



The University of Sydney
at Westmead Hospital

General Practice Statistics and Classification Unit
Family Medicine Research Centre

A collaborating unit of the
Australian Institute of Health and Welfare



BEACH

BETTERING THE EVALUATION AND CARE OF HEALTH

SUMMARY PROBLEM REPORT for GP DIVISIONS

PEPTIC ULCERS IN GENERAL PRACTICE

Twelve months data (April 2001 – March 2002 inclusive)



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Enquiries to: A/Professor Helena Britt

Telephone: (02) 9845 8167

A quick overview of peptic ulcers and Proton pump inhibitors from BEACH 2001-02

In this section two separate reports of GP activity are provided from the BEACH data 2001-02 . The first is a summary of selected data pertaining to the relative rate of management and the GP management of peptic ulcers. The other presents selected data about Proton pump inhibitors (PPIs)

Peptic ulcers:

- were managed at a rate of 0.28 per 100 encounters, or 2.8 per 1,000 encounters.
- Extrapolated to the approximately 103 million GP-patient consultations across the country we estimate there were about 300,000 consultations that involved the management of peptic ulcer
- Medications were prescribed/advised/supplied at a rate of 82.6 per 100 contacts with peptic ulcer
- Exactly 50% of these medications were PPIs
- Extrapolated national estimate is therefore 123,900 occasions on which a GP prescribes PPIs for peptic ulcer.
- Remember when looking at the rate of prescription of triple therapy for peptic ulcer, that this rate is influenced by the one-off nature of triple therapy, compared with the continuing nature of PPI treatment.

PPIs

It is worth noting from the PPI report that:

- The National estimate of the annual number of PPI scrips from GP = 1.73 million
- Peptic ulcers accounted for only 7.2% of the problems for which PPIs were prescribed (see Table 3)
- Oesophageal disease accounted for 65% of the problems managed with PPIs.

More details in the Peptic Ulcer and PPI reports.

The details of the methods use in BEACH can be found in any of the AIHW general practice publications. These can be accessed through our web site: [www://fmrc.org.au](http://fmrc.org.au). You can click on the most recent annual report listed in the Publications page and this will link directly to the book. *Britt H, Miller GC, Knox S, Charles J, Lisa V, Henderson J, et al. 2002. General practice activity in Australia 2001-02. AIHW Cat. No. GEP 10. Canberra: Australian Institute of Health and Welfare (General Practice Series No. 10). ISBN 1 74024 217 3. ISSN 1442 3022*

Background

This is a brief summary of the data collected from April 2001 until March 2002. It provides information on problems managed that the GP recorded as Peptic ulcer. (ICPC-2 rubrics 'D85', 'D86'). It is based on the BEACH collected data for the 12 month period, as specified above, from 983 GPs which provided a database of 98,300 encounters.

The participating GPs are randomly selected from the HIC list of active GPs (those who provided more than 375 GP services in the previous quarter). The research instrument used for each consultation is a single page recording form containing the following variables:

- date of encounter
- service item number/form of payment/indirect encounters (e.g. telephone consults)
- patient age and sex
- patient status to practice (new or seen before)
- health care card status of patient
- patient post code and ethnic background
- patient's reasons for encounter (up to three)
- diagnoses/problems managed (up to four)
- status of each problem to the patient (new/old)
- whether problems are work related
- medications prescribed (up to 4 per problem)
- over the counter medications recommended
- medications provided by the GP
- brand name, strength and regimen of medication
- number of repeats for medication
- medication status - new or continued
- other treatments (up to 2 per problem)
- tests and investigations ordered
- referrals and hospital admissions.

In general results are reported in terms of the number of observations (n), rate per 100 encounters and 95% confidence interval (CI) .The CI is calculated as the rate estimate \pm (1.96 x standard error). The CI is interpreted as "we are 95% confident that the true population value lies between the lower and upper value". Note that confidence intervals may be missing where data was insufficient to calculate a meaningful estimate.

RESULTS

Management rate of Peptic Ulcer 2001-2002 (BEACH)

This table provides a list of the problems managed by the GPs that make up the group Peptic Ulcer. These were selected by including ICPC rubric 'D85', 'D86' - 'Peptic Ulcer'.

Peptic ulcers were managed at a rate of 0.28 per 100 encounters, or 2.8 per 1,000 encounters. Extrapolated to the (approximately) 105 million GP-patient consultations across the country, we estimate there were about 300,000 consultations that involved the management of peptic ulcers.

The GPs usually described the problem as 'peptic ulcer' or 'duodenal ulcer' but sometimes provided a more specific label for the problem (See Table 1).

Table 1: Summary of Peptic ulcer Apr01-Mar02 codes

Peptic ulcer Apr01-Mar02	ICPC Rubric	n	Rate per 100 encs	% of problems	National annual estimated encs
Ulcer;peptic	D86	127.486	0.13	0.09	138000
Ulcer;duodenal	D85	67.342	0.07	0.05	72900
Ulcer;gastric	D86	47.901	0.05	0.03	51900
Oesophagitis;Barretts	D86	16.757	0.02	0.01	18100
Ulcer;stomach	D86	6.356	0.01	0.00	6900
Erosion;gastric;acute	D86	3.262	0.00	0.00	3500
Ulcer;perforated;duodenal	D85	1.520	0.00	0.00	1600
Ulcer;perforated	D86	1.426	0.00	0.00	1500
Ulcer;marginal	D86	1.229	0.00	0.00	1300
		=====	=====	=====	=====
		273.279	0.28	0.20	295700

Place of consultation

Indirect contacts (patient not seen but clinical activity undertaken that should be recorded in the medical record) accounted for 3.1% of these peptic ulcer encounters. Almost three-quarters (72.9%) of all encounters involving the management of peptic ulcers were charged as standard surgery consultations. A further 11.3% were charged as long surgery consultations and 3.1% were nursing home consultations (results not shown)

Characteristics of the patients for whom peptic ulcer managed:

Table 2 describes the different patient groups with which encounters have taken place through this period of the survey.

