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Review

Nurse-led oral and maxillofacial oncology clinics: a review

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Abstract

The ‘nurse-led’ oral and maxillofacial (OMFS) head and neck (H&N) clinic has been introduced and developed over the last decade, and we are now close to a point that this endeavour can potentially be implemented nationwide. This paper is a systematic review of the proposed OMFS H&N nurse-led clinic model. Literature on the topic is limited: only eight eligible papers were identified and reviewed. These were appraised focusing on four domains: requirement/necessity, true cost, patient safety and outcomes, and education and training. Most of the advantages/proposed benefits of these clinics have previously been discussed. This current review has revealed that the available published evidence on the concept of OMFS H&N nurse-led clinics demonstrates that they might not be necessary. The alleged cost savings have not been described in detail and might not be as significant as expected, more intense collaboration is required to establish watertight quality assurance processes concerning patient safety, and the clinics might have an impact on the education and training of OMFS trainees. The nurse-led clinic concept is interesting and exciting, but more discussion and planning is needed prior to it being launched nationwide.

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Introduction

Stellar and pioneering work has been done over the last decade on the introduction, development, and expansion of a ‘nurse-led’ oral and maxillofacial (OMF) head and neck (H&N) clinic.^{1–4} The endeavour started as a ‘dressing’ clinic and evolved to include patients’ reviews, oral and neck examinations, and the delivery of biopsy results. This of course celebrates the enthusiasm and hard work of the involved nurses (and the supporting consultants), has increased bonding and co-operation within the H&N team, and has been claimed to have the potential to reduce costs; the latter always being a hot topic in any NHS debate. It has also been speculated that the clinic might help to achieve national cancer targets, and that it increases the interest of nursing staff in H&N cancer and their morale. Senior clinicians are generally against concepts that promote ‘target-centred NHS care’,

favouring an ‘outcomes-centred delivery of care’ for reasons discussed exhaustively elsewhere.⁵ One might argue that the nurse-led clinic concept might be partially ‘target-driven’.⁴

This current paper aimed to review the set up and supporting information on the proposed nurse-led clinic model. An online search (Medline) using the terms nurse-led AND (OMFS OR maxillofacial OR H&N) revealed 135 potentially eligible articles (Fig. 1). Eight of them were eligible for this systematic review and were analysed further. The published papers were referenced and all the arguments for or against the proposals cited and supported. As this is a concept in development, and the amount of available literature is minimal, it was not easy to apply the PRISMA⁶ methodology in its entirety, but this was attempted when possible. Data extraction that supports the discussion below can be found in the Appendix.^{1–4,7–10} Broadly, the discussion can be split into four domains: requirement/necessity, true cost, patient safety and outcomes, and education and training. The aim of this manuscript was to objectively discuss these domains and how they link to the proposed nurse-led clinic model.

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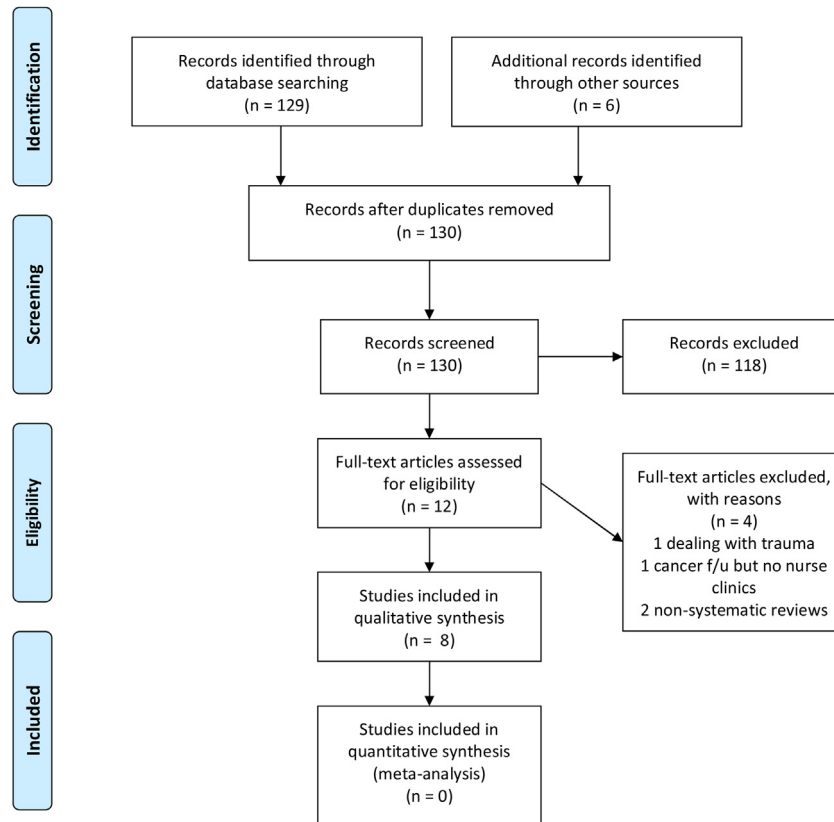


Fig. 1. PRISMA 2009 flow diagram.

