

Development of a managed clinical network in oral medicine

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In brief

Suggests that managed clinical networks (MCNs) provide the structures and processes to raise standards of care delivered to a population through interdisciplinary cooperative, partnership working and active management.

Suggests that MCNs are highly relevant to dentistry and an overview of MCN development in West Yorkshire (population 2.235 million) is given.

Highlights that insight from the MCN is informing strategic approaches to development of improved patient pathways, quality improvement and workforce development.

Oral medicine is concerned with the oral health care of patients with chronic, recurrent and medically related disorders of the oral and maxillofacial region, and with their diagnosis and non-surgical management. For historical reasons care for conditions falling within the scope of oral medicine practice has been inconsistent with limited planning of clinical services. Managed Clinical Networks (MCNs) bring advantages to all stakeholders with a positive impact on patient pathways and access to equitable and quality care across a network of providers working in a coordinated way to make best use of NHS resources. MCNs provide a framework to address the limitations of legacy arrangements and are very relevant to dentistry. Here we describe oral medicine MCN development in Yorkshire and the Humber within the framework of the *Five year forward view* NHS policy. A step-wise approach is being taken across the region to introduce an MCN model that reflects cooperative working between oral medicine, oral surgery, oral & maxillofacial surgery and other stakeholders. Preliminary data are already informing how a regional oral medicine MCN can be further developed with the potential for translation of the lessons learned to other regions.

Introduction

Oral medicine is concerned with the oral healthcare of patients with chronic, recurrent and medically-related disorders of the oral and maxillofacial region, and with their diagnosis and non-surgical management.¹ The scope

of oral medicine practice primarily includes disorders of oral soft tissues (including the lips), salivary glands and pain or neurological dysfunction including pain of a non-dental origin. Oral medicine disorders may reflect local oral problems or oral manifestations of systemic problems.

Care for patients with conditions that fall within the scope of oral medicine is provided by a wide range of healthcare professionals including primary care dental team members. Oral medicine is a distinct speciality of dentistry. At specialist level, the key difference to oral surgery and oral and maxillofacial surgery is that in oral medicine the emphasis is on conditions that are primarily managed medically without the need for surgery. Medical specialists in primary care (including general medical practitioners) and in secondary care also encounter patients with problems that fall within the scope of oral medicine practice. Accordingly, close and collaborative interdisciplinary working is central to high quality care and best use of resources.

Patients should be at the heart of any health-care system and can reasonably expect to receive

equitable minimum standards of care irrespective of the healthcare provider and where they live. Furthermore, patients may also expect involvement of other healthcare providers, typically via referral, where there is clear indication to do so. Ad hoc local arrangements have historically been the norm; there is the need to move to a more structured and coordinated approach.

Skipper² described a managed clinical network (MCN) as 'self-supporting groups of professionals working together to ensure cross-speciality sharing of patients and expertise. They are a strong mechanism for ensuring that patients receive the care they need in a timely fashion from the most suitable professional in the network area.' Clinical services in various countries have developed MCNs with success.^{3,4} Benefits are best seen where patient care is provided by an interdisciplinary team who are not just coordinated but are effectively and actively managed. This requires investment in infrastructure and individuals to provide leadership as well as collective responsibility by network members.

