

GUIDANCE

Videofluoroscopy in the context of COVID-19: interim guidance for speech and language therapists and service managers



Acknowledgements

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1. INTRODUCTION

The purpose of this document is to provide interim guidance to support the delivery of essential care in the context of COVID-19 and to offer broad advice on salient factors to consider in restoring videofluoroscopy services.

The scope of this document is restricted to practical guidance for speech and language therapists (SLTs) and service managers. It focuses on the mitigation of risk in disease transmission for patients and staff during videofluoroscopy for both adults and paediatrics.

This guidance has been developed in response to Royal College of Speech and Language Therapists (RCSLT) members seeking information on how to perform videofluoroscopy swallow and communication evaluations safely and effectively within the current restrictions. It has been prepared by a panel of experts from the RCSLT in collaboration with representatives from the Society and College of Radiographers (SCoR) and the Royal College of Radiologists (RCR). The guidance should be used alongside relevant local policies.

It is important that **SLTs** consider the following **RCSLT guidance** in conjunction with this guidance:

1. [Restoring services and keeping everyone safe: Framework to support decision making](#)
2. [Reducing the risk of transmission and use of personal protective equipment \(PPE\) in the context of COVID-19](#)

It is important that **radiographers** and **radiologists** consider the following **SCoR and RCR guidance** in conjunction with this guidance:

1. [Screening restart: Guidance for safe service provision during COVID-19 pandemic and post-pandemic phase](#)
2. [COVID-19 interim guidance on restarting elective work](#)
3. [COVID-19 interim guidance on restarting elective work: interventional radiology \(image guided surgery\) services](#)

The following guidance may also be useful:

1. [British Nuclear Medicine Society guidance for COVID-19 recovery phases](#)

This is a working document that will be reviewed and revised as further evidence and information becomes available and as the COVID-19 situation develops. The multidisciplinary expert advisory group responsible for this document will:

- Seek feedback from SLTs, radiographers and radiologists to inform a review via [this survey](#) (deadline 31 September 2020)
- Undertake an initial review and update of this document within four months of the date of publication

2. CONTEXT

2.1. Videofluoroscopy

Videofluoroscopy uses dynamic x-ray imaging to visualise bolus flow across oral, pharyngeal and oesophageal stages of swallowing. This enables the systematic analysis of swallow physiology and anatomy to optimise safety and function during oral intake (or mealtimes). It is also used to visualise oral structures for assessment of speech.

Videofluoroscopy may support critical recommendations regarding:

- Oral vs non-oral intake (including strategies for safe eating and drinking)
- Texture modification
- Referral to other specialities
- Interventions that improve function or reduce aspiration (Martin Harris et al, 2008; Brodsky et al, 2008; Lee et al, 2017; Boaden et al, 2020)
- Interventions that improve speech intelligibility (Dudas et al, 2006)

These factors have the potential to enhance patient flow, expedite discharge and prevent readmission.

The procedure is undertaken in a fluoroscopy suite, usually within the imaging department of a hospital or clinic environment. SLTs, together with a radiologist, radiographer or radiography assistant practitioners (hereafter imaging personnel) perform this dysphagia assessment procedure across the age spectrum from neonates to the elderly.

2.2. Videofluoroscopy in the context of COVID-19

During the COVID-19 pandemic, several factors have restricted the use of videofluoroscopy. These factors include the potential for virus transmission through aerosol generation, limitations on availability of imaging facilities and restrictions around transporting inpatients from the ward to other hospital locations.

The COVID-19 crisis has altered the typical provision of swallowing services and challenged workflow and clinical care pathways. Within this context, videofluoroscopy may be preferred as a first line tool for instrumental swallowing as it allows for greater overall physical distancing between the patient and clinician in situations where patients present with a known or suspected positive diagnosis (Fritz et al, 2020).

As services resume, decisions need to be made about the most appropriate instrumental swallow assessment tool for each patient. In some situations, videofluoroscopic swallow evaluation may be considered a safer option than an endoscopic swallow evaluation due to the higher risk of aerosolisation with the latter (Ku et al, 2020; Soldatova et al, 2020). Should a videofluoroscopic swallow evaluation procedure be required, it is advised that SLTs consider the risk of transmission of COVID-19 during the procedure and the urgency of the evaluation. The RCSLT has developed a [framework to support risk assessment](#) which SLTs are encouraged to follow.

3. GUIDING PRINCIPLES FOR PRACTICE

Speech and language therapy and imaging departments will need to consider a wide range of factors to prepare for restarting videofluoroscopy services for inpatients and outpatients.

