Presentations of diarrhoea in Australian general practice

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The BEACH program, a continuous national study of general practice activity in Australia, gives us an overview of the consultations in general practice involving a patient presentation of diarrhoea. This provides a backdrop against which articles in this issue of the *Australian Family Physician* can be further considered.

Rate of presentation

Among the 602 100 encounters recorded by 6021 general practitioners in BEACH April 1998–March 2004, there were 8025 at which the patient gave diarrhoea as one of their reasons for encounter (RFE) (*Figure 1*). These patients presented at a rate of 1.3 per 100 encounters (about 1.25 million occasions per year across Australia).

Other reasons for encounter

At one-third (33.8%) of these encounters, diarrhoea was the only RFE described by the patient. For those presenting with multiple RFEs, common additional symptoms included vomiting (25.0 per 100), abdominal pain (11.0), nausea (4.6), and fever (3.0 per 100).

Patients

Males made up half of these presentations and patients presenting with diarrhoea were younger than average for all encounters. The age and sex specific rates of presentation show that males were slightly more likely to present with diarrhoea (1.6 per 100 male encounters) than females (1.2 per 100), that children aged less than 5 years were the most likely to present with diarrhoea (3.4 per 100), and that the rate steadily decreased with age to only 0.7 per 100 encounters with elderly patients.

Problems managed

There were 11 196 problems managed at these encounters. Of these, eight diagnoses were clearly associated with the RFE of diarrhoea and these accounted for two-thirds (66.1%) of all problems managed at these encounters. Gastroenteritis was the most common diagnosis (66% of encounters). At 18% of these encounters, the GP did not reach a diagnosis, recording the problem only as the symptom 'diarrhoea'. Together these two problem labels accounted for almost 80% of the diarrhoea presentations. Other less common problem labels included other viral illness (3.8%), irritable bowel syndrome (3.2%), chronic enteritis/ulcerative colitis (2.3%), adverse effect of a medical agent (1.4%), and diverticular disease (1.1%) (*Figure 1*).

Management of the undiagnosed problem

The most problematic group for GPs is the patients for whom the symptom remains undiagnosed at the end of the encounter. Of the 1429 problems that remained undiagnosed, more than half (55.1%) were new presentations of diarrhoea.

The likelihood of the problem remaining undiagnosed at the encounter was slightly lower for males (25.7%) than for females (28.2%), and was lowest in children and younger adults (11.9% in people aged 15–24 years). It steadily increased with the age of adults so that for more than one-third (34.8%) of elderly patients (>75 years), the problem remained labelled as diarrhoea.

Medications

For half of these problems (49.4%) the GP did not prescribe, supply or advise any medication. For the remainder there were 830 medications (58.1 per 100 diarrhoea contacts) of which 81% were prescribed. The prescribing rate (47.0 per 100 contacts) was lower than average for all problems managed in BEACH (58.8 per 100). Among all medications, atropine/diphenoxylate and loperamide were the equally favoured generic medication (15.0 per 100 diarrhoea contacts). Of the prescribed medications the antipropulsive drug class was by far the most common (25.6 per 100 diarrhoea encounters).

Other treatments

Other treatments were provided slightly more often (41.2 per 100 contacts) than the BEACH average (35.1). This was due to the frequency of clinical treatments such as advice and counselling given by GPs (39.8 per 100 contacts) compared with the average for all problems (36 per 100). These largely centred on advice about nutrition/weight (14.0 per 100 contacts), and advice about how to treat the problem (12.0 per 100). In contrast, GPs rarely reported procedural work for this problem (1.3 per 100

problems compared with 14.7 per 100 average).

Referrals and tests

The patients were referred elsewhere for this problem less often (6.5 per 100 contacts) than the BEACH average (8 per 100). These referrals were usually to a specialist (6.0 per 100), particularly gastroenterologists (3.8 per 100). Pathology tests were ordered at about the usual rate; requests for faeces M&C being most common, followed by stool cultures, full blood counts, and faeces tests of an unspecified nature. Orders for imaging were negligible.

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Conflict of interest: none declared.

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Patients presenting with diarrhoea
(n=8025)

Sex	%	Rate[a]
Males	48.2	1.6
Females	51.8	1.2
Age group		
<5	17.5	3.4
5–14	6.8	1.4
15–24	14.7	2.0
25–44	30.6	1.6
45–64	17.0	0.9
65–74	6.2	0.7
75+	7.4	0.7

RFE=diarrhoea
n=8025 (1.3 per 100 encounters)[a]
Only RFE=33.8%

Other RFEs (n=7608) often presented with diarrhoea
Rate per 100 encounters with RFE 'diarrhoea'[b]

Vomiting	25.0
Abdominal pain	11.0
Nausea	4.6
Fever	3.0

Associated problems managed
(n=11 196)
Rate per 100 'diarrhoea' encounters[b]

Gastroenteritis	60.5
Diarrhoea	17.8
Other viral disease NOS	3.8
Irritable bowel syndrome	3.2
Chronic enteritis/ulcerative colitis	2.3
Other digestive disease NEC	2.1
Adverse effect medical agent	1.4
Diverticular disease	1.1

Problem managed=undiagnosed diarrhoea with patient RFE of diarrhoea
(n=1429 problems at 1429 encounters)
New problems=55.1%, follow up consultations=44.9%

The patients (n=1429)
Likelihood of problem remaining undiagnosed 'diarrhoea'

Sex	%
Males	25.7
Females	28.2
Age group	**%**
<5	15.2
5–14	13.3
15–24	11.9
25–44	15.5
45–64	23.7
65–74	26.4
75+	34.8

