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Setting up and maximising the usage of an Urgent Dental Care Centre in Blackpool. Sharing our experiences

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Abstract

An integrated Urgent Dental Care Centre with Tier 2 Oral Surgery support was set up in Blackpool starting 24th March 2020. This was in reaction to the COVID-19 pandemic. In the first month 1433 patients had telephone consultations and 713 extractions were performed. The challenges surrounding set up and continuity of care are discussed.

Keywords: COVID-19; Exodontia; UDCC; staff protection; patient safety; PPE

Introduction

COVID-19, a novel coronavirus is the causative pathogen for the current global pandemic. This initially originated from China.[1] and has progressed throughout the world to the United Kingdom. On the 30th January 2020 the World Health Organisation (WHO) announced that this constitutes a public health emergency of international concern.[2] Due to the rising number of deaths in the United Kingdom, this led to restrictions on general dental practice, and guidance from the Chief Dental Officer[3] on the 20th March 2020.

This guidance suggested that 1. Dentistry face to face should only be undertaken face to face in an Urgent Dental Care Centre (UDCC), that 2. Initial treatment should be Advise, Antibiotics and Analgesia (AAA), and 3. Aerosol Generating Procedures (AGPs) should be avoided wherever possible. The reason for this, is that COVID-19 is transmitted by saliva, and aerosol.[1] This has presented challenges for patients and for clinicians. The Prime Minister announced strict social restrictions[4] starting on the 23rd March 2020.

As we all know, dentistry cannot be managed definitively with antibiotics alone. The need for an appropriate venue for exodontia is key to dental management. There was clear guidance from NHS England and from the Chief Dental Officer that exodontia is not an Aerosol Generating Procedure, and requires eye protection, fluid resistant mask, disposable apron, and gloves as personal protection.[5]

The 2019 Social Deprivation Index ranks Blackpool as the most deprived of 317 Local Authority areas in England,[6] based on both the average LSOA score and concentration of deprivation measures, and is also now the most deprived Local Authority based on the lesser-used rank of average score measure. As such there is a high need for dental treatment.[7] Urgent engagement with the Local Care Commissioning Group was central to the rapid setting up of the

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Table 1
Table to demonstrate to the number of patients seen and treated at King Street Dental Practice.

Date	Telephone advice (AAA)	Prescription of antibiotics issued	Temporary restoration	Recementation of crown/bridge	Dental extraction	Extraction to telephone consultation percentage (%)	Prescription to telephone consultation percentage (%)
24-30 March 2020	235	103	7	10	105	44.7	43.8
31 March - 6 April 2020	283	165	5	3	112	39.6	58.3
7- 13 April 2020	344	101	5	4	176	51.2	29.4
14-20 April 2020	268	68	10	2	167	62.3	25.4
21-27 April 2020	303	86	5	2	153	50.5	28.4
Total	1433	523	32	21	713		

Urgent Dental Care Centre. It evolved and adapted quickly over the first week to ten days to improve the service. This was central to preventing the hospital services being overwhelmed with dental issues.

Method

Engagement with Care Commisioning Group (CCG)

An initial telephone meeting with the Dental Care Commissioning Group lead on the 13th March 2020 occurred. This happened as we both felt that the COVID-19 issue was intensifying, and a coherent integrated plan blending primary care, Tier 2 oral surgery, Emergency Dental Services and Secondary Care was needed if either lockdown occurred or normal dental practice changed.

At this meeting we agreed that King Street Dental Practice, a large 11 surgery practice with a large NHS contract, geographically central to the areas of highest social need, currently holding a Tier 2 contract, was the most appropriate venue.

We felt that the minimum level of face to face care that should be provided without AGPs would be placement of a temporary restoration, recementation of crown and exodontia.

We agreed that to prevent AGPs, exodontia should be undertaken by experienced (Tier 2) practitioners unless the General Dental Practitioner was fully confident managing extraction under local anaesthetic.

