Local primary care 'dental clusters':

Improving collaboration and the delivery of specialised services in dentistry?

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Introduction

The emergence of the novel corona virus (SARS-CoV-2) has had a significant impact on general dentistry and the related speciality services. Urgent Dental Centres (UDCs) were set up throughout the country, with the East of England amongst the first regions to describe this urgent care system in their COVID-19 Standard Operating Procedure, as a pathway for patients to access urgent and emergency dental care during the first national lockdown. Following the lockdown measures, East Anglia is adapting a 'new normal', by experimenting with dental 'clusters' to help navigate the issues facing our profession, intensified by COVID-19.

Numerous difficulties facing providers and clinicians such as; rapidly changing guidance, personal protective equipment (PPE) challenges, clinical downtimes, lengthy referral pathways and patient backlogs have placed significant stresses on the profession with respect to the delivery of face-to-face care for patients.

Dental clusters can aim to improve access to dental services, address the impact of rurality on workforce, and be flexible to meet the needs of local populations. The idea of a local cluster or network is commonplace in the wider healthcare system but is underdeveloped and underreported on in dentistry.

This article expresses the experiences and opinions of the authors, and discusses how clinicians within the region have worked together to adopt a clustering model which can be further developed and progressed upon.

We outline an elementary cluster model in this paper as it could be of benefit to other primary care dental providers on how they could initiate their own dental cluster.

What is a cluster?

A healthcare cluster is a network of care providers which serves a geographic region.[1,2] The essence of a conventional cluster is to bring together local services to provide a range of healthcare services to the local population through simplified referral as well as payment systems.[1] Examples of healthcare clusters include Primary Care Networks (PCNs), which comprise of neighbouring general practices that have teamed up with other partners in community and social care to provide a wider range of health and wellbeing services. These services are targeted to the needs of their local population, typically serving communities of around 30,000 – 50,000.[3] Therefore, dental clusters

Abstract

There have been numerous challenges faced by the dental profession during the COVID-19 pandemic. Throughout this difficult period, a spirit of collaboration and peer support have been crucial in helping to maintain urgent care access for patients and in assisting practices with their return to full operational activity.

Dental clusters can provide a different model of working, and can provide improved access to dental care for patients as well as reducing inequalities. They can also improve collaboration and communication between primary care dental services. Furthermore, clusters can help to provide a support network for clinicians and facilitate better integration with medical colleagues. Dental clusters may also provide a better platform for innovation to meet the demands of local populations.

Importantly, we feel that clustering can bring educational benefits to colleagues, as it can encourage a multi-disciplinary teamwork approach to patient care and to the needs of the local population, through regular cluster meetings. This can benefit colleagues through peer review, case-based discussions, mentoring and upskilling within clusters.

We aim to outline our experiences of a basic cluster model.

Key points

→ A dental cluster is a network of dental services serving their local population within a geographical area
→ Dental clusters can help improve urgent care access for patients through improved collaboration and communication between cluster practices
→ Clustering can allow educational opportunities through direct speciality support, peer review, case-based discussions and mentoring.

are simply a network of dental care services which serve their local population within a geographic region.

Clusters of 'right size' and 'right elements' for their local population are needed, with an organic bottom-up approach led by the localities to find a cluster arrangement that suits the demands of the population and the skillset amongst the cluster.

Aims of our dental clusters

The aims of our dental clusters are outlined in Table 1.

Cluster model
Background

The East of England was one of the first regions to set out provision of urgent care during the COVID-19 pandemic in its Standard Operating Procedure (SOP) document.[4] A de novo, centralised and regional clinical triage system (CTS) as well as urgent dental centres (UDCs) for treatment were implemented swiftly for the entire region. This provided an accessible and equitable pathway for residents to access urgent as well as emergency dental care, in and out of regular service hours. Significant attention was given to appropriate triaging of cases by the CTS to ensure that treatment with 'advice, analgesia and antimicrobial means where necessary' was provided, with treatment reserved for those truly urgent cases which were subsequently referred to the appropriate UDCs'.[5] Thus, all non-essential contact as well as unnecessary travel was avoided, in line with The Scientific Advisory Group for Emergencies (SAGE) guidance.[6] As lockdown measures were gradually relaxed, so were elements of the improvised urgent care system, which slowly came to a halt across the region. UDCs continued their provision of aerosol generating procedures (AGPs) which helped provide a continued pathway to urgent dental treatment for patients whilst primary care dental services resumed operational activity. Therefore, UDCs were naturally a source of support for general dental practices and other primary dental care services in their locality. Hence, it was beneficial to link primary dental services together in a small network to improve the patient journey to urgent care treatment.

