time when they have treatment that they do not have C-19 and there is no risk of transmission.

Green de-escalation No/ very low risk of transmission



Risk of transmission: e.g. UK Alert level 2/1 (raise from green to low amber alert/high amber or red level locally if there is evidence of virus circulating or rising in local/ regional area)