Eur. J. Prosthodont. Rest. Dent., Vol.16, No. 2, pp 56-60
Printed in Great Britain

A Survey on Orthodontic-Restorative Dental Services in a NHS Hospital

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Abstract - *The provision of a joint orthodontic-restorative hospital service is important in providing a quality service for some dental malocclusions. A prospective survey was carried out of the joint orthodontic-restorative clinic at Mayday University Hospital, during the months of January to August 2005. Data was collected using a data collection form. In total 61 patient's attended 4 joint clinics. Fifty per cent of referrals were by general dental practitioners. The commonest referral reasons were spacing and dental trauma. Over one third of patients were seen within 12 weeks of their referral, whilst two thirds start their treatment within 12 weeks of consultation. The commonest restorative treatment was periodontal therapy, crown and bridgework. Over one third of patients required joint orthodontic and restorative treatment. More than 12% of patients require oral surgery in the form of removal of impacted teeth, exposure of unerupted teeth, placement of bone anchors or orthognathic surgery. Consultation and treatment waiting times could be reduced by the introduction of more clinics and employment of more staff. A representative in oral surgery maybe useful with the increase use of bone anchors and mini implants to aid joint orthodontic-restorative treatment. Access to an orthodontic and restorative consultant clinic is useful in providing patients with a high quality of multidisciplinary treatment planning in an efficient manner.*

KEY WORDS: Orthodontic and restorative dentistry, multidisciplinary, hospital services, joint clinic

INTRODUCTION

At present there is limited literature on hospital orthodontic-restorative services in the UK. In 1998 the General Dental Council (GDC) organised registered specialist lists in order to formalise, standardise and improve the quality of dentistry provided to the general public[1, 2]. In the UK, Orthodontics and Restorative Dentistry have existed as specialities since 1973[2]. In order to become a hospital orthodontic consultant one has to complete a 5 year hospital training program, which involves completing a 3 year course as a specialist registrar (SpR), followed by 2 additional years in a Fixed Term Training Appointment (FTTA)[1]. There are 3 sub-divisions of restorative dentistry, each with their own mono-specialist list[1, 3]. These sub-divisions are endodontics, periodontics and prosthodontics. Restorative specialists can receive training in all 3 mono-specialities or become specialist in a single mono-speciality. There is a tendency for restorative mono-specialists to work in private dental practice as the training is usually self funded. In order to become a hospital consultant in restorative dentistry one completes a 5 year training program.

Referrals into the hospital dental services can be of a multidisciplinary nature. Therefore, the provision of a joint orthodontic-restorative hospital service is important in providing a quality service for those malocclusions affected by: hypodontia, generalised spacing associated with microdontia and bimaxillary proclination, enamel or dental defects (enamel hypoplasia, amelogenesis imperfecta, dentine imperfecta), tooth surface loss, dental trauma of the anterior teeth, cleft lip and palate and syndromes affecting the occlusion (ectodermal dysplasia), impacted, ectopic and infraoccluded teeth. A report on a teaching hospital's orthodontic-restorative hospital clinic stated that the main reason for referral was hypodontia[4]. However, there were no details regarding the providers of orthodontic and restorative treatment, and the waiting time to start treatment. The objectives of the survey were to collect data on the following: referral details (source of patient referral and type of problem), waiting time, type of specialist that performs the orthodontic and restorative treatment, and the consultation outcome.

METHOD

A data collection form was designed to be completed by the clinician. A pilot survey was carried out and the data collection form was completed by the orthodontic clinicians in the department, as a result minor adjustments were carried out. The survey was registered with the Mayday University Hospital Clinical Governance Department. Completion of the data collection form was carried out for each patient attending the joint orthodontic-restorative consultant clinic by the FTTA in orthodontics, between January and August 2005.

RESULTS

Sixty one patients attended 4 joint orthodontic-restorative consultant clinics during January and August 2005. On average each clinic was attended by 15 patients, of which 60 per cent were female. Nearly 50 per cent of patients were originally referred by the general dental practitioner,

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whilst 29 per cent were referred by the Mayday Restorative or Orthodontic department (fig1). The commonest reasons for referral were spacing and dental trauma (fig 2). Over one third of patients were seen on the joint clinic within 12 weeks. However, nearly 75 per cent were seen within 6 months and only 5 patients waited greater than 9 months to receive their consultation (fig 3).

The majority of restorative dentistry was carried out by the consultant in restorative dentistry and the dental hygienist (fig 4). This is reflected in the commonest restorative treatment being carried out as crown and bridgework and periodontal treatment. However, the majority of orthodontic treatment was carried out by the FTTA in orthodontics (fig 5). The outcome of the consultation showed that 20 per cent of patients could be treated with restorative dentistry alone. Over one third of referrals require joint orthodontic-restorative dentistry, and additional 12 per cent of patients require oral surgery (fig 6).

