



Dental Public Health in Action: Utilising a telephone triage system to run an Urgent Dental Care Hub during the COVID-19 pandemic

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This paper aims to explore the outcome of a telephone triage system used by different team members to run an Urgent Dental Care Hub (UDCH) during the first wave of the COVID-19 pandemic. It will also look at the adjustments made to the system because of the challenges faced. Data were collected from the telephone triage proforma and clinical notes of patients that were triaged from 2nd April to 10th June 2020. With 65% of telephone triaged and accepted patients receiving definitive treatment that alleviated the presenting complaint, the value of telephone triage is highlighted in streamlining an urgent dental care service during a viral pandemic.

Public health competencies being illustrated:

- Dental public health intelligence
- Developing and monitoring quality dental services

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Initial impetus for action

With the worldwide outbreak of severe acute respiratory syndrome coronavirus (SARS-CoV-2), the UK took public health measures to reduce the spread of the virus by going into a UK-wide lockdown on 23 March 2020 (GOV, 2020).

To minimise infection risk, dental practices in England were asked by the Chief Dental Officer to cease non-urgent dental care from 25th March 2020. The unprecedented end of routine dental care meant provision for urgent treatment was needed. Dental practices had to establish a remote urgent care service providing telephone triage (NHS England, 2020a). Urgent Dental Care Hub (UDCH) networks were created across England in partnership with acute, primary care and Community Dental Services providers. The new service was created to meet the urgent oral health needs of the London population during the pandemic. A pathway was created for patients to access the UDCH. Patients were asked to contact their dentist or use the National Health Service (NHS) 111 service (NHS England, 2020b). The NHS 111 service provides advice or urgent treatment. It can be accessed online or through a phone by dialing 111. NHS 111 can make appointments directly with the General Medical Practitioner and Urgent Treatment Centre (NHS England, 2020c).

Solution Suggested

The Dental Department at St George's University Hospitals NHS Foundation Trust in South West London became a UDCH on 2nd April 2020 and operated until 10th June

2020. The service ran from 9am to 5pm from Monday to Friday. To reduce patient contact and promote social distancing, a telephone triage system was adopted in the UDCH at St George's Hospital. The telephone number for the UDCH was shared with NHS 111 service and other hubs in the locality. Patients were also referred via Accident and Emergency at St George's Hospital/ General Dental Practitioners (GDPs)/ Specialist orthodontists/ other Trusts.

Patients sent by NHS 111 and GDPs had an element of triage before referral to the UDCH. This was predominately to determine the level of urgency of the presenting complaint and establish if they required emergency treatment in A&E or were suitable for treatment by a dental professional.

The triage pathway started with the lead dental nurse completing a triage proforma over the phone (Figure 1). The proforma was created by the department to collect key information, including the history of presenting complaint, medical history, identification of immunocompromised and shielding patients, and photographs and radiographs to be sent. The completed proforma was passed to Dental Core Trainees (DCTs) in the Dental Department who would request more information from the patient if necessary and discuss the urgency of the referral with the lead Consultant.

The criteria for accepting the referrals were based on the Scottish Dental Clinical Effectiveness Programme guidelines on the 'Management of Acute Dental Problems During COVID-19 Pandemic' (SDCEP, 2020). In conjunction, local procedures were established for managing patients based on their COVID-19 status and whether they were shielding.