There may be multiple competing challenges to restoration of videofluoroscopy services, including but not limited to:

- a) Limitations on availability of Imaging resources, including access to fluoroscopy suite(s). This may be due to a backlog of referrals and/or the need to prioritise certain patient groups.
 - i. Please refer to the section *Framework for decision making: Understanding the impact of COVID-19 and implications for service delivery* in the RCSLT's [Restoring services and keeping everyone safe: Framework to support decision making](#)
- b) Ongoing staffing pressures due to:
 - i. Diversion of imaging personnel from videofluoroscopy to higher urgency imaging areas
 - ii. Please refer to section *Framework for decision making: Understanding the impact of COVID-19 and implications for service delivery* in the RCSLT's [Restoring services and keeping everyone safe: Framework to support decision making](#)

Areas considered below in **3.1. – 3.6.** will warrant particular attention.

3.1. Environmental considerations

- a) **Cohorting:** It is important to refer to local guidance on cohorting for resuming outpatient activity. SLTs may also want to consider section 4.2.2. *Cohorting or bubbles* in [reducing the risk of transmission and use of personal protective equipment \(PPE\) in the context of COVID-19](#).
- b) **Consider other service provision options:** This includes the use of independent sector providers and equipment, use of alternative spaces such as day-case theatre C-arm image intensifiers, or community imaging facilities (fixed and mobile units) (NHS England, 2019a; NHS England 2019b; NHS England & NHS Improvement, 2019).
- c) **Decontamination:** It is important to follow local infection and prevention control guidance on environmental decontamination and Government [guidance on COVID-19 infection prevention and control](#).

3.2. Patient considerations

Preventing avoidable harm to the patient must be the key underlying principle when considering a videofluoroscopy procedure. This may mean that treatment is expedited or delayed based on clinical judgement.

For inpatient and outpatient services:

- a) The decision to proceed with videofluoroscopy will be a multidisciplinary one
- b) Risk-benefits will be clearly identified, understood and mitigated to inform the appropriateness of the procedure
- c) An agreed protocol for two-way communication with referring clinicians should be in place. Referrals should include information regarding the COVID-19 status of the patient.
- d) For urgent/inpatient pathways, the following scheduling could be considered to minimise viral transmission, but must always be agreed with the local infection control team:
 - a) COVID-19 negative
 - b) COVID-19 recovered, asymptomatic & swabbed negative
 - c) Suspected COVID-19
 - d) COVID-19 positive

Outpatient services will in addition need to consider:

- a) Provision of patient information leaflets outlining information about what the videofluoroscopy procedure will involve (which may need to be adapted).
- b) Virtual/telephone consultation ahead of appointments to gather relevant information and to provide reassurance regarding the procedure, social distancing, screening and other pertinent factors.
- c) Adherence to local guidance regarding isolation, travel, use of face masks and arrival on the day.
- d) The requirements of patients with special or additional needs (e.g. learning disabilities, requiring a wheelchair).
- e) The requirements of vulnerable patients will need consideration with reference to local and [national guidance on shielding](#). Discuss risks and benefits with referrer and patient and document in line with local policies.
- f) Local protocols to guide those involved in booking or re-booking appointments. These protocols should include information on how to prioritise patients and advice to be provided should a patient need to change an appointment due to change in COVID-19 status.
- g) Agree a method of communicating videofluoroscopy results to the patient and/or referrer in a manner which minimises virus transmission risk. This may involve providing results virtually/phone at a later stage to reduce time spent in Imaging and/or on the hospital site.

3.3. COVID-19 screening

- a) Services should have an agreed protocol for deferral of the videofluoroscopy procedure in the case of a COVID-19 positive result. This should include seeking advice on how to proceed if a patient is positive on repeat testing, especially in cases where the risk of deferring a procedure is potentially greater than the risk of proceeding.

3.4. Individuals present in the fluoroscopy suite

- a) Consideration must be given to rotas within the SLT and imaging departments. If risk assessment deems the need for enhanced PPE, team members must have had adequate fit mask testing and understand local protocols for donning and doffing.
- b) Reduce the number of people present during the procedure to those most essential. This includes consideration of parents/carers/relatives and other observers being present.
- c) Local practices may require training of personnel in the fluoroscopy suite. However, it is important this decision is risk assessed to ensure it is appropriate.

3.5. Personal protective equipment

SLT and imaging departments must comply with [national](#) and local guidance on PPE.

SLTs should consider the following sections in the RCSLT's guidance on [reducing the risk of transmission and use of personal protective equipment \(PPE\) in the context of COVID-19](#):

- a) *Section 5. Use of personal protective equipment (PPE)*
- b) *Annex 1. Risk assessment framework*

The RCR has also developed an infographic on PPE advice for imaging departments and teams, which can be accessed [here](#).