(a) Rate per 100 encounters (n=602 100)
(b) Expressed as rate per 100 encounters at which a RFE of 'diarrhoea' was given (n=8025)
(c) Expressed as a rate per 100 'diarrhoea' problems managed at encounters with a RFE of 'diarrhoea' (n=1429)
Note: NOS = not otherwise specified, NEC = not elsewhere classified

Medications (n= 830, 58.1 per 100)
Rate per 100 diarrhoea problems[b]

Prescribed	47.0
Advised OTC	8.8
Supplied	2.3

Most common generics (n=830)

Atropine + diphenoxylate	15.0
Loperamide	15.0
Metronidazole oral/systemic	5.5
Sodium/potassium/citric/glucose	5.2
Tinidazole	4.0

Common prescribed drug groups (n=671)

Antipropulsives	25.6
Other antibacterials	9.3
Other mineral supplements	2.2
Propulsives	1.6
Other analgesics and antipyretics	1.3

Other treatments
(n=588, 41.2 per 100 problems)
Rate per 100 diarrhoea problems[c]

Clinical treatments	39.8
Counsel/advice nutrition/weight	14.0
Advice/education treatment	12.0
Procedures	1.3

Referrals (n=93, 6.5 per 100)
Rate per 100 diarrhoea problems[c]

Specialists	6.0
Gastroenterologist	3.8
Hospital/ED	0.3

Pathology tests
(n=469, 32.8 per 100)
Rate per 100 diarrhoea problems[c]

Faeces M&C	12.3
Stool culture	3.9
Full blood count	3.4
Test faeces NOS	1.8

Imaging (n=13, 0.9per 100)
Rate per 100 problems[c]

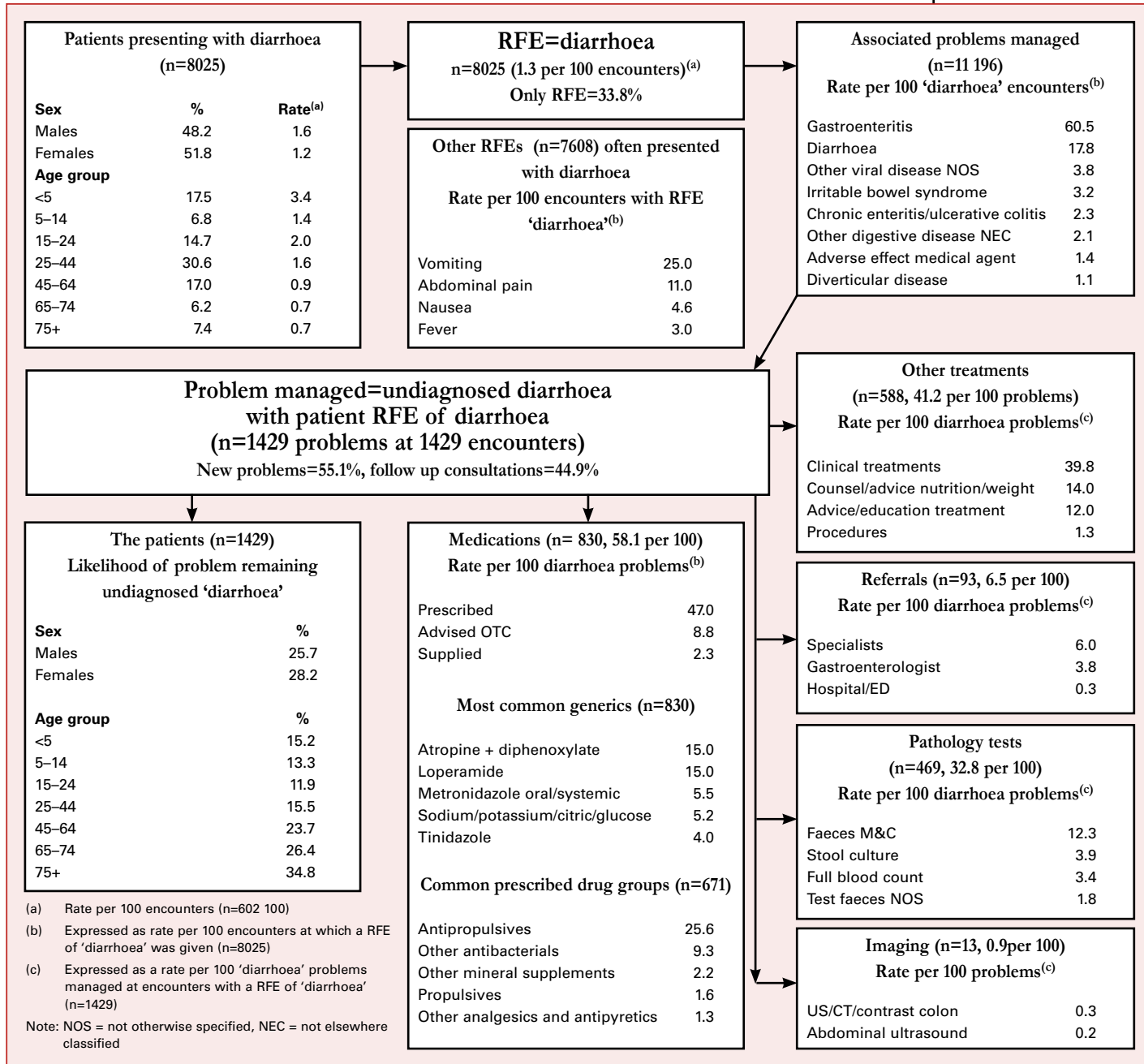|	
US/CT/contrast colon	0.3
Abdominal ultrasound	0.2

Figure 1. Presentations of diarrhoea, and management of the undiagnosed problem