In general nearly two thirds of patients start their joint orthodontic-restorative treatment within 12 weeks. However, 13% of patients wait greater than 9 months to start treatment (fig 7).

DISCUSSION

The results show that nearly 30% of referrals to this joint clinic are from the Orthodontic or Restorative Dentistry department. However, 7% originate from other hospital departments e.g. Oral and Maxillofacial surgery. The main reasons for referral were spacing and hypodontia which is similar to the findings from another hospital's joint orthodontic-restorative clinic[4]. Dental trauma was the second most common referral. This may reflect the way a District General Hospital manages referrals for dental trauma compared to a dental teaching hospital which usually has a department of primary dental care for such cases.

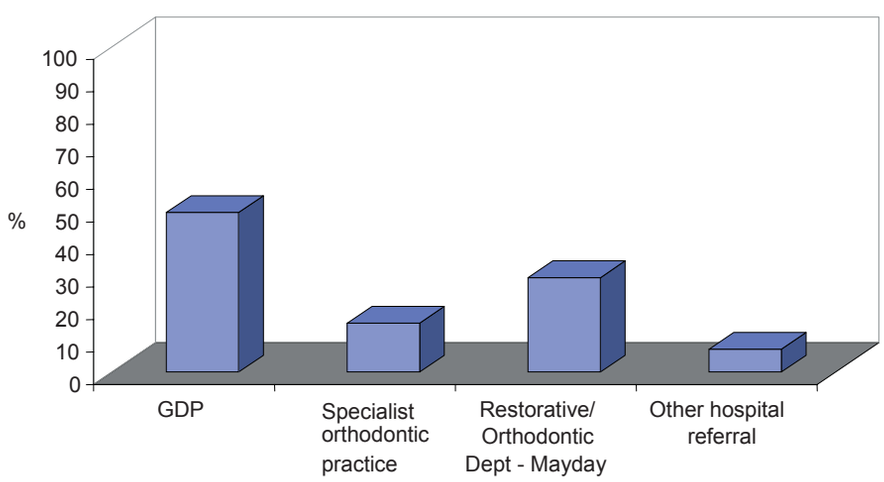

Figure 1. *Referral origin*

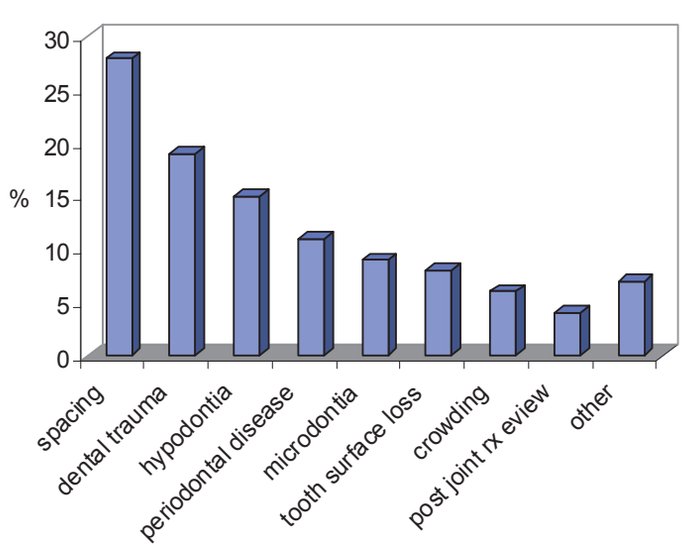

Figure 2. *Reasons for referral*

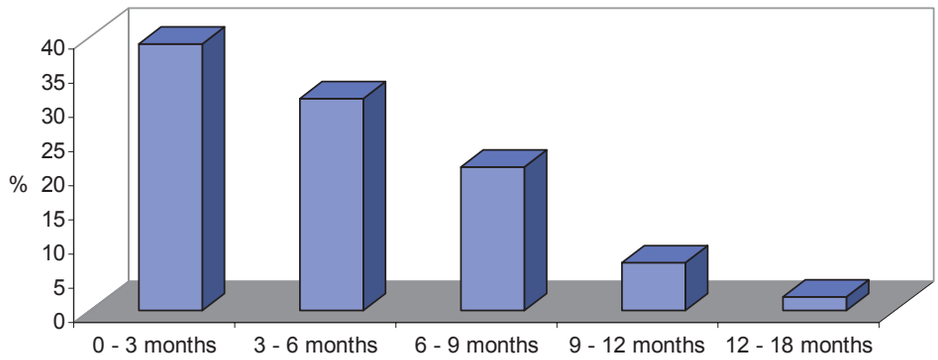

Figure 3. *Waiting time for consultation appointment*

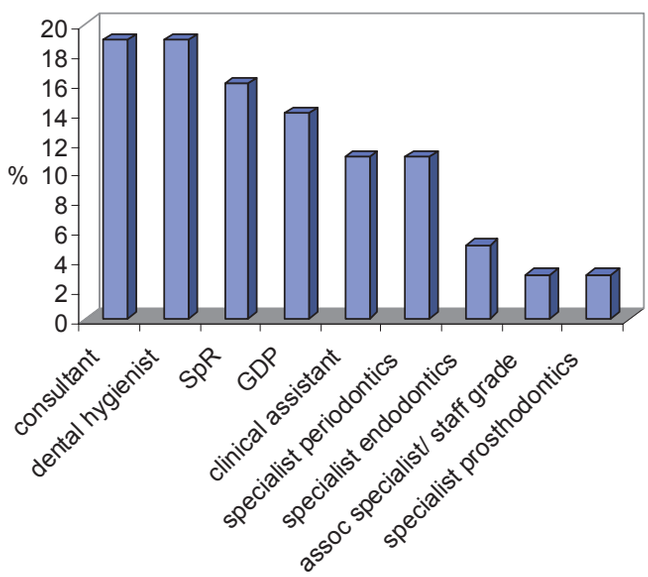

Figure 4. *Provision of restorative dentistry*

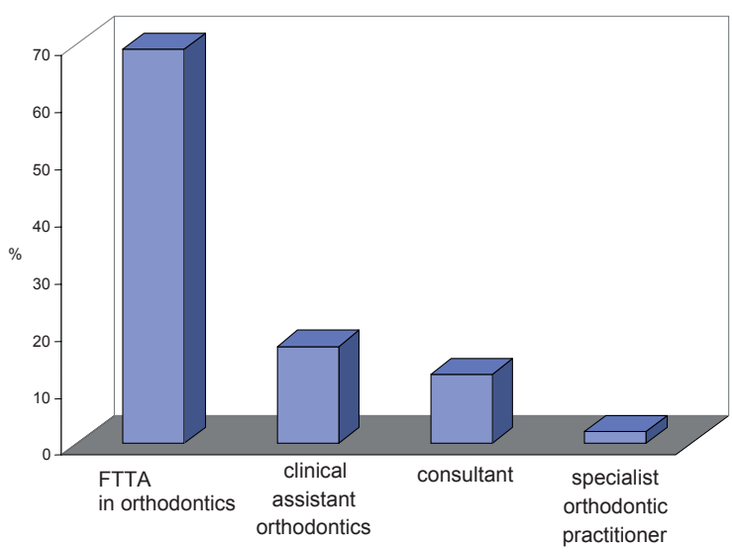

Figure 5. *Provision of orthodontic treatment*

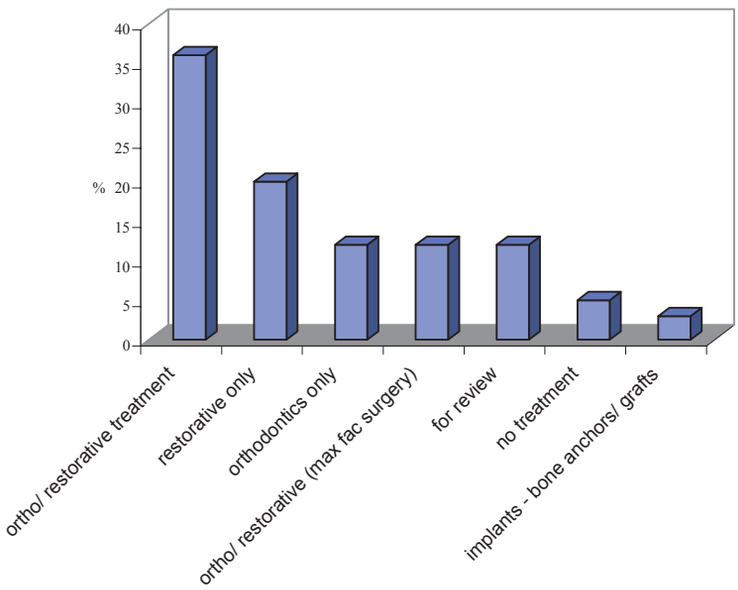

Figure 6. *Outcome of Orthodontic–Restorative Clinic Consultation*

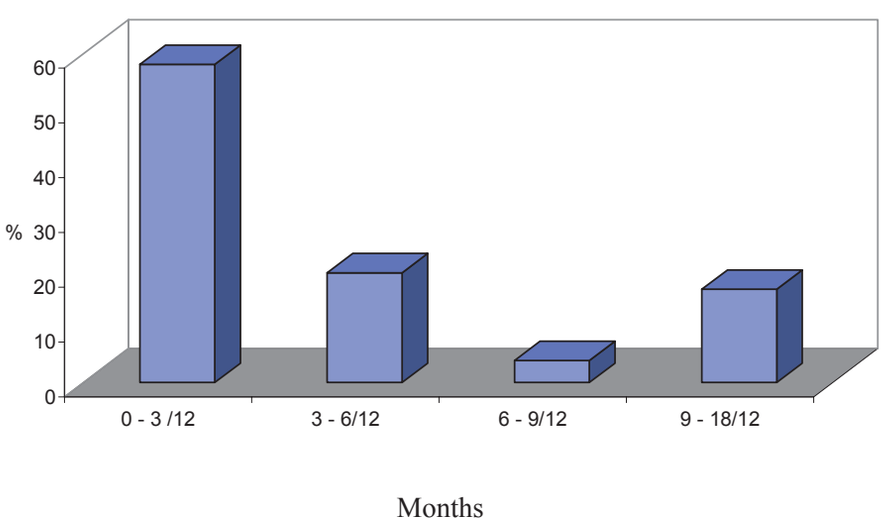

Figure 7. *Time to start of joint Orthodontic and Restorative treatment*

The current waiting time for a new patient consultation is 12 weeks. Recently the waiting time for a patient to start their treatment after receiving their consultation is 24 weeks[5]. The results show that nearly two thirds of patients start treatment within this time limit. A reason for this delay could be the shortage of hospital consultants, which has been reported in the UK orthodontic workforce survey[6]. Specialists in the restorative mono-specialties usually provide treatment on a private basis. It has been reported that long waiting lists were the most significant barrier to general dental practitioners referring NHS patients for specialist restorative services[7].