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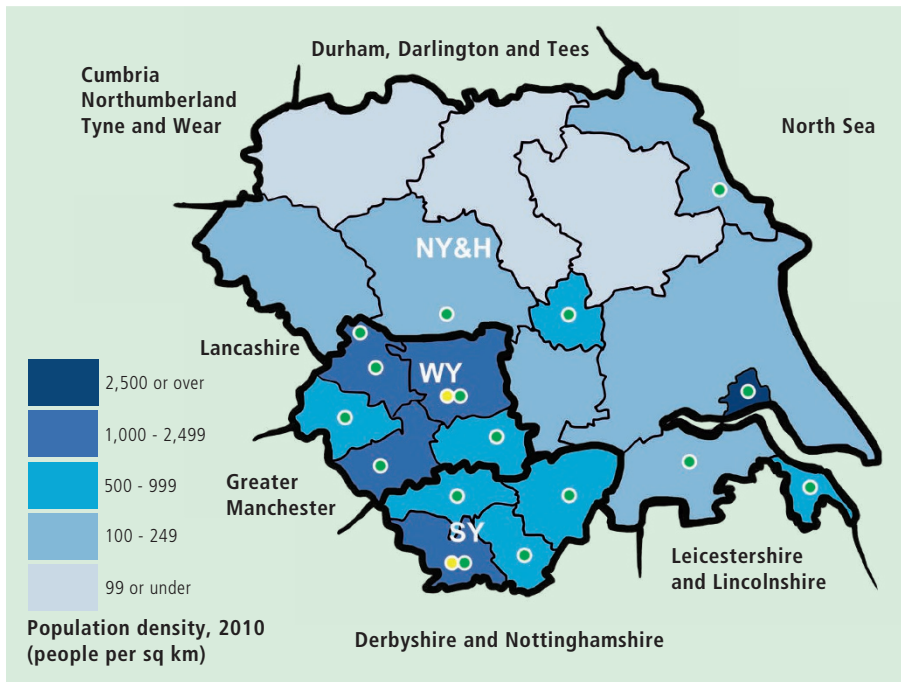
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Fig. 1 Population distribution across Yorkshire and the Humber with West (WY: 2.235 million), South (SY: 1.427 million) and North Yorkshire and Humber (NY&H: 1.690 million) boundaries marked. The sites of hospital-based oral medicine (OM: yellow [Leeds in WY; Sheffield in SY]) and surgical (green) services are marked and represent the historic providers of most oral medicine clinical care outside of primary care. Adjacent NHS area teams are named with recognition that patients may travel across boundaries for care. The population density data is adapted from 'The Office for National Statistics'.⁸ Note: there is no area in the region with a population density of 250–499 people per square km



United Kingdom (UK) MCN development in Scotland followed a 1998 policy decision reflecting the challenges of delivering care to urban and dispersed populations.

In October 2014 the Five year forward view⁵ tasked the NHS in England to improve equity and quality of care including MCNs within the goals of delivering better patient care outcomes delivered locally. Guides for commissioning dental specialties and their implementation followed from 2015 onwards.^{6,7} These set out different levels of care complexity and highlight that complexity levels do not describe contracts, or practitioners or settings. Current provision of level 1 and 3 are delivered primarily (but not exclusively) by primary care dentists and hospital-based specialists, respectively. Level 2 care is provided in many different settings. Over time there will be changes such as less level 2 care delivered in hospital-settings and more in primary care by dentists with enhanced skills. There is a need for an appropriate patient mix for training purposes, both at undergraduate level and as part of ongoing professional development. Although the specific policy decisions in these documents relate to NHS

care in England, the underpinning principles and goals have relevance to NHS care in all parts of the UK. The essence of any MCN is to deliver overall policy that fits local context. Accordingly, there will be variations in delivering the core features and benefits of an MCN for a given geographical area.

Here we will outline how an oral medicine MCN offers opportunities for improved patient care and use of NHS resources. Furthermore, we will describe the initial insight gained of relevance to oral medicine care and future planning following commissioning of an innovative MCN in West Yorkshire.

Yorkshire & the Humber

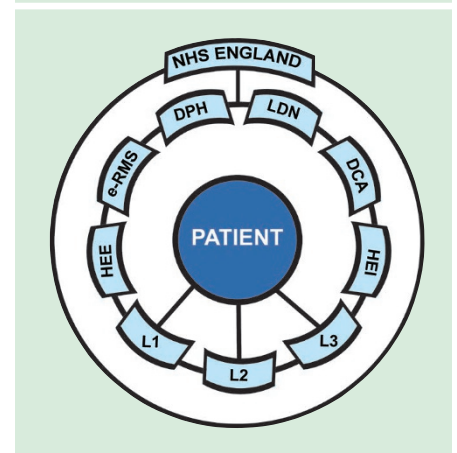
Yorkshire and the Humber is home to 5.352 million people in urban and rural populations dispersed across 15,400 square kilometres⁸ with approximately 750 NHS dental practices. All NHS dental care in the region is commissioned through NHS England. The oral health needs assessment for the population was published in 2015.⁹ The region subdivides in to West, South and North Yorkshire and Humber, each of which has a local dental network (LDN) who

work closely with the NHS England commissioning team to deliver the Five year forward view⁵ goals within the local context.