In East Anglia, like in many other places in England, referrals such as Oral Surgery referrals are managed by an online referral management system. Online referrals from general dental practitioners (GDPs) are processed and sent to appointed 'level 2' triagers. These triagers are either specialists or dentists with enhanced skills in Oral Surgery and work to referral guidelines that have been accepted by the Oral Surgery MCN. The referrals are then directed to the appropriate care settings in the community offering 'level 2' services, or to secondary care

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Table 1 Aims of dental clusters
Aims
Improve urgent dental access for patients
Support a preventative approach and address regional inequalities in oral health
Support closer communication and collaboration between primary care dental services and with other healthcare colleagues
Supporting a multi-disciplinary approach to patient care and the needs of the local population
Supporting and developing the dental workforce. Upskilling of dental professionals through peer-to-peer development and other educational opportunities.
Future aims
Delivering skill mix models of care and an upskilled dental workforce to meet complex needs rather than referral to tertiary care
Integration with healthcare colleagues such as general practitioners, pharmacists, optometrists and secondary care specialists
Providing greater opportunities for dental practices to support their local population
A flexible model of renumeration which moves away from Units of Dental Activity (UDAs)

for 'level 3' services. Inappropriate referrals are rejected back to the 'level 1' settings. The CTS system set up during pandemic utilised the online referral management system to send urgent referrals to UDCs, which were based on a referral criteria accepted by the LDNs and written in the SOP.[4] The referrals were directed to the nearest UDC based on the patient's location and UDC availability.

East Anglia is well supported by the Managed Clinical Networks (MCNs), there are MCNs in; Oral surgery, Special Care Dentistry, Orthodontics and Restorative dentistry. These MCNs work closely with the Local Dental Network and the Local Dental Committees. Prior to the COVID-19 pandemic there was no established Urgent Care MCN, although urgent care pathways are supported by the rest of the Specialty MCNs. The commissioned urgent dental care services in our area largely consisted of Dental Access Centres in multiple locations. Contracts were also given to successful providers for in-hours and out-of-hours urgent dental activities.

During initial setup of dental clusters, the work was clinically led which allowed providers to work together flexibly. Commissioner involvement at this stage was to ensure appropriate numbers of UDCs and to ensure contractors were providing services. As the cluster model continues to develop, the commissioning team will have an important role in establishing effective referral mechanisms into dental clusters, and to contemplate a renumeration model for dental clusters that begins to move

away from UDAs and focuses instead on delivering preventative care[7] to an entire local population. This could involve flexible commissioning of current contracts or exploring alternate ways of working outside of current contractual constraints to support areas of work amongst providers that are necessary to meet the needs of the local population. Support will also be needed for referral pathways within clusters and with IT systems. In summary, dental clusters could be clinically led, with support from our commissioner colleagues.

Initial model: Improving urgent care and access

In our initial cluster model, there were core elements for improved urgent care provision in localities which consisted of:
1. UDCs providing complex procedures and dental trauma
2. Oral surgery UDCs providing Minor Oral Surgery procedures
3. UDCs providing treatment to children
4. General Dental Practices performing non-AGP treatment (or non-AGP UDCs) whilst they gradually became fully operational.

By linking together, individual primary care dental services can highlight amongst their cluster any significant issues affecting their capacity such as; high numbers of referrals, staffing concerns and PPE shortages. Communicating such issues clearly through regular cluster meetings helps participants to identify sites with capacity to direct patients and referrals towards as

appropriate. Learning and support around management of patient cases as well as operational requirements is facilitated with clinicians sharing relevant information, insights and experiences.

If intra-cluster referrals needed to be made, the online referral management system described above was adopted to facilitate this. UDCs were listed with the online referral management service and the referrer was asked to clearly state the name of the intended treatment centre on the form. Once the referral was received and triaged by the online referral management system, it was then sent to the stated treatment centre.

This allowed patients to be seen at their most local treatment centre, avoiding long distance journeys. Anecdotally, it can also mean a more even distributions of patients within clusters, resulting in shortened waiting times for patients.

Developing the cluster model
These initial clusters were encouraged to link more widely with further local general dental practices, specialists and level 2 providers across all specialties as shown in Figure 1. Importantly, clusters have also been linking in with other healthcare colleagues such as general practitioners (GPs) and pharmacists. Some clusters made great progress in achieving this, and have also gone a step further to forge links with local Accident & Emergency (A&E) departments as well as NHS 111.