The results show that 54 per cent of all referrals require specialist restorative treatment, with nearly one third of restorative treatment being carried out by the periodontist or dental hygienist. This reflects the need for many patients to undergo a phase of oral hygiene and periodontal therapy before starting their joint treatment. The consultant in restorative dentistry carries out the majority of crown and bridgework because there is only 1 part time SpR in the department. The majority of orthodontic treatment is carried out by the FTTA. This reflects the orthodontic workforce which consists of only 1 part time orthodontic consultant and 2 FTTA's in orthodontics.

The outcome of the consultation revealed that over 50 per cent of cases required multidisciplinary treatment. This treatment involved orthodontic and restorative dentistry, or orthodontics and restorative dentistry with orthognathic surgery or minor oral surgery. Consultation with an oral-maxillofacial surgeon was required for advice on orthognathic surgery, removal of impacted or ectopic teeth, exposure of impacted teeth and the placement of bone anchors.

Recent changes in the provision of NHS orthodontic treatment has been restricted by the use of the index of orthodontic treatment need (IOTN) [8]. Orthodontic treatment is provided only for patients with a dental health component

of grade 4-5, or grade 3 with an aesthetic component of 6 and above. This index does not reflect the dental health need for cases requiring orthodontic-restorative treatment. The development of an index of Restorative Treatment Need has been attempted[9]. The complexity of Restorative Dentistry in regard to periodontal, endodontic, fixed and removable prosthodontics can now be assessed using a Restorative Dentistry Index of Treatment Need, but is not widely used[10].