First week

On the 24st March after the advice from the Chief Dental Officer and the Prime Minister, we engaged with the CCG and had ratification to start the Urgent Dental Care Centre officially. We staffed with two General Dental Surgeons (GDS) doing a combination of telephone triage and face to face consultation, and a tier 2 oral surgeon present. Each dentist had two surgeries and two nurses. This was to allow efficient cleaning of one room whilst the other was in use. There are three waiting rooms to allow for social distancing.

Table 2
Table to demonstrate rate of successful extraction.

Extraction	Number
Successful extraction without drill	675
Drill used	17
Knowingly left retained root tips (apical third)	19
Required further surgical treatment	2

With regards to staff, one staff member has a neurological condition, so was excused face to face interaction. A nurse who has had Intensive Treatment Unit admissions for asthma was shielded at home.

Second week and beyond

Due to demand the CCG asked for the surgery to be open seven days a week. We agreed to this, and provided a minimum of two GDS practitioners and one tier 2 oral surgeon each day including Bank Holidays. Depending on demand we increased numbers of both GDS and Tier 2 practitioners so that patients did not wait beyond 36 hours for treatment.

We collated data for the patients, and tabulated the data to demonstrate the work which had been undertaken.

Results

Table 1 demonstrates that there was a rapid rise from 235 telephone consultations between 24th and 30th March 2020 and 344 telephone consultations between 7th and 13th April. Table 1 also shows that the percentage of telephone consultations which resulted in an extraction increased from 39.6% (31st March to 6th April 2020) to 62.3% (14th to 20th April 2020). The percentage of antibiotic prescriptions issued per telephone consultation reduced from 58.3% (31st March to 6th April) to under 30% for the next three weeks. The numbers of recementations and temporary dressings were low.

Table 2 shows that 94.7% of extractions were successful with forceps or elevators. In 2.7% of cases we accepted that apical tips of roots (apical third) had been left, and the patient was informed. 2.7% of cases required the use of a drill to complete the extraction. 10.5% (2/19) patients who had an

Table 3
Patients who required treatment in secondary care.

Medical issue	Reason for treatment in secondary care
Undergoing current chemotherapy for lymphoma	Required full blood count, and clotting screen
Factor XI deficiency	On site haematology in case of blood products being required
INR 4.6	Elderly lady who was struggling to manage her warfarin with large abscess given Vitamin K
Renal transplant patient	On reflection could have been managed in primary care, but full blood count done.

Table 4
Table to demonstrate the number of Emergency Department attendances with dental issues.

Month (2020)	Number of dental attendances
January	7
February	3
March	4
April (until 21st)	3

Table 5
Table to demonstrate the average number of days per month exposed to clinical practice.

Type of practitioner	Average number of days exposed to clinical practice per month
Tier 2 Oral Surgeon	10.3
General Dental Practitioner	9.7
Dental Nurse	8.6
Support Staff (Reception/Management)	10.5

apical third of a root left returned for completion of extraction due to ongoing symptoms.

Table 3 showed that three out of four patients who presented in primary care, had good reason to be seen in secondary care.

Table 4 showed that Blackpool Victoria Hospital had no significant Emergency Department attendance rise due to COVID-19 and the suspension of normal dental services.

Table 5 demonstrates that there was a range of patient exposure from 8.6 days per month to 10.5 days per month.

Discussion

The initial advice from the Chief Dental Officer suggesting that the AAA strategy be used for the management of patients,[3] clearly was not going to be entirely effective in the long term. The first two weeks show that the percentage of telephone consultations resulting in a prescription being issued was higher (43.8% and 58.3%) in the first two weeks of guidance. In the next three weeks it was far lower (29.4%, 25.4% and 28.4%). This is suggestive that a large cohort of patients who were managed with AAA had not been successful, and were more willing to accept a dental extraction under local anaesthetic due to the ongoing pain or infection. This is also confirmed by the telephone consultation to extraction percentage increasing in the last three weeks (51.2%, 62.3%,50.5%) compared to the first two weeks (44.7%, 39.6%).

The strategy to leave apical root tips to minimise AGPs seems to be successful as only 10.5% of patients returned for further treatment and completion of the extraction. The numbers are small, and the follow up period is short. However, only one of those two patients required the use of a drill to complete the extraction.