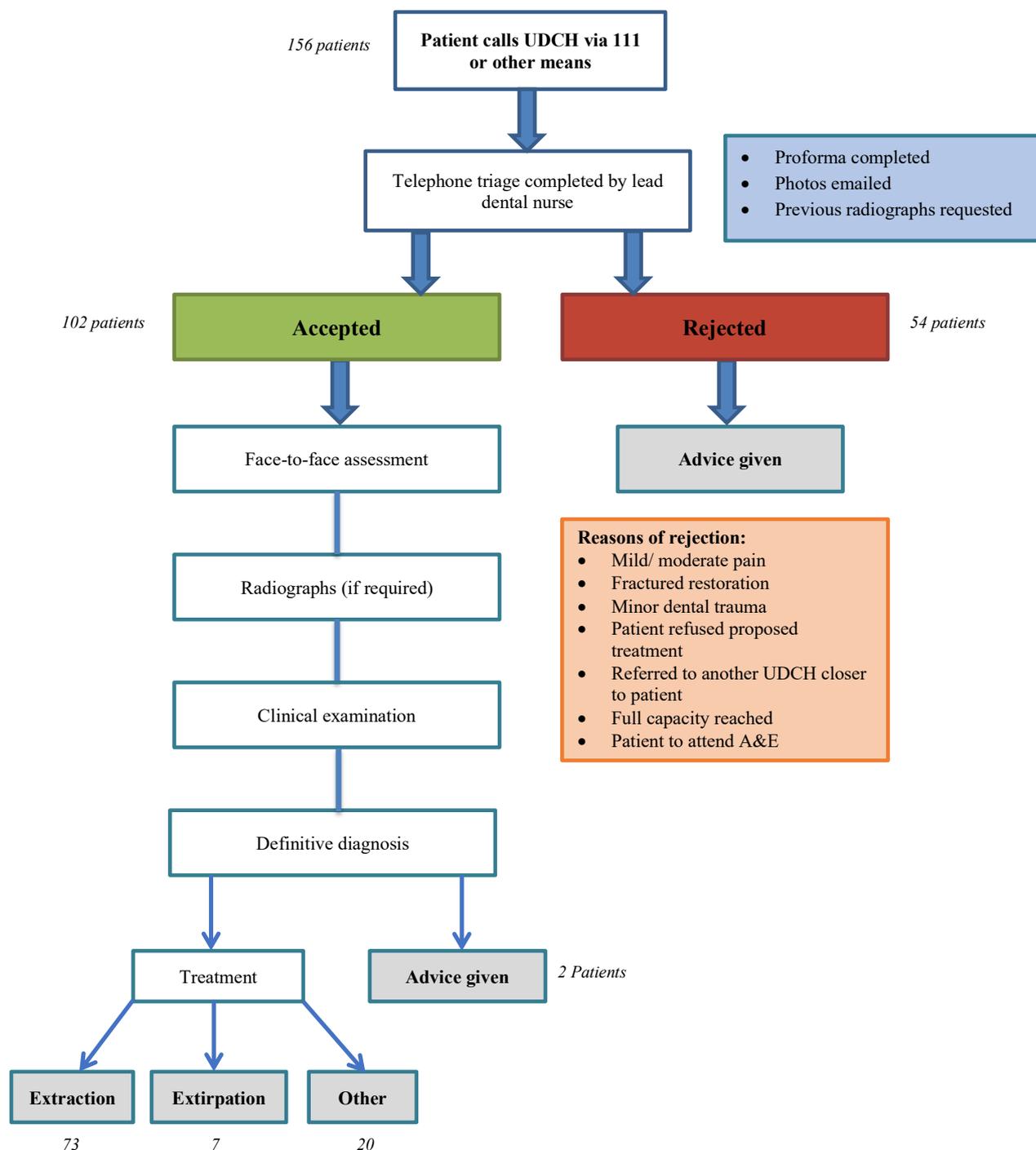


Figure 1. Flowchart of the triage pathway

If urgent treatment was required, an appointment was made. Patients had a face-to-face appointment where they were assessed clinically and radiographically if required, and treatment was undertaken. Patients were then given a discharge summary of their treatment.

Outcome

In total, 156 patients were referred to the UDCH between 2nd April and 10th June 2020, of which 42% were referred from NHS 111 service and 37% from other UDCH. Most (65%) referrals were accepted for a face-to-face assessment, with the other 35% rejected. The mean age of referrals was 42.3 years. Approximately half (47%) were male. The most common diagnoses for all referrals were

acute apical abscess (40%), irreversible pulpitis (20%) and fractured teeth/ restorations (14%). Table 1 details the information collected from accepted and rejected referrals using the telephone triage proforma.

Four shielding patients were accepted for treatment and five who lived with someone shielding. These patients were allocated a suitable appointment time and kept separate from other patients. Of the 102 patients accepted for treatment, 73 had extractions, 7 had extirpations and 20 had other treatment (Figure 1). Other treatment included review of trauma to permanent teeth, temporary dressing of tooth and orthodontic emergencies.

The 35% of rejected patients were rejected for reasons other than mild/ moderate pain, fractured restorations or minor dental trauma. ‘Other’ reasons included patient

Table 1. Characteristics of 156 patients collected from the telephone triage proforma

		Accepted * n= 102 (66%) %	Rejected * n= 54 (34%) %
Age	Mean (Range) (y)	42.3 (4-85)	43.9 (7-88)
Gender	Male	47	46
	Female	53	54
Referral from	NHS 111	39	46
	UDCH	35	41
	GDP	3	6
	A&E	8	4
	Other	2	2
Complaint	Pain	88	83
	Trauma	8	2
	Swelling	2	6
	Other	2	6
Pain	Average days of onset (n)	9.5	9.3
	Affected sleep	81	50
	Affected eating	78	50
	Average severity	8.6	6.0
Analgesia taken	Paracetamol	25	119
	Ibuprofen	6	24
	Both	32	19
	Other	19	7
Antibiotics taken	Yes	68	41
Swelling	Extra-oral	12	11
	Intra-oral	18	11
	Both	25	0
Trauma	Deciduous tooth	1	0
	Permanent tooth	7	2
Further information sent	Radiographs	21	2
	Photographs	55	17
Reason for accepted referral	Severe pain	88	
	Trauma	8	
	Swelling	2	n/a
	Bleeding	0	
Reason for rejected referral	Other	2	
	Mild/ moderate pain	n/a	57
	Fractured restorations		2
	Minor dental trauma		4
	Other		35