Definitions/nomenclature

Readers might object to the use of the term ‘nurse-led’ clinics, as the published articles describe them as running parallel to consultants’ clinics.^{2–4} This is a purely cosmetic argument about nomenclature, therefore the term ‘nurse-led’ is used throughout this manuscript.

Requirement/necessity

Any proposed change in the NHS is always faced with scepticism. A national survey on the concept of a nurse-led clinic for head and neck follow up revealed that 67% of the consultants who replied were firmly against it¹ and the remaining one third that supported it set strong conditions for its implementation.¹ Even great ideas with unanimous support are often turned down for various reasons (logistic, financial, sustainability), but no idea can get beyond its starting phase if it is not supported by requirement/necessity. Published papers^{2–4} have suggested that there is an absolute need to increase the capacity for consultants’ two-week wait (TWW) and other H&N slots. Nurse-led clinics have been proposed as an alternative model for selected patients who would otherwise be seen in consultants’ clinics, and running a nurse-led clinic for biopsy results and reviews can allegedly achieve this.^{2,4} Two questions arise from this speculation: Is

the TWW referral increase a real problem, and (most importantly) do patients who are suitable for the nurse-led clinic need to be seen in clinic at all?

The second question is probably easier to answer. Over 60% of patients are seen in the nurse-led clinic for benign pathology results (for example, polyps, mucocoeles, geographic tongue).² Interestingly (but not surprisingly), 20% of the patients booked on these clinics did not attend.² A consultant can easily clinically diagnose the majority of the above conditions, and explain to the patient that a biopsy (or excision) will confirm what is seen. The practice of many senior OMFS H&N colleagues nationwide is to write to patients and general practitioners (GPs) with the final histology results, offering the option to be contacted if a patient wishes further discussion. In my practice, I am yet to receive such a request, and I am sure that this is the norm. One of the papers mentioned that one of the benefits of the nurse-led clinic is that there is ‘no payment for letters sent out’.² Does that indicate that patients are seen in clinics when there is no need purely to generate income for the unit? It certainly reads that way, although I am sure that is not the intention. With the ever-growing demand on the NHS, a reduction in the number of unnecessary hospital or clinic appointments is the way forward, utilising clinical letters, text and email services, or even phone/Skype consultations, as described by other oncology groups.¹¹ There is no need to follow up every TWW referral (in fact, the vast majority can safely be discharged with

a letter). Therefore there are potential solutions to the proposed capacity issue that are already in place and are practised safely.

The first question is slightly more difficult. The increase in the incidence of oral cancer in the UK over the last decade has been minimal; smoking and alcohol education is certainly helping. The increase in oropharyngeal HPV-driven disease is slowing down; it is expected to plateau soon and start reducing around 2030, with a view to eclipse in the next generation should the vaccination programme succeed.¹² Although not directly relevant (as the nurse-led clinic discussion is focused on OMFS clinics, whereas oropharyngeal cancer is seen in ENT H&N clinics too), the comment above is important if we are to paint the full H&N cancer landscape. Furthermore, the number of OMFS H&N consultants has increased, particularly due to the British Association of Head and Neck Oncologists' (BAHNO) recommendation of dual operating lists for free-flap reconstruction cases. One would expect that these dynamics would ensure adequate capacity for TWW slots. Furthermore, the education of GPs and general dental practitioners (GDPs), when designed appropriately, improves the quality of referrals and helps to achieve NHS England's 3% conversion rate target. Greater Manchester practises a clinic step-down process, which means that after a consultant's review and examination, patients with no suspicious features are stepped down the TWW pathway even if they need further investigations (scans or biopsies). A regional audit revealed a 0% cancer-miss rate for this approach, indicating a safe practice.

The capacity problems identified in the reviewed papers²⁻⁴ do not necessarily reflect a nationwide picture. Busy OMFS H&N practices find ways to manage their TWW and H&N follow-up slots. This is probably due to in-house subspecialty structures (H&N surgeons seeing minimal numbers of routine OMFS referrals) and discharges by letter of patients who do not need to be seen back in clinic.

This section concludes with some OMFS history. In the late 1990s, surgeons used to follow up patients after wisdom tooth extractions and dentoalveolar work. Today, these cases are done as outpatient minor-ops or general anaesthesia (GA) day cases and are followed up by the referring GDP. This could potentially be the future for TWW that have benign pathology results. A letter should suffice.

