Clinical Focus: Oral Health

HUBS AND SPOKES OR CLINICAL NETWORKS?

**PV Dyer, Consultant Oral and Maxillofacial Surgeon
Morecambe Bay Hospitals**

INTRODUCTION

In 1998, the consultants in oral and maxillofacial surgery and orthodontics decided to consolidate their respective departments to establish the Maxillofacial Unit. This coincided with the formation of the new Morecambe Bay Hospitals Trust incorporating the acute hospitals in Lancaster, Barrow and Kendal and was to a large extent a natural development of the existing service delivery of the specialities at all three sites. In this article the establishment of the oral and maxillofacial surgery service in Morecambe Bay will be discussed and presented in the context of a number of recent reports which have tried to predict how surgical and medical services will develop in the acute sector.

HISTORICAL PERSPECTIVE

Prior to his death in 1999 Eric Cooper, who had been the consultant dental surgeon in the Morecambe Bay area from 1951 to 1974, committed his memories of the service to paper and much of this section is from his article.

When the NHS was formed in 1948, the Manchester Regional Hospital Board was created as the authority responsible for the hospitals in Westmorland, Lancashire and much of Cheshire. They established a consultant dental service at four centres in Baguley (now Wythenshawe), which had been a maxillofacial unit during the second world war, Crumpsall, Preston and Bolton.

Eric Cooper was appointed consultant dental surgeon in 1951 based at Preston and with five main hospitals in his area. These were Preston Royal Infirmary, the Royal Albert Edward Infirmary Wigan, Blackpool Victoria Hospital, the Royal Lancaster Infirmary and North Lonsdale Hospital. In total he was responsible for 83 hospitals and in his first few months as a consultant visited them all!

At the outset of his appointment as a consultant *dental* surgeon Eric Cooper was expected to offer a service in all branches of dentistry. This was not quite what he had anticipated, particularly with a background in oral and maxillofacial surgery and it was a number of years before he was able to change the service to predominantly oral surgery. Despite this, a considerable proportion of his time was spent carrying out prosthetic (denture) work. In the early 1960s, with the appointment of colleagues in Preston and Blackpool, Eric Cooper was able to confine his service to Morecambe Bay with dedicated outpatient facilities at Beaumont and North Lonsdale Hospitals.

Richard Dendy was appointed as Eric Cooper's successor in 1974. As one of the first dually qualified surgeons in dentistry and medicine, Richard Dendy consolidated and developed the speciality within Morecambe Bay and extended the range of services provided in the department. Although initially

appointed as a consultant dental surgeon this, with time, was converted to consultant in oral and maxillofacial surgery.

ORGANISATION OF ACUTE HOSPITAL SERVICES

Following a document published in 1962 by the Ministry of Health⁽¹⁾ a three level hospital service was envisaged in which district general hospitals formed the core, delivering care to populations between 100,000 and 150,000, with smaller hospitals in the rural areas and the larger teaching establishments. Central funding during the 1960s and 1970s ensured that this pattern became the basis for secondary and tertiary care but at the same time a number of other developments were taking place. Technological advancements, particularly in surgery, were reducing the average length of stay in hospital, allowing an increase in day-case surgery and enabling some services to be delivered outside the hospital setting. In addition there was a steady increase in the number of elective and emergency cases treated each year with an increasing range and complexity of care.

The traditional role of the district general hospital as the mainstay for the provision of hospital services has come under increasing scrutiny as the developments outlined above have occurred. Consultants are now expected to have a greater involvement in emergency care and the traditional 'firm' has been replaced by teams of consultants who provide training for the trainee staff within different sub-specialities. There has been a significant reduction in junior doctors' hours⁽²⁾ and in the way their training takes place⁽³⁾.

A number of reports covering specific areas of clinical activity have also had a bearing on how the department of oral and maxillofacial surgery in Morecambe Bay has developed over the last three years.

One particular initiative has had a considerable effect on planning for the delivery of care to patients with cancer (Department of Health and Welsh Office, 1995)⁽⁴⁾. It was recognised that throughout the United Kingdom the provision of cancer services was fragmented and the type of treatment received by a patient, whether surgery or radiotherapy, often depended upon the individual preference of the clinician involved. The management of oral cancer requires a multi-disciplinary approach involving specialist nurses, dieticians, restorative dentists and speech therapists as well as head and neck oncologists and oral and maxillofacial surgeons. Advances in the surgical reconstruction of defects in the facial region have resulted in the use of free microvascular flap techniques, increasing the complexity of the patients' management. As a result many oral and maxillofacial surgeons have sub-specialised in oncology with the benefit of treating more patients, providing an enhanced service to the patients and

allowing sufficient numbers of patients to be seen for good research and audit.

