An Evaluation of Tele-clinics Introduced During COVID-19 Pandemic in a Paediatric Dental Department

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INTRODUCTION

The World Health Organisation declared a global pandemic of COVID-19 on 11 March 2020.1 Due to the risk of transmission in dental settings, the Chief Dental Officer of England issued instructions to cease all routine dental services in England on 25 March 2020.2

The University College London Hospitals NHS Foundation Trust (UCLH) is a fully computerised trust, and the electronic health record system (EHRS) is fully accessible remotely. To ensure continuity of care for our patients, two telephone clinics (tele-clinics) were successfully piloted on 8 April 2020 and a new tele-clinic service was launched.

Tele-clinics were initially restricted to existing patients triaged specifically for this service, which included those who were ready for discharge and those awaiting eruption of teeth or further development. Positive feedback from staff and parents/patients encouraged extension of the service to new patients from 12 May 2020 and to all existing patients from 14 May 2020. A Standard Operating Protocol (SOP) was issued to a shared online workspace on 14 May 2020.

Tele-clinics are a new service and are a new way of working in dentistry. Therefore, a service evaluation was completed to assess its use and clinician practices and to inform local decision-making.

AIM

The aim of the service evaluation was to assess the characteristics of patients being seen via tele-clinics and the appointment outcomes, and to evaluate clinician working practices to identify any areas for improvement.

METHOD

This retrospective service evaluation included all tele-clinic appointments booked between 8 April 2020 and 15 May 2020 inclusive. Multidisciplinary clinics and the telephone triage of patients referred for the regional child urgent dental service were excluded.

Clinic schedules and the patients’ electronic health records were reviewed to record the number of appointments booked and attended, the primary diagnoses of patients, their pain histories, outcomes of appointments, and reasons for requesting a face-to-face appointment. Record-keeping was assessed to see whether the person spoken to was documented and whether discharge letters were sent when required. Areas of good practice or any areas requiring improvement that were noticed were recorded.

RESULTS

Appointments

• 23 clinics were evaluated; 2 new patient clinics (10 booked appointments) and 21 review clinics (144 booked appointments).
• New patient clinics were being piloted by consultants only.
• Review clinics were completed by all grades of dentists.
• When the parent or carer of the child was unreachable after two attempts at the nominated appointment time, this was recorded as ‘Was Not Brought’ (WNB). 13 (8%) appointments were recorded as WNB. Two of these involved children with safeguarding concerns, both were contacted again outside of clinic time, and telephone assessments were completed then.

Patient characteristics

A total of 12 (8%) of the 143 patients (3 new and 9 review) complained of current pain. The top three primary diagnoses of all patients (new and review combined) were dental trauma (36, 25%), caries (34, 24%), and molar-incisor hypomineralisation (17, 12%). Dental anomalies were diagnosed in 49 patients (33%).
Outcome of the appointment

Tables 1 and 2 show the outcomes of tele-clinic appointments and the reasons a face-to-face appointment was requested.

**TABLE 1** Appointment Outcomes

| Outcome of patients seen | New patient, n = 10 | Review, n = 133 | Total, n = 143 |
|--------------------------|---------------------|-----------------|----------------|
| Attend a face-to-face visit | 6 (60%) | 74 (56%) | 80 (56%) |
| Review | 2 (20%) | 15 (11%) | 17 (12%) |
| Discharge | 1 (10%) | 44 (33%) | 45 (31%) |
| Referred to another department | 1 (10%) | 0 | 1 (1%) |

**TABLE 2** Justification for requesting a face-to-face appointment

| Reason for requesting a face-to-face visit | New patient, n = 6 | Review, n = 74 | Total, n = 80 |
|------------------------------------------|-------------------|----------------|---------------|
| Clinical or radiographic examination | 3 (50%) | 51 (69%) | 54 (68%) |
| Treatment: AGP | 3 (50%) | 17 (23%) | 20 (25%) |
| Treatment: non-AGP | 0 | 6 (8%) | 6 (8%) |

Abbreviation: AGP, aerosol-generating procedure

**Record-Keeping**

The person spoken to was recorded in the clinical notes for 103 of 143 (72%) completed appointments. Investigation revealed this detail had been recorded in the software for 100% of the appointments; however, an error in the coding for autogenerated clinical notes meant this information was not being pulled into the clinical note. Discharge letters were required for 37 patients and were completed for 36 (97%).