True cost

Cost reduction is (directly or indirectly) linked to many practice changes in industry and health care. The NHS is not an exception, and this should always be welcomed, especially in periods of austerity and economic uncertainty. However, health economics should be precise and take into account a number of factors. This is a notoriously tricky business to explore and understand. The papers about nurse-led clinics mention a 'consultant-led service' on many occasions,⁴ but the NHS moved into a 'consultant-delivered' service many

years ago, with an abundance of evidence suggesting significant cost reductions since implementation. A robust and undisputable example is the reduction in the length of hospital stay with an increase in safe discharging, and a reduction in re-admission rates since the introduction of consultants' ward rounds in several surgical specialties.¹³ The cost savings are measurable, reproducible, and (crucially) significant. The current systematic review has revealed that although cost savings were alluded to in many of the papers, details about costs and health economics were not mentioned in any of them (Appendix Table 2).

The proposed nurse-led OMFS oncology clinic model was very difficult to set up (as the authors admitted).⁴ It took six years to implement the service within a team that already had the drive, belief, and commitment to do it. However, there has been no mention of consultants' remuneration for the time spent in training and assessing the nurses, and for the proposed continuing lifelong supervision. Being a clinical supervisor (CS) or educational supervisor (ES) attracts between 0.125 - 0.25 programmed activities (PAs)/trainee depending in which trust you work. One would argue that the same amount (or more, given the medicolegal hurdles) should be linked to the training/supervision of nurses to set up and run a nurse-led clinic. Even if consultants do this in their own free time as a special interest or to help the service, it is usually translated (deservedly) into local or national clinical excellence awards (CEAs), which again are funded by the same (unfortunately not-bottomless) pot of the NHS. In the bigger picture of nationwide implementation, the reality is that the design and setting up of nurse-led clinics (or any other nurse-led service) will be remunerated, as consultants cannot contribute to this for free.

There is more to this. The numbers of patients/slots seen in a consultants' clinic are linked to the additional administrative and training duties that the consultant has within that clinic.¹⁴ Inevitably then, the number of patients who are seen by the consultant in a clinic that is linked to a nurse-led clinic will reduce. The loss of income needs to be calculated alongside the potential income generated from the nurse-led clinic. This generates the next question: What will be the commissioning tariff for a nurse-led clinic? Have the clinical commissioning groups (CCGs) been consulted on this? If so, what are their views, and what is the overall cost to the provider of a nurse-led clinic? Furthermore, one may argue that time and money could be invested in consultants educating GPs and GDPs, with the aim of improving the quality of TWW referrals, reducing the number of inappropriate referrals, and improving the conversion rate of cancer referrals. The author has significant experience of delivering teaching sessions to GDPs via the Greater Manchester H&N Cancer Pathway Board of Education domain; and the use of Gateway-C has certainly got GPs more engaged and involved in cancer prevention, early detection, and appropriate referral.

The recent experience within the COVID-19 pandemic has resulted in a sharp reduction in TWW referrals, accompanied with a sharp increase in the cancer conversion rate;

there is no reason why this trend cannot continue after the pandemic ceases. The available evidence on health economics in the nurse-led clinic papers is extremely limited (Appendix), although some has come from other tumour groups.^{15,16} The loop therefore closes by asking again the question: Are these clinics really necessary? The topic has been discussed in the section above.

Patient safety and outcomes

The published work about nurse-led clinics has stated that audit of the proposed service has demonstrated ‘no adverse events or incidences or reduction of quality of care’ (Appendix).^{2–4} This is extremely reassuring and welcomed. However, there is a lack of tabulated outcome-supporting data. This might be due to two reasons. First, because patients seen in these clinics may not need to be seen in clinics (as discussed above) so the risk of adverse events is extremely low, and secondly, when it comes to H&N follow up, data on overall survival, recurrence detection rates, and salvage surgery outcomes may not have been collected (or published) as of yet. These are the outcomes (with quality of life data) that would indicate that the proposed model actually delivers. The authors have not presented any patients’ survey results, or patient-reported outcome measures (PROMs). There is no mention as to whether a nurse has ever picked up a suspected recurrence in one of the follow-up clinics, which itself is a crucial element of H&N cancer follow up. Crucially, out of eight eligible papers, only one was a randomised controlled trial (RCT);⁷ one would have expected greater adherence to experimental designs when it comes to assessing interventions.