Similarly the Clinical Standards Advisory Group in 1998⁽⁵⁾ reported on the delivery of care for the cleft lip and palate patient. As a result plans have been developed to bring all the disciplines involved in the management of the cleft patient to fewer designated centres.

In the USA trauma management has resulted in the development of trauma centres within which all the relevant surgical and medical specialities are available to provide optimal treatment to accident victims. In comparison, the UK relies upon the local accident and emergency departments for the treatment of trauma patients. A study into the effectiveness of establishing trauma centres within a regional trauma system in the UK and the survival of patients with major trauma has recently been completed⁽⁶⁾. The authors concluded that any reduction in mortality from establishing trauma centres and regionalising trauma care in the shire structure of England would be modest compared to the reductions seen in the USA.

As a result of many of these developments various models for the hospital service have been suggested. In one report it was envisaged that more services would be delivered in primary care and hospitals would be organised to serve populations of 500,000 to 800,000 or populations of 50,000 to 150,000. The former would provide the full range of specialist care whilst the latter would provide a minor injuries service, with outpatient and diagnostic facilities⁽⁷⁾. In addition they suggested that there would be a large expansion in the number of consultants and non-consultant staff grades and a change in the traditional structure of medical teams to allow coverage of all elective and emergency work in specialist centres. The smaller hospitals would be based locally, relying on general medical practitioners for staffing.

It was, however, the model suggested by the King's Fund⁽⁸⁾ which at first appeared to provide the solution for the development of the oral and maxillofacial services in Morecambe Bay. Their model recognised the need to balance the apparent conflict between maintaining a quality local service and providing specialist services often outside the local area. In their discussion document, a 'hub and spoke' model was proposed which was sufficiently flexible to be applied in different ways in different parts of the country. They suggested that for some specialities a particular hospital may have better

facilities and expertise and would become the 'hub' for that service, receiving patients from a wide area. The same hospital could, however, be a 'spoke' for another service with another hospital developing the role of 'hub'. The more routine work would still be provided locally. Whilst this model may result in an

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increase in size of some hospitals, the concept of the district general hospital providing local services to local people would remain. Clearly for this model to be successful all hospitals must have a good understanding of their roles.

PROVISION OF ORAL AND MAXILLOFACIAL SERVICES IN A CLINICAL NETWORK

The concept of the 'hub and spoke' delivery of service has evolved into a clinical network and includes all the clinicians

working in oral and maxillofacial surgery within Morecambe Bay and extends to the areas covered by Royal Preston Hospital and Blackpool Victoria Hospital. A network is defined as a set of autonomous organisations or individuals who come together to reach goals that none could reach separately. By establishing a clinical network, the four oral and maxillofacial consultants have been able to sub-specialise and accept patients from a wider area. The initial referral of the patient remains the same, to the local department, but the patients can then be referred appropriately to the consultant managing their problem.

Oral cancer patients from Morecambe Bay are seen in Lancaster, Barrow or Kendal where initial diagnosis and investigations are performed. They are then referred to Shakeel Akhtar in Preston who has developed a multi-disciplinary team to continue their management. Similarly, those patients with facial anomalies requiring orthognathic surgery are assessed locally, usually by the consultant orthodontist, and then referred to the author for treatment. Patients with dento-facial trauma are managed locally unless their injuries are so severe that admission is necessary, in which case they are treated at Royal Preston Hospital under the care of the author or one of his colleagues. All follow-ups occur locally.

The three areas of sub-specialisation discussed above lend themselves to the application of a clinical network, as do other activities, such as the management of salivary gland pathology. Recently a combined dermatology/maxillofacial skin lesion service has been introduced locally.

SUMMARY

Oral and maxillofacial services in Morecambe Bay have evolved over the last 50 years to the point where a clinical network has been established linking the three local acute hospitals to Blackpool and Preston. The routine caseload of minor oral surgery is managed at a local level but those patients requiring treatment for oral cancer, facial anomalies and severe facial trauma are managed by consultants who have sub-specialised in those fields. It is perhaps ironic to remember that Eric Cooper was initially appointed to hospitals in Preston, Lancaster and Barrow and that with the establishment of the clinical network we have started to return to the original plan for maxillofacial services in the northwest – albeit with more consultant staff and improved surgical techniques.

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