The normal use of an air rotor drill (fast hand piece) with integrated cooling aerosol clearly is an AGP, and requires a filtering face piece respirator, as well as using full gown, visor and gloves. By using a fissure burr in a straight hand piece with non-concomittant irrigation of the tooth via a 10 ml syringe with saline does not generate an aerosol. This was only done in 2.7% of cases to divide roots and aid bone removal. The irrigation is used to cool the surrounding tissues, and drilling does not occur at the same time as irrigation. Whilst this is not ideal, it reduces risk, and provides a pragmatic solution.

All three Tier 2 practitioners work at Blackpool Victoria Hospital (1 Consultant, 2 associate specialists). The aim was to reduce the AGPs being required, and by having experienced associate specialists and consultants performing the extractions, we feel that this kept the rate of successful exodontia high. Also being present in the same building as the GDS practitioners helped guide and manage patients also. By having practitioners who work in primary care and in secondary care, enabled the smooth and timely arrangement of care for those patients who required secondary care.

The engagement with the local Care Commissioning Group was central to the success we perceive has happened, and continues to happen. Their openness to ideas, and involving us with planning is central to this plan being actioned immediately. Integration of services has enabled there to be minimal delays. Normally Tier 2 oral surgery services in Lancashire are managed on an e-referral service (DentalReferrals.org) which is initially triaged, however to facilitate easy referral we have arranged with the Emergency Dental Service and local practitioners to e-refer direct to us. The Lancashire Dental telephone helpline has our telephone number for patients to contact directly.

The lack of local and regional dental services, has resulted in patients travelling up to one and a half hours in a car to receive treatment. The provision of this integrated UDCC hub with Tier 2 we feel has prevented a spike in Emergency Department attendances as Blackpool Victoria Hospital (Table 4).

We have a responsibility to shield both staff and patients. In terms of staff shielding we checked all staff medical histories, and have shielded one nurse from home, and one dentist is not doing face to face consultations. As such we have had had

no members of staff who have been symptomatic or tested positive for COVID-19.

Patients are questioned at telephone consultation with regards to health and to symptoms. We rely on their honesty, as with all medical consultations, but no patient is allowed in the building unless they have had a telephone consultation.

Patients are shielded with staggering of appointments, the use of two dental surgeries for one dentist to allow extensive cleaning of one surgery whilst the dentist uses the other surgery. This allows for an efficient but safe volume of patients. The use of one waiting room for one patient allows for appropriate social distancing.

Patients also need to have an alteration in expectation. We have had up to 980 deaths per day,[8] in the United Kingdom, and over 20000 in total currently. The lack of an ability to perform root canal treatment, and the loss of some teeth which could ordinarily be saved over a few months is unfortunately a sequelae. If we were at war, and losing almost 1000 people a day would we complain about losing a few incisors or premolars? Unfortunately, the loss of teeth is likely to be a smaller price to pay than some cancer patients, who are currently waiting for treatment.

Conclusions

I think that engagement with the local Care Commisioning Group is essential to the success of a UDCC.[9–11] This is a two way street. Having a central integrated hub where the Emergency Dental Services and Tier 2 Oral Surgery Services work together, allied with secondary care practitioners who work in primary care allows for a large volume of patients to be treated quickly and in the appropriate setting.

Space is also important. By having space, it allows for efficiency and for both staff and patient safety.

Our Chief Dental Officer (CDO) is the leader of dentistry, and the most senior dentist. I cannot find any good evidence currently that a dental extraction is an aerosol generating procedure. Until there is good evidence, we will follow the advice of the CDO, and of NHS England, and continue to use the appropriate protective equipment which they both advocate.[3,5]

Will we ever practice dentistry in the same way again? We think that it is unlikely. Our view is that to prevent us failing our patients as we have done currently, we must have a much closer relationship between primary and secondary care. It also begs the question: Given that we are, and continuing to manage without a large amount of secondary care dental provision, could we continue to manage without it beyond COVID-19?

Ethics statement/confirmation of patients' permission

Not required as this was an audit. No patient information was used.

Conflict of interest

We have no conflicts of interest.

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