Outside of the primary care setting, oral medicine NHS care in Yorkshire and the Humber is provided by a diverse range of dental and medical providers. Care in hospital settings includes that delivered in two specialist oral medicine units and several oral and maxillofacial surgical services (Fig. 1). A national survey of oral and maxillofacial surgical units reported that more than a quarter of the 183 consultants who participated dedicated between 20% and 40% of outpatient time to oral medicine.¹⁰

The regional situation and its associated challenges informed the strategic approach to establishment of an oral medicine MCN in

Fig. 2 Stakeholders for MCNs involving oral medicine care are the same for the West Yorkshire oral surgery MCN as for the Yorkshire and Humber oral medicine MCN reflecting the importance of proactive interdisciplinary and inter-speciality cooperative working. The patient is at the centre of the process with care delivered by level 1 (L1), 2 (L2) and 3 (L3) providers working in a coordinated way with input and support from the local dental network(s) (LDN), Dental Public Health (DPH – Public Health England), NHS England Dental Clinical Advisor (DCA), the electronic Referral Management System (e-RMS) provider and providers of training and professional development (Health Education England [HEE] and Higher Education Institutes [HEIs – Universities]). The MCN is responsible to NHS England with the Yorkshire and the Humber secondary care commissioner a MCN member. The MCN is accountable to the LDN(s) with the Chair separately accountable to others depending on local arrangements



Box 1 Aims for the Yorkshire and the Humber oral medicine MCN

- Improve equality with regard to access to care
- Raise care quality standards, no matter the provider
- Define patient pathways and improve patient flow
- Up-skill the workforce through professional development and training
- Inform future workforce planning.
- Make best use of NHS resources.

Box 2 Advantages of an e-RMS

- Single entry point for all referrals allowing active real-time service management within fluctuations in demand and provider capacity
- Supporting patient choice
- Rapid, secure and reliable information (written and images) exchange from referrer to provider in standardised formats and integration with local IT systems
- Patients and clinicians tracking referrals online
- Enables, where appropriate, remote, anonymised clinical triage of referrals to a range of providers in primary and secondary care
- Improved partnership between referrers and providers through initiatives leading to improved guidance for referrers and referral quality (audit and review to shared standards)
- Data that informs strategic approaches to future service design, workforce development and the educational and training needs of all involved in the network.

Yorkshire and the Humber with an imperative to ensure a smooth, incremental and non-destabilising transition to new ways of working in partnership with all relevant stakeholders.

The aims for a regional oral medicine MCN in Yorkshire and the Humber reflect national policy and local context (Box 1). A coordinated approach that challenged established ways of working was required. It was clear that this could be achieved through collective interdisciplinary and inter-speciality working. It was neither sensible nor practicable within the regional context to establish an oral medicine MCN in a single service reorganisation. A stepped approach was more appropriate.

Establishing an innovative MCN

West Yorkshire has a largely urban population of 2.235 million⁸ and was the first area in the region chosen by NHS England for an MCN reflecting a range of issues.⁹ Over the next ten years there is a projected population growth in the five West Yorkshire local authorities. West Yorkshire has greater ethnic diversity compared to other parts of the region. Deprivation is associated with poorer oral health. The proportions of the population living in the lower two quintiles of deprivation is higher than the England average in Calderdale, Leeds, Kirklees and Wakefield with an even higher proportion in Bradford.

Within the local context there were benefits to be gained by moving some care, primarily intermediate minor oral surgery, from hospital to primary care settings through graduated change via establishment of an oral surgery MCN.⁶ It was also clear that any reorganisation could bring benefits to other areas of care and inform workforce development and planning. This potential is reflected in the MCN model adopted that is inclusive of a diverse membership, who historically would not have all met at the same time, with an ethic of collaborative partnership working and strong leadership among all stakeholders (Fig. 2).

