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Main Article

Can we improve dysphagia referrals?

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Abstract

We set out to examine whether a multidisciplinary out-patient dysphagia referral triage service would shorten the duration of a patient's referral process and direct patients to the correct specialty. A review was carried out of patients referred with dysphagia before and after the introduction of a multidisciplinary out-patient dysphagia service, from February 2001 to April 2001 and from January 2002 to March 2002, inclusive.

One hundred and eight patients were referred in total. The length of time until the first appointment was reduced from four to three weeks (median; range one to 23; $p < 0.001$). The number of instrumental investigations was reduced, with a median of one instrumentation per patient under the new service, compared with two in those under the standard service ($p < 0.001$). Attendance to hospital was also reduced, with 45 per cent of patients under the new service requiring only one appointment, compared with 13 per cent in those under the standard service ($p < 0.001$).

The multidisciplinary out-patient dysphagia service was associated with significant reductions in waiting times, in the number of instrumental investigations and in the duration of the patient's referral process.

Key words: Dysphagia; Referral and Consultations; Interdisciplinary Communication

Introduction

Background

Dysphagia is a symptom which may be caused by a local lesion or a generalized disease.[1] Its aetiology spans several different specialties: gastrointestinal medicine, gastrointestinal surgery, thoracic surgery, ENT, neurology and speech therapy.[2–4] Unless a patient describes accompanying signs or symptoms, their general practitioner (GP) faces the question of which specialty to refer to. A retrospective audit of out-patient dysphagia referrals to the Royal Infirmary in Edinburgh in 2001 indicated that this large, fragmented service was causing lengthy referral delays, with patients requiring multiple hospital visits to different specialties. To create a coordinated referral system, the service was redesigned.[5] In 2002, a new, multidisciplinary out-patient dysphagia service (MODS) was created at the Royal Infirmary, Edinburgh.

The service comprised two main components:

(1) A GP referral pro-forma, consisting of quick, easy questions and answers, which could be faxed to the central service (see Appendix 1).
(2) A core team of professionals with an interest and expertise in dysphagia: consultants in gastroenterology, otolaryngology, gastrointestinal surgery, thoracic surgery and radiology; and speech and language therapists. One or more of these professionals would review referrals on a daily basis and an appointment would be made to the most appropriate specialty, with urgent cases prioritized.[6]

Three months after implementation of this multidisciplinary service, a prospective audit was undertaken to assess the effect of the new service on patients' waiting times, number of hospital visits and investigations performed, compared with those parameters under the old service.

Aims

We aimed to examine whether the MODS would shorten the duration of a patient's referral process and direct patients to the correct specialty.[3]

Method

From February to April 2001, an initial, retrospective study audited all out-patients who had received barium swallows, all patients who had received a diagnosis of dysphagia based on an endoscopy report and all out-patient dysphagia referrals that had been seen at the speech and language therapy department. A total of 157 patient medical notes were audited. Of these 157, 64 patients had dysphagia as the reason for referral. These 64 were therefore included in the audit. Ninety-three patients were excluded as they did not have swallowing difficulties.

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After the MODS had been operational for three months, a further, prospective study was carried out on 44 referrals to the new service from January to March 2002. We compared the results of this second study to those of the previous study carried out on the standard service. For the comparison, we analysed the time from referral to the initial appointment, the number of instrumental investigations performed and the number of hospital visits prior to diagnosis. The results were accumulated using SPSS software, with analysis by chi-square tests and *t*-tests where appropriate.

Results

The length of time from referral to first appointment in the standard service ranged from one to 32 weeks, (median four weeks), with 12.5 per cent of patients being seen within three weeks. The MODS cut this interval to a maximum of 23 weeks (median three weeks), with 52 per cent of patients being seen within three weeks (Figure 1). The statistical significance of this difference was $p \leq 0.001$.

The number of instrumental investigations patients received prior to diagnosis significantly dropped following redesign of the service, with 72 per cent of patients under the MODS receiving just one instrumental investigation (overall median one), compared with only 22 per cent of patients prior to redesign. Under the old service, patients received a median of two instrumental investigations, and 25 per cent of patients received three or more (Figure 2).

The MODS significantly reduced the number of hospital appointments that patients attended prior to diagnosis (Figure 3). Fifty-four per cent of patients attending the MODS did so only once (and these patients overall had a median of one appointment); in comparison, only 13 per cent of patients attending the standard service did so only once (and these patients overall had a median of three appointments). The statistical significance of this difference was $p \leq 0.001$.

Discussion

The results of the second audit indicated that the MODS had achieved its aim of targeting referrals to the most appropriate specialty and thus reducing the duration of the patients' referral process. Consequently, this led to a reduction in waiting times and, specifically, a significant reduction in the number of costly instrumental investigations carried out. It also reduced patients' exposure to the unnecessary risks of these extra procedures.

The reduction in the number of appointments patients received prior to diagnosis reflected the high percentage of patients attending the one-stop gastrointestinal clinic. This clinic carried out instrumental procedures on the same day as the clinic appointment. The duration of the patients' referral process was therefore reduced further.

