

ORIGINAL ARTICLES

Are Grampian General Practitioners Good Gatekeepers for Access to Emergency General Surgical Care?*Al Mitchell¹, RA Keenan²*¹Specialist Registrar General Surgery, Ward 32, Aberdeen Royal Infirmary, Foresterhill Road, Aberdeen, AB25 2ZN²Consultant General Surgeon, Ward 32, Aberdeen Royal Infirmary, Foresterhill Road, Aberdeen, AB25 2ZN**Correspondence to**

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Abstract**Background**

Direct admission from primary care is the predominant emergency general surgical referral route in north-east Scotland. Recent primary and secondary care reconfiguration has increased resources necessary to support the current system, therefore alternative models are proposed. We seek to analyse frequency and accuracy of provisional diagnosis by general practitioners within our current admission system.

Method

Presence of referral letter, provisional diagnosis, discharge diagnosis and management were prospectively recorded for all emergency general surgical admissions to Aberdeen Royal Infirmary over three weeks.

Results

One hundred and sixty three primary care admissions: 69.3% from patient's own practice and 30.7% from the out-of-hours service. Of these patients 98.1% came with a referral letter, 86.1% including a provisional diagnosis, which was correct in 43.6% of cases. Fourteen patients (8.6%) were transferred to another ward for treatment.

Discussion

General practitioners provide written provisional diagnoses with most referrals, accurate in almost half of cases, with only a minority of patients requiring transfer for management of presenting problems. This is despite limited investigations, clinical isolation, restricted facilities for examination and limited time for assessment. We believe Grampian general practitioners are good gatekeepers to emergency general surgical care and support the current direct admission pathway.

Grampian is provided, admissions are accepted twenty-four hours a day by the on-call general surgical unit from primary care by telephone referral to the on-call resident doctor. Four general surgical wards share this responsibility which rotates every seven days. At either end of this pathway significant recent reconfiguration of working patterns has occurred and is indeed ongoing. In primary care the new general practitioners' contract has transferred 24 hour responsibility for patients from individual general practitioners to health authorities.¹ Previous out-of-hours general practitioner co-operatives managed and staffed by general practitioners have been replaced by a nurse-led telephone triage system which then acts as a gatekeeper to an out-of-hours medical service managed and staffed by local health authorities. In secondary care, statutory limitation on junior doctors hours has increased resources necessary to staff surgical units.^{2,3} With ongoing statutory reductions in junior doctors working hours, various strategies to support the continuation of current service provision are being proposed or indeed employed in the United Kingdom.⁴ These involve both reductions in the tiers of junior doctor working within a particular specialty and increases in the number of specialties covered by individual doctors or teams, particularly at night. An organisational strategy to support these changes would aim to assess emergency referrals in a centralised surgical or hospital admissions unit rather than directly admit to individual specialised units. The admissions unit would therefore assume the role of gatekeeper to the general surgical ward, a role currently performed by general practitioners. More radical proposals would involve the out-of-hours general practice provision merged with the Accident and Emergency department.

With this background, we aim to evaluate the performance of general practitioners regarding formulation of provisional diagnosis within the current system of direct emergency general surgical admission. The objectives of this study were to determine the frequency and accuracy of provisional diagnosis by general practitioners of patients they admit and determine the proportion of patients admitted with pathology that required transfer to other specialties for management.

Method

All patients coming under the care of the on-call emergency adult general surgical unit in Aberdeen Royal Infirmary were prospectively analysed over three weeks in March and April 2005. Patients were identified from daily review of an admissions board and a ward admissions log. Patient data were collected at the time of hospital discharge and notes of patients transferred to other wards for further management were

Background

At present, direct admission from primary care by general practitioners is the predominant referral pathway for emergency general surgical admission within NHS Grampian, one of Scotland's fourteen health board areas. In Aberdeen Royal Infirmary, where the main general surgery service within NHS

retrieved for analysis. Data recorded included: age, referral source, referrer's provisional diagnosis, management and discharge diagnosis. Discharge diagnoses of patients discharged from the surgical unit were subject to retrospective internal audit from consultant surgeons responsible for patient care based upon one or more of: clinical information available, investigation findings, operative findings and operative histology. It was not possible to determine criteria for determination of, and grade of doctor involved in, the formulation of discharge diagnosis for patients transferred to other wards.

Results

Two hundred and nine patients, median age 53 (range 14-99), came under the care of the emergency general surgical team during the study period. Seventy eight percent (n=163) of patients were admitted from primary care: 113 (54.1%) from the patients' own practices and 50 (23.9%) via the out of hours general practice service (Table I).