3.6. Risk assessment checklist

A risk assessment checklist for videofluoroscopy clinic is provided in [Annex 1](#). This checklist pulls together key considerations outlined above. It is important to note that it functions only as a guide and must be amended as required according to local procedures and requirements.

4. CLINICAL PROTOCOL

Trusts should follow their local videofluoroscopy clinical protocols. Where appropriate, this can be combined with COVID-19-specific risk assessment to inform any necessary modifications.

5. PRIORITISATION / CLINICAL DECISION-MAKING

Prioritisation for videofluoroscopy needs to take the following into account:

- a) Imaging capacity within the organisation
- b) Speech and language therapy patient level prioritisation

Speech and language therapy services should prioritise cases using criteria based on clinical urgency and risk. Regard must be given to national guidance, e.g. 2 week wait cancer pathways. Trusts should hold a record of all cases that have been deferred and the criteria used to do so. Deferred referrals should be recorded so that these can be managed appropriately using a risk stratification system when services resume.

SLTs should refer to [Annex 2: Speech and language therapy patient level prioritisation](#) when discussing prioritisation of patients.

Further, the RCR's [COVID-19 interim guidance on restarting elective work](#) provides a table to support service prioritisation. An amended version to include videofluoroscopy can be found in [Annex 3: Service prioritisation and videofluoroscopy](#).

SLTs should also refer to the section *Framework for decision making: Understanding the impact of COVID-19 and implications for service delivery* in the RCSLT's [Restoring services and keeping everyone safe: Framework to support decision making](#) for more information.

Annex 1: COVID-19 joint speech and language therapy and imaging videofluoroscopy (VF) checklist

The checklist is intended to encourage

- a) dialogue between staff
- b) use of routine safety checks to minimize adverse events or risk of harm.

Boxes marked **!** indicate the need for further risk assessment, remedial action prior to starting, or not proceeding with the examination until further advice is sought. In the context of COVID-19, consideration should be given to minimising the number of people present.

Checklist

Triage of patient (SLT)	Yes	No
<ul style="list-style-type: none"> Do the benefits of undertaking the procedure outweigh the risks? If no delay 		!
Prior to clinic	Yes	No
<ul style="list-style-type: none"> Assess COVID-19 status and risk of transmission associated with VF for each patient. 		
Prior to clinic (SLT & Imaging)	Yes	No
<ul style="list-style-type: none"> Has a discussion taken place between Imaging personnel and SLT to ensure that appropriate PPE and staffing is available for all present during the procedure? If no, do not proceed. 		!
<ul style="list-style-type: none"> Ensure donning/doffing buddy/runner available to support running of clinic as appropriate 		!
<ul style="list-style-type: none"> Does the patient scheduling reflect national and local guidance on infection prevention and control with regard to COVID-19 status. 		!
Prior to procedure	Yes	No
<ul style="list-style-type: none"> Confirm that appropriate clinic decontamination equipment is in place. 		
<ul style="list-style-type: none"> Confirm that appropriate PPE is available according to patient risk. 		
<ul style="list-style-type: none"> Prepare and store radio-opaque food/fluids in an appropriate area to minimise risk of contamination. Use single use or patient's own cups/crockery/cutlery. 		
<ul style="list-style-type: none"> Consider ventilation requirements with reference to local guidance on infection control. 	!	
Donning radiation protection and infection protection – buddy to assist	Yes	No
<ul style="list-style-type: none"> Put on lead apron and follow local procedures for donning & doffing and disposal of PPE (NB this includes and parent/carer who is required to be present to support patient and is not behind the radiation protection screen) 		
<ul style="list-style-type: none"> If required, put alert sign up on outside of door regarding 		

timeframe for room closure.		
During the procedure	Yes	No
<ul style="list-style-type: none"> Confirm patient identification and complete consent procedures in designated area. Reassure patient regarding procedure/precautions. 		
<ul style="list-style-type: none"> Optimise positioning, ensure only the SLT or parent/carer is in direct contact with the patient and nearby equipment. 		
<ul style="list-style-type: none"> Where possible, personnel or carers who are required to support the patient during the assessment should remain behind a radiation protection screen. 		
Between patients	Yes	No
<ul style="list-style-type: none"> Dispose of cups, packets, food, utensils immediately as per local protocol 		
<ul style="list-style-type: none"> Provide feedback to patient in a manner that minimises risk of COVID-19 transmission 		
<ul style="list-style-type: none"> Follow doffing and donning procedures for completion of procedure and cleaning as per local infection control guidance. 		
<ul style="list-style-type: none"> Ensure all materials are ready within videofluoroscopy suite before proceeding to the next patient. 		
Completion of clinic session	Yes	No
<ul style="list-style-type: none"> Report any adverse events on local incident reporting system 		