One limitation of this study was the lack of inclusion of referrals from the accident and emergency department. However, referral to MODS would be easy to implement within a hospital intranet system. Another limitation was that GPs did not have to refer all their dysphagic patients via this service; GPs could still refer directly to a specialty or organize a specific investigation such as endoscopy. This may have been appropriate when the

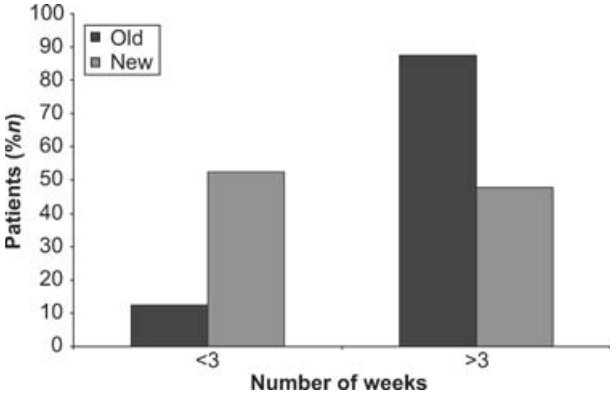

FIG. 1

Time from patient referral to first appointment. Old = standard service; New = multidisciplinary out-patient dysphagia service

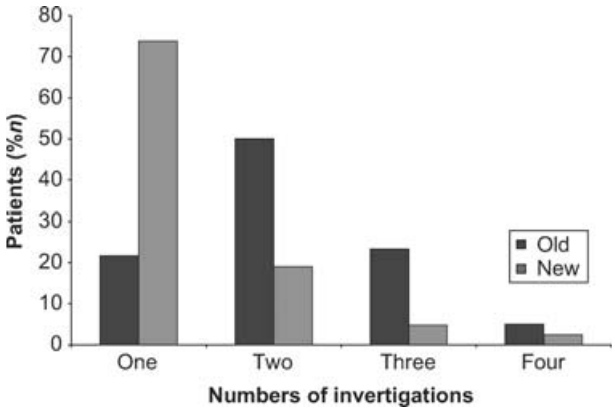

FIG. 2

Number of patient investigations prior to diagnosis. Old = standard service; New = multidisciplinary out-patient dysphagia service

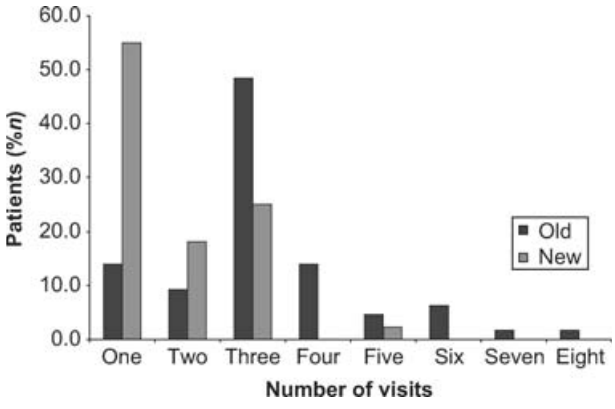

FIG. 3

Number of patient appointments prior to diagnosis. Old = standard service; New = multidisciplinary out-patient dysphagia service

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patient's symptoms clearly pointed to one of the specialties. However, our pilot audit, as well as other studies, indicated that patients were frequently being sent to an inappropriate specialty, leading to unnecessary investigations and hospital visits.[7]

At the time of writing, our hospital service had moved to an electronic referral system (rather than fax), enabling two-way communication regarding referrals; further audit of this system will ensue.

Comparison of the two audit cycles therefore suggests that GPs should be encouraged to refer all their patients with dysphagia to a MODS. Once this service has been promoted and further audit cycles completed, this template may be applicable to other common conditions seen by multiple specialties.

- **Dysphagia has many aetiologies, producing difficulties in referral to the correct specialty**
- **The introduction of a multidisciplinary dysphagia triage referral system improved clinical care and allowed targetted referrals to be made to the appropriate specialty**
- **Unnecessary appointments were reduced, as were unnecessary interventions**

Conclusion

This audit therefore shows that in order to improve clinical care, reduce the duration of the patients' referral process, and reduce unnecessary appointments and interventions, all dysphagia patients should be referred via a multidisciplinary dysphagia referral triage service.

Acknowledgements

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The Central Outpatient Dysphagia Service

NHS Lothian

Patient Details:	**Hospital Unit No:**
	Date of Birth: **Age:** **CHI Number:**
Patient Tel No:	*If patient can attend at short notice, please add work telephone number:*

Referring GP:	**Tel:**
	Fax:
	E-mail:
Registered GP:	

DYSPHAGIA v1.1 03Dec03

Date of Referral:

PLEASE DESCRIBE PATIENT'S DYSPHAGIA SYMPTOMS ACCURATELY:

When did it begin ?

If the patient has a sensation of a lump in the throat which does not interfere with the swallow function i.e: the globus sensation, please do not refer this patient to the dysphagia service - refer to ENT in usual manner

DOES THE PATIENT COMPLAIN OF THE FOLLOWING ?
Please tick relevant boxes :

Problems swallowing solids	Yes ☐	No ☐	
Does patient complain of food sticking	Yes ☐	No ☐	If yes, where? Neck ☐ Chest ☐
Progressive difficulty	Yes ☐	No ☐	
Weight loss > 3 Kg	Yes ☐	No ☐	
Problems swallowing liquids	Yes ☐	No ☐	
Coughing / choking during or after drinking	Yes ☐	No ☐	
Intermittent symptoms	Yes ☐	No ☐	
Hoarseness	Yes ☐	No ☐	
Acid reflux	Yes ☐	No ☐	
Regurgitation	Yes ☐	No ☐	

Previous investigations for swallow difficulty Yes ☐ No ☐
If yes where & when - please specify findings

Contraindications for endoscopy Yes ☐ No ☐
If yes, please explain:

CVA Yes ☐ No ☐ Recurrent Chest Infections Yes ☐ No ☐

Any other additional relevant information?:

Past medical history:

Signed.....

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