Table I – Referral Source of All Admissions

Referral Source	Number of patients
Patient's registered general practice	113 (54.1%)
Out of hours general practice service	50 (23.9%)
Accident and Emergency department	27 (12.9%)
Other Aberdeen Royal Infirmary wards	10 (4.8%)
Other hospitals	8 (3.8%)
Offshore	1 (0.5%)

The frequency of documentation of a provisional diagnosis in admission notes or letter and correlation with diagnosis at discharge is tabulated in Table II. Admissions from the out-of-hours general practice service were based on a standard template including a section for provisional diagnosis. Letters from general practitioners during working hours adopted a variety of formats. A correct provisional diagnosis was stated in n=71 (43.6%) of primary care admissions.

Table II – Accuracy of Provisional Diagnosis Made

Referrer	Number of admissions	Provisional diagnosis stated	Provisional diagnosis correct
Patient's General Practice	113*	94 (85.5%)	47 (42.7%)
Out of hours general practice service	50	48 (96.0%)	24 (48.0%)
Accident & Emergency	27	25 (92.6%)	17 (68.0%)
Other Aberdeen Royal Infirmary Wards	10	10 (100%)	9 (90.0%)
Other Hospitals	8	8 (100%)	7 (87.5%)
Offshore	1	-	-

* No letter found with three patients

Analysing the other admissions from primary care, with an incorrect or absent provisional diagnosis, n=33 (20.2%) were discharged with a diagnosis of non-specific abdominal pain (NSAP) and n=59 (36.2%) an alternative diagnosis. The management of all patients admitted, with sub analysis of primary and secondary care, is summarised in Table III.

Table III – Management of Patients Admitted

Management	All patients admitted (n=209)	Admissions from primary care (n=163)	Admissions from secondary care (n=45)
Conservative	122 (58.4%)	100 (61.3%)	21 (46.8%)
Operative	53 (25.4%)	34 (20.9%)	19 (42.2%)
Endoscopic procedure	16 (7.6%)	14 (8.6%)	2 (4.4%)
Operative & endoscopic	2 (1.0%)	1 (0.6%)	1 (2.2%)
Transfer	16 (7.6%)	14 (8.6%)	2 (4.4%)

Discussion

In this study general practitioners provided a letter with n=160 (98.1%) of emergency admissions, n=142 (87.1%) of which contained a provisional diagnosis. It is acknowledged this does not take account of the content of the telephone referral. In n=71 (43.6%) the provisional diagnosis concurred with the diagnosis stated on discharge despite general practitioners' limited access to investigations, restricted situations in which to examine the patient, clinical isolation and less time to perform clinical assessment and reassessment. Of the other patients n=33 (20.2%) were discharged with a diagnosis of NSAP. Retrospective analysis of this group in the literature has demonstrated that patients with a diagnosis of NSAP can represent unrecognised presentations of various pathologies.^{5,6} Indeed in patients over 50 years of age there is a proven association with a later diagnosis of intra-abdominal malignancy.⁷ Therefore this group in our study may include some patients with unrecognised conditions in the provisional diagnoses of general practitioners requesting that their patients be admitted. This group also demonstrates the difficulty of diagnosis among general surgical patients, even for consultant led teams with the benefit of inpatient diagnostic facilities, reinforcing the achievement of our primary care colleagues without the advantages of inpatient facilities.⁵ Only a small proportion of patients admitted n=14 (8.6%) required transfer to another specialty for treatment half of which, n=7, were admitted due to a local policy of the urology unit not admitting primary presentations of ureteric colic.

These findings therefore suggest that most emergency general surgical admissions from primary care in Grampian are appropriate to the specialty and that general practitioners are practising good communication and have a good understanding of the actual diagnosis despite the limitations of their clinical situation. We believe these findings suggest Grampian general practitioners are good gatekeepers for emergency access to general surgical care. Based on our findings we would support general practitioners in Grampian retaining this role.

References

1. The Department of Health. Delivering Investment in General Practice - Implementing the New GMS contract. London: Department of Health, 2004
 2. NHS Management Executive. Junior Doctors: the New Deal. London: Department of Health, 1991
 3. Council Directive 93/104/EC. Off J Eur Communities 1993; L307: 18-24
 4. The Department of Health. Findings and Recommendations from the Hospital at Night Project. London: Department of Health, 2004
 5. Gray DWR, Collin J. Non-specific abdominal pain as a cause of acute admission to hospital. Br J Surg 1987; 74: 239-42
 6. Decadt B, Sussman L, Lewis MPN et al. Randomized clinical trial of early laparoscopy in the management of acute non-specific abdominal pain. Br J Surg 1999; 86: 1383-86
 7. de Dombal FT, Matharu SS, Staniland JR et al. Presentation of cancer to hospital as 'acute abdominal pain'. Br J Surg 1980; 67: 413-6
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