Specific considerations for inpatients

Transportation of patient (pre & post clinic)	Yes	No
<ul style="list-style-type: none"> Has the medical team agreed for the patient to be transported to Imaging department 		
<ul style="list-style-type: none"> Does the patient need to wear a mask during transportation? Remember to consider the needs of laryngectomy/tracheostomy patients to ensure mouth, nose and stoma/tracheostomy tube are safely covered 		
<ul style="list-style-type: none"> Does the porter need to wear PPE during transportation? If yes, ensure this is clearly communicated. 	!	
<ul style="list-style-type: none"> If patient requires wheelchair, does porter know where the chair will be decontaminated? If ward chair, ward to decontaminate; if portering chair, imaging to decontaminate. Follow local decontamination guidelines depending on patient's COVID-19 status (Clinell or Actichlor). 		
After the procedure – Patient transportation	Yes	No
<ul style="list-style-type: none"> Refer to above sections: provide clear communication for safe transportation of patient back to ward 	!	
<ul style="list-style-type: none"> Request next patient be brought down to clinic. This allows time for room decontamination. Patient to be brought straight into fluoroscopy suite. 		

Specific considerations for outpatients

Before the procedure	Yes	No
<ul style="list-style-type: none">• Adhere to trust guidelines on pre-appointment screening		
<ul style="list-style-type: none">• Adhere to trust guidelines on limiting waiting time and provision of appropriate waiting areas within the hospital		
<ul style="list-style-type: none">• Adhere to trust guidelines on use of face coverings for patient and parent/carer.	!	
After the procedure	Yes	No
<ul style="list-style-type: none">• Consider use of telehealth for additional patient feedback	!	
<ul style="list-style-type: none">• Support patient to leave hospital premises promptly.		

Adapted from the Joint SLT & Radiography Videofluoroscopy Procedure Suitability and Safety Checklist (Karima Collins, Clinical Lead SLT, Imperial College Healthcare NHS Trust)

Annex 2: Speech and language therapy patient level prioritisation

Level	Criteria
Level 1: Urgent with MDT approval	1. To inform decision-making regarding functional oral feeding where there is no alternative method of nutrition and concerns regarding possible aspiration.
	2. To evaluate the risk of aspiration against the benefits of oral intake e.g. where thickened liquids are not tolerated or oral medication is preferred
	3. To inform immediate MDT decisions on admission avoidance, hospital discharge or prevention of serious secondary complications (when all other available assessment modalities have been inconclusive to provide oral intake recommendations)
	4. To inform decision making regarding establishment of enteral nutrition where the procedure is time critical
	5. To establish baseline of function prior to a time critical surgical intervention
Level 2: Important but not urgent	1. Assessment is important to schedule to guide MDT patient management but can be delayed without adversely affecting patient outcomes or safety
	2. To inform decision making regarding establishment of enteral nutrition where the procedure is important but not urgent
	3. To establish baseline of function prior to a surgical intervention which is important but not urgent
	4. To provide advice on dysphagia rehabilitation or to investigate the response to a dysphagia rehabilitation programme including effectiveness of compensatory strategies
	5. To investigate suspected anatomical or physiological features which may require referral on to other specialties e.g. pharyngeal pouch, oesophageal dysmotility/reflux, cricopharyngeal spasm
Level 3: Not essential	1. Other assessment modalities could be used to answer clinical questions

Annex 3: Service prioritisation and videofluoroscopy

Priority	Definition/description	Videofluoroscopy
P1	High probability of potentially life threatening condition	Aspiration risk unmanaged or physiology unknown with known respiratory and/or nutrition compromise
P2	High probability of condition potentially causing significant long term harm	Aspiration risk unmanaged and/or physiology unknown with no known respiratory or nutrition compromise
P3	Possibility of potentially life threatening condition	Aspiration risk managed or physiology known, change anticipated
P4	Possibility of condition potentially causing significant long term harm	Aspiration risk managed or physiology known, change not anticipated
P5	Unlikely to be life threatening or cause significant long-term harm	During COVID-19, bedside assessment/management of swallowing

Adapted from the table to support service prioritisation in the RCR's [COVID-19 interim guidance on restarting elective work](#).

AGP IN
PROGRESS
DO NOT
ENTER

ROOM
CLOSED

AGP COMPLETE AT:

DO NOT ENTER
UNTIL:

REFERENCES

COVID-19 interim guidance on restarting elective work: Interventional Radiology (image guided surgery) services (The Royal College of Radiologists);

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COVID-19 interim guidance on restarting elective work (The Royal College of Radiologists);

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