The West Yorkshire oral surgery MCN was established to deliver high quality, safe, effective and patient-centred services with improved patient outcomes that meet the oral health needs of our local population.^{6,7} At the inaugural MCN meeting two decisions were agreed that fundamentally changed provision of care falling within the scope of oral medicine practice:

1. All referrals from primary dental teams to secondary care oral surgery, oral medicine and oral and maxillofacial surgery providers would be made via a single, electronic referral management system (e-RMS) new to the region
2. Specific electronic referral forms, guidance and processes would be introduced

for intermediate minor oral surgery, oral medicine presentations and those requiring specialist oral and maxillofacial surgery input.

Both changes were necessary foundations for MCN delivery within the context of historical local service provision. The MCN went live on 1 October 2016.

Electronic referral management system

The traditional paper referral letter from referrer directly to a specific provider has persisted in dentistry despite recognition of its limitations and a NHS transition to paperless systems. Moving to an e-RMS brings advantages (Box 2).

New referral processes

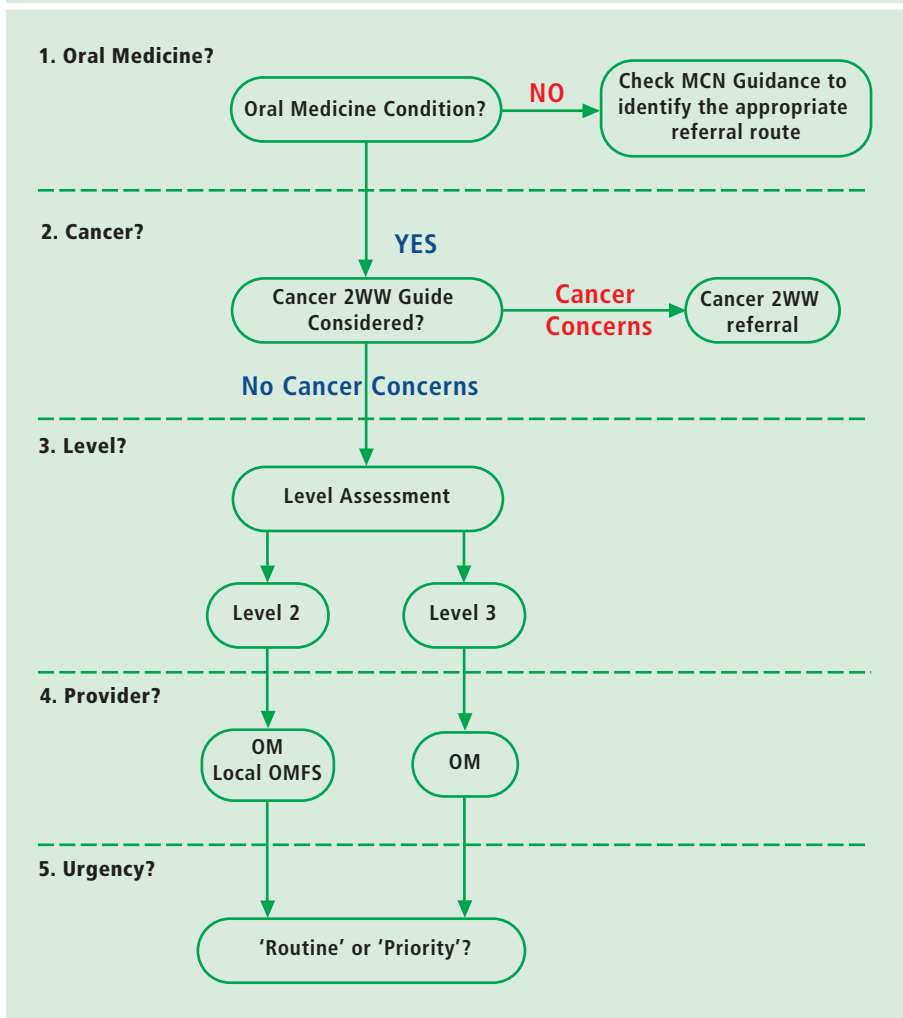
The new oral medicine referral form was designed to capture key information for all clinical presentations falling within the scope of oral medicine practice. The form includes a combination of free-text and tick boxes with some fields mandatory. For example, referrers are asked to tick the relevant box from a choice of: oral soft tissue; salivary gland; orofacial pain; presentation of a wider problem; and, other.