The main issue identified from reviewing the published evidence about the proposed model was the lack of a nationwide agreed quality assurance (QA) process for patient safety. The published papers generate questions: Is shadowing a consultant’s clinic enough to gain skills in how to examine H&N follow-up patients? Senior specialty trainees (STs) and interface fellows (TIG) do the same, but there is a robust method for assessing their skills and competencies via the Annual Review of Competency Progression (ARCP) and the Joint Committee on Intercollegiate Examinations (JCIE). Details of how the consultants assess the nurses’ practice and the dictated letters were not presented in the published papers (Appendix). The proposed in-house assessment tool is a good starting point, but it needs to be validated and agreed at a nationwide level, otherwise there is a risk of quality assurance being relegated to a tick-box exercise that is susceptible to the assessor’s benefits and beliefs about the concept of the service.

One of the competencies cited is that nurses are able to ‘perform oral and neck examinations’. The basic principle in any clinical examination is that ‘you see only what you know’. How do we ensure that the nurses have the relevant knowledge of anatomy, physiology, pathology, dental and

oral medicine, swallowing, and voice training, to mention a few domains? Yes, consultants can advise and supervise, but they rely on what they are told rather than what they see. Are there guarantees that there will be no missed diagnoses if and when this model expands at a national level? Who will take the overall medicolegal responsibility? Nurses themselves have expressed a lack of confidence in the domain of examining and assessing complex symptoms (Appendix).⁸ This therefore is an area that needs careful consideration.

There is another controversial topic, perhaps the one with the most ambiguity. It is the concept of nurses ordering investigations. The General Medical Council (GMC) and General Dental Council (GDC) in particular have published guidance clearly stating that whoever orders an investigation should be able to interpret it.¹⁷ This is particularly the case for orthopantomograms (OPGs), for which a report should be entered in the patient’s notes (an OPG is a common first-line investigation in an OMFS H&N follow-up clinic). The published papers do not address these queries in detail.

The most recent paper has tabulated the skills and competencies required of nurses in nurse-led clinics.⁴ The majority of these skills are generic and already included in the mandatory training schemes that trusts have for nurses and other allied health professionals. The most important skill, the ‘theory and practice of head and neck cancer, including anatomy, physiology, and pathology’ is the critical one and one that is difficult to achieve, retain, and monitor. There are therefore issues concerning robust quality assurance that require further clarification.

Education and training

The potential impact of the proposed model on education and training has not yet been explored. All but one of the reviewed papers did not even mention it, and the one that did suggested that patients assigned to a nurse-led clinic are of no educational value to trainees if there are no further explanations (Appendix).² As we all know, OMFS already experiences problems in recruiting higher specialty trainees, which will be translated into difficulties in the recruitment of consultants in the years to come.^{18,19}

The interest of OMFS specialty registrars (StRs) in TIG H&N fellowships has decreased over the last five years, averaging to less than 20% of the candidates. What can we do as a surgical specialty to attract trainees and build the future manpower? What is described in the context of a nurse-led clinic can be good training material for trainees of various levels, yet these opportunities might be lost with the proposed model. In addition, valuable consultants’ time is spent in supervising/overseeing these clinics, and it could be spent training junior doctors or educating medical students. The H&N multidisciplinary team (MDT) clinic is an excellent vehicle for education and training.

There is a view amongst colleagues that I personally do not share: ‘Why would one spend 15 years or more of one’s life

studying for two degrees, with the intense specialty training, exams, courses, and costs, when nurses can do similar tasks?' The real questions though are: Where do we stop, and where do we draw the line? This is because without a doubt, nurse-led clinics set a paradigm. If we accept that nurse-delivered care is cheaper than consultant-delivered care (see True cost), then why do we not expand this in more domains? Why do we not train nurses to perform skin cancer surgery (already happening)? Everything is possible. The question is whether it should. What are the views of the GMC, GDC, Royal College of Surgeons (RCS), BAHNO, and BAOMS on the topic? In the past, singly qualified dentists were trained in all aspects of OMFS surgery and we had numerous singly dentally qualified OMFS consultants, most of them outstanding clinicians. However, the pathway has changed. This is a long, different discussion, but in summary, the OMFS training pathway has changed because technical skills and a bit of clinical knowledge will never (and should never) replace a medical degree, which is the cornerstone of every surgical specialty. Maybe this is the same with the nurse-led clinic concept.

Conclusion

In conclusion, the available published evidence for the concept of OMFS H&N nurse-led clinics demonstrates that they might not be necessary, that the alleged cost savings are not clear and might not be as significant as expected, and that a more intense collaboration towards a watertight quality assurance process is required. They might also have an impact on education and training. Nurses have a crucial role in the H&N team, and this is extremely valuable and should be recognised. The nurse-led clinic concept is interesting and exciting and I support it at a personal level, but we need guidance to be agreed at a national level.

Conflict of interest

I have no conflicts of interest.

Ethics statement/confirmation of patients' permission

Not applicable.

Appendix A. Supplementary data

Supplementary material related to this article can be found, in the online version, at doi:<https://doi.org/10.1016/j.bjoms.2020.08.089>.

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