**Clinician practices**

Good practice identified included the following:

- Changing autogenerated text in the clinical notes to match a telephone consultation. Examples include changing ‘patient attended with’ to ‘person spoken to’ or changing ‘intraoral examination’ to ‘description of intraoral condition from parent/carer’.
- Providing a clear summary at the end of the notes for the next face-to-face visit.
- The first SOP issued on 14 May 2020 included criteria to grade the clinical priority and instructions to include the priority and identify aerosol-generating procedure (AGP) need when requesting appointments. An immediate improvement was noticed in the following six clinics.

   Areas for improvement identified included the following:

- Inconsistency in the information recorded by staff conducting clinics.
- Clinicians sharing their NHS email addresses with parents or carers for pictures to be sent and reviewed. The divisional policy at the Eastman Dental Hospital, UCLH, encourages patient contact through a generic departmental email address to avoid failed communication in the event of staff absence and sickness, or when staff leave the Trust.

**Changes implemented**

- New EHRS note- and letter-generating templates were created for tele-clinic appointments, correcting errors in existing templates and incorporating the good practices highlighted.
- A template email and document providing instructions for taking and sending patient pictures were created to be sent and received through the administrative team when images were required.
- The EHRS appointment request proforma was amended to include fields indicating the booking priority, whether the appointment would be virtual or face to face, and AGP or non-AGP.

**Evaluation of changes**

A Google Form (Google®, California, USA) survey was conducted in February 2021 to gain feedback on the new note and letter templates. Ten responses were received and showed 100% of those surveyed felt the new templates had improved workflow. Qualitative responses on the impact of the templates showed agreement around the themes of improving efficiency and improving consistency between clinicians and that the templates served as prompt to clinicians, which was felt to improve the quality of assessments.

Further changes recommended included making the social history a mandatory requirement (preventing electronic signing of the notes without an entry) and recording whether the child was present for the assessment in order to improve safeguarding.

Receiving patient photographs through the admin team was initially successful; however, once routine face-to-face care resumed, the increased workload for the administrative team led to delays in images being uploaded.
DISCUSSION

The WNB rate was lower for tele-clinics than for face-to-face clinics prior to the COVID-19 pandemic (14.9%). This could be due to the period of the evaluation coinciding with the first national lockdown or due to the appointment being initiated by a clinician calling the parent, thus eliminating missed appointments due to forgetfulness or difficulties travelling.

A high proportion of the clinics (74%) were booked with patients who had been triaged for tele-clinics. The triage criteria included those ready for discharge explaining the high proportion of discharge outcomes and patients requiring monitoring of eruption of teeth, which explains the high proportion of patients seen with dental anomalies.

Of all patients assessed, 44% were managed without the need for a face-to-face assessment demonstrating that tele-clinics have been useful to provide continued patient care during the cessation of routine service and to triage appropriate use of face-to-face clinics during the COVID-19 pandemic.

Evaluation of the note and letter templates highlighted the role of a proforma in prompting staff to complete all aspects of an assessment, thereby improving the quality of the assessment.

Key aspects for the success of tele-clinics included full remote access and functionality of the EHRS, the ability to make changes to and adapt the EHRS software to new ways of working, and an online team workspace, which allowed for responsive, rapid improvements to be made and shared across the department. Although this service evaluation demonstrates that tele-clinics have had a positive impact, further evaluations are required to identify patient and clinician opinions, to assess where they are most effective, and to ensure patient safety as tele-clinics is likely to continue to be used in dental hospital services in some form.

ACTION PLAN

Standards for conducting tele-clinics have since been identified and incorporated into a new edition of the SOP. These standards incorporated the identification of vulnerable patients, management of parents/carers who do not speak English, management of patients who WNB, and standards for record-keeping and communication.

The outcomes of this service evaluation were shared across the hospital and with local community dentistry service providers via online presentations.

Further service evaluations are planned to assess the usefulness of tele-clinics, and patient and clinician opinions on their use, and to determine which patient groups are most suitable for tele-clinics.

REFERENCES

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