When considering and making an oral medicine referral practitioners are asked to make five decisions (Fig. 3 and Box 3). To support this process an oral medicine quick referral guide was prepared for the start of the MCN. Subsequently, an oral medicine full referral guide followed that set out more detailed information including presentations by symptoms and signs illustrated by clinical photos, as well as named conditions, to help inform decision-making during referral (Tables 1 and 2). The guides are accessible to referrers via the e-RMS. Although the guides are being used by primary dental teams, their content is also applicable to primary medical teams and includes information relevant to decision-making in secondary care with respect to involvement of other healthcare services.

The five decision approach to the oral medicine referral process from primary dental care and the associated guidance is the start to a new approach locally that will develop iteratively between all stakeholders over time.

Within the West Yorkshire oral surgery MCN oral medicine referrals currently 'pass through' the e-RMS and are triaged locally by the receiving oral medicine provider rather than be triaged before provider dispersal as

Fig. 3 Overview of the decision-making process in Yorkshire and the Humber when considering a referral for a clinical problem falling within the scope of oral medicine practice. Further detail is included in Box 3. Abbreviations: OM (oral medicine – in Leeds and Sheffield); OMFS (oral and maxillofacial surgery); 2WW (2 Week Wait)



Box 3 Further detail about the five decisions (illustrated in Fig. 3) that inform referral decision-making

1. Oral medicine condition?

The scope of oral medicine practice is described in the referral guides with examples given.

2. Consider if oral cancer may be present

Guidance is provided on presentations that might represent mouth cancer. Where cancer is suspected then referral should be made via the local urgent 'fast-track' (2-week-wait) cancer service¹¹ and not via the oral medicine referral form.

3. Initial assessment of the level of care required

There are 3 levels of care complexity. The default position is that a referral requires level 2 care unless there are explicit reasons why level 3 care is required (Table 1). Further direction is given in the full referral guide with examples of features that should trigger an appropriate request for Level 3 (Table 2).

4. Care provider preference

The importance of patient choice is explicit in the NHS constitution.¹² The patient, often in partnership with the referrer, needs to make a choice about the preferred provider receiving the oral medicine referral form. The decision should take account of the clinical needs of the patient balanced with pragmatic issues of where care can be most easily or rapidly accessed. Patients with level 3 care requirements can expect to be seen within a specialist oral medicine unit.

5. Urgency of referral

The default position is that all referrals are routine unless it is explicit in the referral that a priority (urgent) appointment is requested and why. Further direction is given in the full referral guide with examples given.

is the case in oral surgery, where a range of primary care providers are utilised.

MCN experiences

In West Yorkshire, there has been a smooth transition to an e-RMS from a paper letter based system for referrals from primary care dental teams directly to individual providers. Use of the oral medicine referral form irrespective of the provider selected, allows for the first time, insight into the demand for oral medicine care via general dental practices in West Yorkshire. Preliminary data are also giving new insight into referrer behaviour, provider activity and patient preferences that are already shaping the approach to future service provision. Data validation is being followed through further to ensure accurate understanding informs planning and will be reported separately.

MCN – The next stages

MCN introduction to West Yorkshire in October 2016 is fundamentally changing planning for the delivery of care falling within the scope of oral medicine and represents a clear difference from the established models of care. The data to date confirms the potential to develop several areas.

Supporting information

The information supporting patient choice and referrer decision-making can be developed further with respect to content and access reflecting the diversity of the regional population. Patient and public engagement will be central to this.

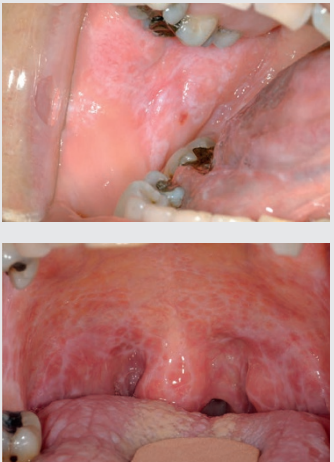
Quality improvement

A patient should expect the same standard of care irrespective of provider. Adoption of shared standards of care and outcome measures for oral medicine conditions underpin assurance measures for equitable standards of care between providers. For example, assessment and initial management of a patient with oral lichen planus should meet the same five standards of care regardless of which team member (junior or senior) in a secondary care setting undertakes the consultation, irrespective of speciality (see online supplementary material). A regional approach also supports utilisation and development of patient reported experience measures (PREMs) and patient reported outcome measures (PROMs).^{13,14}