*Missing data has not been reported so some totals do not equal 100%

refusing proposed treatment, referred to another UDCH when outside of catchment area or when at full capacity, or instructed to attend A&E. Although patients referred to the UDCH from NHS 111 and GDPs had an element of triage before referral, 25 of 65 referrals from NHS 111 (38%) and 3 of 6 from GDPs (50%) were rejected after the UDCH triage.

Challenges Addressed

Formatting the proforma

Remote consultations were used to limit the number of patient interactions. A comprehensive triage proforma aided diagnosis over the phone and assessing the urgency of the treatment required. When piloting the proforma, key information was missing and not all sections were completed by the triage nurse and clinician. Therefore, the proforma was formatted as a table and checklist to make it user-friendly and to gather the necessary information in a structured manner. The proforma improved the efficiency of the triage, allowing clinicians to accept referrals for urgent dental problems only.

Shielding patients

The triage proforma collected a medical history from the patient, this brought to light the new challenge of accommodating for patients that were shielding or living with someone who was shielding. The Dental and Maxillofacial Department share a waiting room, which would be busy during the day. Therefore, adjustments were made to give shielding patients the first appointment the following morning when the waiting room was less occupied to allow social distancing.

Requesting photographs and radiographs

A major challenge of telephone triage is the inability to examine the patients clinically and radiographically. Therefore, patients were asked if they had a radiograph taken by their dentist recently. If so, a request to obtain a copy of the radiograph was sent. Radiographs were received for 20% of patients accepted for treatment, thereby reducing the need for unnecessary repeat radiographic exposure.

Most (55%) patients accepted for treatment sent a photograph of the tooth with the problem to a secure email address. Photographs allowed visual assessment, which was useful if patients found it difficult to describe the tooth or problem in clear terms that would enable a clinician to diagnose the problem. With photographs and radiographs, the clinicians were able to improve remote assessment of the tooth, diagnose the problem and provide advice or treatment options compared to only taking a history. This allowed the dental team to prepare the surgery for the procedure expected.

Future Implications and learning points

Tele-dentistry was key to Dentistry's response to COVID-19. It has the potential to improve access to oral healthcare by exchanging clinical information and images for dental consultation and treatment planning virtually (Jampani *et al.*, 2011).

Other UDCHs in the UK also benefited from effective telephone triage systems, especially as a COVID screening tool to separate 'COVID-asymptomatic', 'COVID-symptomatic' and shielding patients (Carter *et al.*, 2020). They have been found to be an essential preventative measure against COVID-19 in the dental practice when supported by a questionnaire on recent symptoms and movement, as well as body temperature measurement and the use of specific PPE (Villani *et al.*, 2020).

The advent of COVID-19 had a major impact on routine dental care; however, the UDCH posed an opportunity to learn new lessons. It demonstrated the importance of obtaining a detailed history from the patient over the phone and diagnosing dental problems provisionally without physically assessing patients. These skills might be used by any member of the dental team in primary or secondary care and proved important for others setting up similar centres in the future.

New challenges will be faced as the face of dentistry changes. This is seen by the rising number of patients seeking emergency dental treatment in A&E, which could be treated in primary care (Blackhall and Singh, 2021). This indicates a need for restructuring of the provision of emergency dental care and the need to develop a reliable means of triaging patients requiring it.

Improvements could reduce the need for patients to go through multiple triage systems before obtaining treatment. A first port of call could provide a single, effective emergency dental triage pathway to collect all the necessary information. This could significantly help patient access to emergency treatment, as well as reduce the costs of having several triage systems that could be streamlined into one.

Conclusion

The creation and adaptation of a new urgent dental care pathway at the height of the COVID-19 pandemic presented several challenges. An effective telephone triage pathway proved invaluable to allow the team to prepare appropriately and manage the patients' expectations, as well as deliver safe, effective high-quality care. With 65% of telephone triaged and accepted patients receiving definitive treatment which alleviated the presenting complaint, the value of telephone triage has been highlighted in streamlining an urgent dental care service during a viral pandemic.

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