Forming Clusters: The practicalities
→ Clusters are designated by approximate geographical areas. If possible following PCN footprints and avoiding an overlap with Sustainability and Transformation Partnerships (STP) or Integrated Care System (ICS) boundaries.
→ UDCs, Level 2 performers and specialty providers within a locality were contacted directly and asked to cluster. It was explained that this was to co-ordinate more efficient urgent care with specialty support for advice as well as assistance with referral pathways if needed.
→ General dental practices were contacted directly and invited to participate in clustering.
→ Gradual and persistent development is required to slowly increase participants and the various elements to clusters.
→ At the very initial development, the above primary care dental services were contacted directly by telephone where possible to

outline cluster structure, aims and benefits. Secondary email communication was sent if direct contact was not achievable.

→ Subsequent communication from the LDN and Local Area Team has promoted awareness of the dental cluster concept.

→ A 'cluster lead' is nominated per cluster group.

→ The cluster lead is asked to form a group on a secure communication platform (an example is Microsoft Teams) for their cluster. This allows instant messaging and prompt advice for participants around urgent cases. It also helps to organise cluster videoconference meetings

→ Videoconference meetings are flexible and left to cluster participants to decide on the frequency and timings.

→ The cluster lead is responsible for overseeing the regular organisation of meetings and sending out videoconferencing invites.

→ It is important that an appropriate representative from an involved practice is present at cluster videoconference meetings to provide updates. Other members of the practice team are also welcome should they wish to discuss a case or a particular issue. Therefore, the communication platform and videoconference meetings could include GDP's, dental care professionals and practice managers from practices.

Videoconferencing

In East Anglia, there are examples of clusters who utilise videoconferencing regularly; this is entirely flexible and dependent on time availabilities of cluster participants. Virtual meetings last approximately 30 minutes to keep discussions focused and concise. Although videoconferencing has been around for a substantial amount of time,[8] it has been particularly interesting to see the rapid implementation of this technology during the COVID-19 pandemic.

A typical virtual meeting agenda comprises:

a. Presentation of patient cases for advice, discussion or for appropriate referral to another cluster participant, such as to a level 2 provider

b. Specialists and Level 2 performers to provide any further educational input and advice. Also, to highlight any significant referral issues

c. Any other miscellaneous issues or business. Frequently, there is information sharing and discussions around standard operating procedure protocols
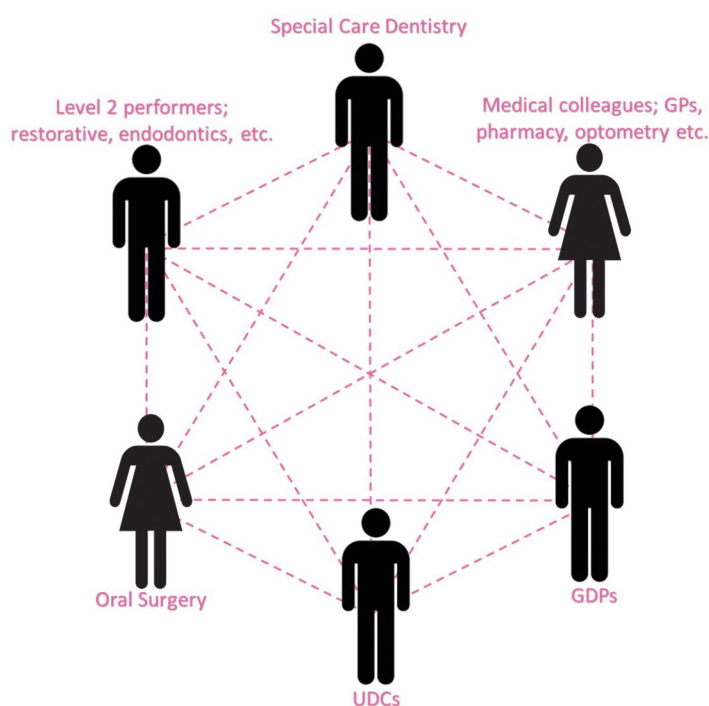
Fig. 1 Cluster model with primary dental care services linking directly with each other and with medical healthcare colleagues.

d. Continual professional development and education

Support

Clusters have the support of the Local Dental Network and the Managed Clinical Networks (MCNs) who oversee the cluster activity and advises the groups accordingly. The MCNs have been actively involved in organising and participating in clusters in East Anglia, helping to address the concerns that more patients could require admission for acute dental infections due to the disruption in routine dentistry.[9]

The experienced advantages of clustering
Improved urgent care access

During the strict lockdown measures of COVID-19, regular cluster meetings helped manage available capacity amongst the cluster, and this co-ordination helped to direct patients to sites where they could be managed and treated sooner. Patients would be treated at a site local to the patient, reducing travel times.