Table 1 Descriptors for levels of care in oral medicine used in Yorkshire and the Humber. Further guidance and example presentations are given in the oral medicine full referral guide

Level one	<ul style="list-style-type: none"> • Recognition of normal features of the mouth and oropharynx that may be confused with pathology • Recognition of conditions and recording an initial (working) diagnosis • Initiation of management (eg, identify and address concerns, appropriate information, interventions including oral hygiene and 1st line topical treatments) with appropriate follow-up • Recognition of situations where the presenting complaint indicates referral to either Level 2 or 3 • Ongoing management as part of shared care or following discharge from Level 2 or 3 care.
Level two	<ul style="list-style-type: none"> • Re-evaluation of the initial diagnosis and the aims of care • Re-evaluation and revision of management with follow-up • Recognition of situations where the presenting complaint indicates referral for Level 3 assessment • Ongoing management as part of shared care with Level 1 or 3 care.
Level three	<ul style="list-style-type: none"> • Evaluation of presentations associated with prominent or unusual orofacial symptoms and/or signs (mucosal, salivary, pain or neurological) • Evaluation of presentations that may represent an orofacial manifestation of a systemic or widespread problem with physical and/or psychological components • Re-evaluation where the diagnosis is unclear • Management is complicated by significant co-morbid illness (physical or mental health) or the management of this • Interventions at Level 2 have not achieved a satisfactory outcome • Management requires potent topical or systemic medications • Multi-disciplinary or multi-professional management is indicated.

Table 2 An example taken from the oral medicine full referral guide, which includes presentations by symptoms and signs as well as named conditions. Referral decision-making should also take account of the descriptors given in Table 1

Persistent white and/or red mucosal lesions:	Typical oral presentation	Red flags: Level 3 referral
	<p>Reticulated or plaque-like hyperkeratosis with variable redness and/or ulceration (may be none).</p> <p>Symmetrical involvement of the posterior buccal mucosa is common, but any site may be involved.</p> <p>Desquamative gingivitis can be present.</p> <p>Lesions may be unilateral/adjacent to dental restorative materials.</p>	<p>Features that do not fit the typical oral presentation.</p> <p>Unexplained other features such as:</p> <ul style="list-style-type: none"> • skin rash • nail changes • genital ulceration • scalp soreness or acute hair loss • widespread oral involvement <p>Note: cancer development in oral lichen planus is <1 in 100 who have oral lichen planus for 10 years or more.</p>

Patient pathway development

The flow of patients between providers is a key feature of the MCN approach. As the referral processes, including the referral guides develop, this should lead to a greater understanding among all stakeholders of where care should be delivered at any given time point, to limit delays and improve the quality of care. This includes the potential to improve the quality of referrals. Not all patients with oral medicine conditions need to be seen in a specialist oral medicine

(level 3 care) unit, but there remains scope to improve the flow of patients who do need level 3 care from level 1 and 2 providers. More formalised care provision has the potential to further raise regional standards of care for conditions requiring specialist oral medicine (level 3 care). There is also scope to improve and formalise shared care arrangements. For example, care can be shared between a specialist oral medicine (level 3 care) unit and a level 1 or 2 provider much closer to home.

Training and professional development

Referral data, quality improvement initiatives and pathway development inform training and professional development needs and a strategy to deliver these. There is a pipeline for professional development in oral medicine practice covering pre-registrant dental team members through to specialists. The majority of dentists work in primary care and the need for standards for new registrants is recognised in the new oral medicine undergraduate dental

student curriculum.¹⁵ The MCN approach allows planning of a suitable clinical case-mix for undergraduate education and development before first registration. Professional development should continue through dental foundation training.¹⁶ For those who go on to dental core training (DCT) (formerly SHO) posts, often in oral and maxillofacial surgery services, there is a clear distinction between curriculum outcomes for oral medicine and oral surgery.¹⁷ DCTs working in oral and maxillofacial services can expect to deliver care for level 2 oral medicine conditions under the supervision of the responsible consultant. Accordingly, MCN data will be increasingly important in planning targeted professional DCT development, for example via regional study days or other educational resources. Many DCTs return to primary care and transfer their oral medicine skills to this setting. This highlights the considerable challenge of how the oral medicine skills of all in primary dental care are maintained and developed. The preliminary MCN data has identified individual referrers who may benefit from focused professional development in oral medicine practice. Up-skilling all the dental workforce has the potential to reduce the number of oral medicine referrals being made for level 1 and 2 conditions. There is clear scope within the MCN approach to engage interested primary care practitioners to extend the care that may be delivered local to patients.