'The NHS Plan' states that patients should have access to high quality treatment[11] This is provided by a joint orthodontic-restorative consultant clinic. The role of a consultant in orthodontics and restorative dentistry is to provide: clinical consultation, treatment of severe multidisciplinary cases, service co-ordination and training.

The survey only reflects the experience of a District General Hospital. Regional variation may influence the referral rate, type and consultation outcome, and availability of orthodontic or restorative specialists to provide joint treatment. The inclusion of bone anchors and mini implants in orthodontic-restorative treatment may not be available in some units; so there maybe a reduced need for an oral surgery input. The audit may have been affected by seasonal variations as it was carried out at the beginning of the year.

CONCLUSION

In order to see patients on the joint clinic within the Government's time frame waiting list initiative clinics may need to be organised. The survey has revealed that extra hygienists and Periodontists may help reduce restorative treatment waiting times. Orthodontic treatment waiting times could be reduced by the employment of more staff. A representative from the Oral Surgery department is useful and time effective in terms of treatment planning, due to the increasing use of bone anchors. Access to an orthodontic–restorative consultant clinic is useful in providing the patient with a high quality of multidisciplinary treatment planning in an efficient manner.

ACKNOWLEDGEMENTS

The authors would like to acknowledge Mr Mike Blades (Mayday University Hospital Clinical Governance Department) for his I.T contribution and support.

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