Some clusters have also linked with their local A&E department, Air Ambulance Services and NHS 111. This provides direct links for these services into clusters and optimises the patient's urgent care journey to appropriate treatment whilst reducing rates of unnecessary A&E attendance for dental issues.

Given the uncertainty around future 'waves' of infection and further local lockdowns, this model could help improve the resilience of dental teams to possible future urgent care demands.

A different model of working? Improving community links and outreach

The clustering model offers a clinically led model with closer working between dental practices and with wider health care partners such as GPs, Pharmacists and Optometrists which is a key part of the NHS long term plan.[10] Clusters can identify and address local population needs, supporting the reduction in health inequalities. It is a more flexible model to deliver prevention and enhanced services to a population, and may be a move away from target driven UDAs.

An example of an enhanced service includes improving access to care for vulnerable groups such as care home residents who have had recent attention drawn to the long-term poor provision of oral health care to this group.[11] For those practitioners interested in this work, integrating a model of care for care home residents could be more readily achieved with clustering. For example, utilising dental care professionals to provide fundamental

preventative oral health advice and assistance to care homes, whilst liaising with local domiciliary providers within their cluster to ensure that treatment for care home residents with urgent needs is provided promptly.

Collaboration and communication
Arguably and generally, dental practices often find themselves in an isolated bubble, trapped in the target-driven treadmill of UDAs. Quite often there may not be direct interaction with other local primary care dental services, particularly with regards to education, peer review and advice or support. We have found that adopting technological trends allows for regular communication between local providers which results in improved collaboration between practices and even the wider community. It can be a refreshing approach to working, may promote unity and opens up more possibilities for learning, mentoring and support.

Multi-disciplinary approach, upskilling, education and utilisation of skill mix
Clustering allows a multi-disciplinary approach towards patient care which can help meet the needs of patients in a local population. As colleagues with enhanced skills and specialists partake in cluster meetings, the experience and knowledge can be extended to develop colleagues through direct interaction, education,[12] peer review and case-based discussions.

We have experienced frequent discussions from clusters on communication platforms, often with participants asking for advice. Importance is given to representation from the various specialities at all levels. This helps support a platform for case-based discussions and management of various clinical and non-clinical situations. There is an opportunity for mentoring schemes, upskilling, utilising skill mix and peer review supported by the MCNs and LDN.

This could be particularly helpful for early years dentists who may benefit from early exposure to the various dental specialities, promoting the interest in the development of sub speciality interests within dentistry to the benefit of patients. These interests may be clinical, educational or research. This approach may also help with recruitment and retention issues of dental clinicians within this region. Whilst there have been various initiatives to help with this issue, working as part of a wider multi-disciplinary team with better educational opportunities may offer more

solid incentive for younger dentists to remain with their practices.

Furthermore, with the support of the LDN and the relevant MCNs a clinical governance structure for clusters is being discussed with consideration given to; data collection, audit, clinical delivery and outcome measures. The multidisciplinary approach in patient management at a primary care level as well as appropriate, encompassing governance will ensure high quality patient care.

The experienced issues with clustering
Funding
At present, there is no additional financial incentive to form a cluster, with funding being a regular query that arises. Clearly financial input is needed if this work is to develop substantially and is an important topic of discussion. The precise funding mechanisms is outside the remit of this paper. Presently within our region, clustering has been achieved by enthusiastic and innovative clinicians.

Participation
Unsurprisingly, a critical factor to the success of clustering is the level of engagement from clinicians and primary care dental providers across the cluster geography. It can be difficult for busy providers to fully engage with the clustering process, especially during initial formation. Co-ordinating initial cluster meetings is also a challenge and progress can be slow but steady. The main reasons for unwillingness to participate in a cluster seem to be because of a lack of time and incentive.

Referrals
In East Anglia, the online referral management system used can keep data for auditing purposes. There have been issues encountered with this system that have made intra-cluster referrals challenging. Lengthy authentication processes, time spent filling out forms and being unable to direct the referral to a recipient precisely can all be frustrating. Common issues encountered are referrals sent to primary care dental services that are large distances away from the patient. A more dedicated, flexible and streamlined referral system is needed to support the cluster model and ease referral pathways.

Conclusion
Dental clusters could possibly follow the example of primary care networks (PCNs)

which are a key part of the NHS Long Term Plan, with structure and funding for general dental practices to care for a geographical area in response to the needs of their local population.

In our experience, primary care dental services can very quickly connect with each other and organise clusters if willing. There is no current evidence or data to support dental clusters and further systematic evaluation of improvements is needed which will take place once appropriate governance surrounding clusters are in place. However, we hope that the embryonic model discussed provokes some thought, discussion and even consideration to forming a network with your local colleagues. ◆

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