Workforce planning

Workforce planning is notoriously challenging. The MCN data is giving new insight into the demand for oral medicine services in West Yorkshire at levels 2 and 3 and this insight will be refined over time. It is important to recognise that service demand and service need do not necessarily equate. As the MCN approach matures there should be a closer alignment of demand and need for both level 2 and 3 services. Even the MCN data currently available starts to inform the workforce needed at each care level for West Yorkshire. These needs will be different as the MCN approach extends to other parts of Yorkshire and the Humber.

Referral triage

Oral medicine triage in West Yorkshire is currently by the provider selected by the referrer. Central triage is an alternative model. Potential advantages include impact on consistency of triage decision-making, development

of patient pathways and active management of provider workload within the capacity at any given time point. There is a financial cost associated with central triage and clear benefits would need to be evident before adoption. As the referral processes are refined as part of patient pathway development the role of triage either locally or centrally may change reflecting better understanding of where and when care for a given patient should be delivered.

MCN development in Yorkshire and the Humber

The West Yorkshire oral surgery MCN is already bringing new insight into demand and provision for oral medicine patient care with the potential for much more to be achieved. Implementation of a similar MCN model elsewhere in the region is planned. MCN development requires engagement of multiple stakeholders who hold shared goals with respect to service delivery and professional workforce development. While this was achieved in West Yorkshire within a short period, it is recognised that in other areas it may be more challenging. This emphasises the need for clarity of communication and a willingness to work differently, which in some instances can be a break from long-established arrangements.

The MCN approaches of the Leeds and Sheffield oral medicine units are aligned and shared practices will extend beyond the geographical area of Yorkshire and the Humber reflecting current service provision and need for Level 3 oral medicine care. Involving North Yorkshire will bring a different set of challenges reflecting the largely dispersed population with one large urban centre (Hull) that will differ from the more urban-dominant characteristics of West and South Yorkshire. However, the MCN approach in North Yorkshire will formalise existing arrangements within a managed system.

The majority of referrals received by the West Yorkshire oral surgery MCN relate to intermediate minor oral surgery and this will be the same in South and North Yorkshire too. It is this aspect that is a key determinant of the size of a deliverable MCN. With the phased implementation of the oral surgery MCNs in South and North Yorkshire there is a need for an overarching Yorkshire and the Humber oral medicine MCN to ensure strategic delivery of the Five year forward view⁵ and consistency of care tempered by local context with active involvement in each of the three oral surgery MCNs. The regional oral medicine MCN is being established with representation

from the same stakeholders as described in Figure 2. Over time, the operational relationship between the oral medicine and oral surgery MCNs in the region may change, but it is unlikely that the core principle of proactive cooperative partnership working between oral medicine, oral surgery and oral and maxillofacial surgery as well as with all the other stakeholders will be of lesser importance.

MCN development beyond Yorkshire and the Humber

The MCN model developed in West Yorkshire can be replicated without duplication of efforts in other regions with customisation of the core elements to meet local circumstances.

Conclusions

For historical reasons provision of care for conditions falling within the scope of oral medicine practice has been inconsistent with limited service planning. MCNs bring advantages to all stakeholders with a positive impact on patient pathways and access to equitable and quality care across a network of providers working in a coordinated way to make best use of NHS resources with workforce development supported. Implementation of an innovative oral surgery MCN in West Yorkshire has brought new insight into oral medicine service demand. This is informing development of a new strategic approach for future oral medicine service provision across Yorkshire and the Humber overseen by a regional oral medicine MCN using a model that could be adapted to meet the needs of other regions and parts of the UK. Many of the points raised are also of relevance to care in other areas of dentistry during a period when MCNs are being developed.

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