Gender and age distribution are provided. The age groupings correspond with significant trends in GP service consumption.

HCC Yes are encounters with patients who hold Commonwealth Government health care card (HCC).

VA gold card and *VA white card* are encounters with Veteran's Affairs card type holders (not necessarily charged through VA).

NESB are encounters with patients whose primary language spoken at home is not English.

Aboriginal patients who identify as being Aboriginal.

Torres Strait Islander patients are those who identify as being Torres Strait Islander.

Aboriginal and Torres Strait Is. are patients who identify as both Aboriginal and Torres Strait Islander.

The patients for whom peptic ulcer was managed were significantly more likely to be male (54.0%) than in the overall dataset (42.6%) and significantly more likely to be health care cardholders (63.0% c/f. 41.9% on average). Patients in the 45-64 years age group were over-represented (Table 2).

Table 2: Summary of data base: patients - Peptic ulcer Apr01-Mar02

Data	n	Rate per 100 encs	Lower 95% CI	Upper 95% CI
Patients	273.2			
- Males	146.6	53.95	46.8	61.1
- Females	125.1	46.05	37.6	54.5
- Missing gender	1.414			
- 15-24 years	7.167	2.63	0	45.5
- 25-44 years	61.08	22.38	7.5	37.3
- 45-64 years	105.0	38.48	29.4	47.5
- 65-74 years	50.43	18.48	2.7	34.2
- 75+ years	49.18	18.03	3.3	32.8
- Missing age	0.399			
- HCC Yes	172.1	63.01	55.5	70.5
- VA gold card	11.52	4.22	0	32.7
- NESB	52.04	19.04	0	57.1
- Aboriginal	2.560	0.94	0	55.7
- Torres Strait Islander	1.825	0.67	0	138.7
- Aboriginal & Torres Strait Is	0.776	0.28		
- New to practice	19.40	7.35	0	38.6
- Seen previously	244.5	92.65	89.6	95.7

Summary of data base: specific to PEPTIC ULCER (D85,D86)– Apr01-Mar02

Number of observations (n), rate per 100 encounters, rate per 100 problems, 95% confidence intervals (CI) are provided for each data point.

Problems managed are the total number of times the selected problem was managed in the BEACH sample during the 2001-02 BEACH year.

New problems: those that have never been managed before by any doctor, or first consultations for a new episode of a recurrent problem.

Medications include any *prescribed* medications, *advised OTC* (over the counter) medications or medications provided from the GP's own supplies. (up to 4 per problem)

Other treatments (up to 2 per problem) include treatments other than prescribing and are divided into:-

Clinical (eg. advice, counselling)

Procedural (eg. bandage, physical therapies, excisions).

Referral is any new referral of the patient for this problem to:-

Emergency department

Hospital

Specialist (eg. surgeon, psychiatrist)

Allied health service (eg. physiotherapist, social worker, community services).

Pathology are any *pathology tests* ordered or undertaken as a result of the problem.

Imaging are any separate imaging *tests* ordered or undertaken as a result of the problem.

Table 3 shows that 18.7% of the total peptic ulcer problems were new problems to the patient and that medications were prescribed/provided/advised at a rate of 82.6 per 100 contacts with peptic ulcer.

Table 3: Summary of data base - Specific to Peptic ulcer Apr01-Mar02: Problem management

Data	n	Per 100 Peptic ulcer Apr01-Mar02	Lower 95% CI	Upper 95% CI
Problems managed	273.28	100		
- New problems	51.098	18.7	1.3	36.1
Medications	225.6	82.55	67.8	97.3
Other treatments	53.774	19.68	12.6	26.8
- Clinical	39.233	14.36	8.7	20
- Procedural	14.541	5.32	1.9	8.7
Referrals	36.725	13.44	0	116.5
- Specialist	35.548	13.01	0	123.6
- Allied health services	1.1776	0.43		
- Emergency department	2.1304	0.78		
Pathology	54.221	19.84	0	101.3
Imaging	8.4615	3.1	0	45.1

Patient reasons for encounters (RFEs) – PEPTIC ULCER (D85,D86) – Apr01-Mar02.

Reasons for encounter reflect the patients expressed demand for care as recorded by the GP. The RFE label is the individual ICPC rubric label unless denoted by *, which indicates a grouping of multiple ICPC rubrics under the same RFE (concept) label. The RFEs are not necessarily related to the Peptic Ulcer management, for the patient may have come about some other problem (e.g. arthritis) and not mention the ulcer, or symptoms of such, as a specific reasons for attending

Results: Requests for a prescription were common and these were followed by a mixture of symptom and complaints (e.g. abdominal pain) and of the diagnosis itself (Table 4).

Table 4: Top 30 reasons for encounters (RFEs) - Peptic ulcer Apr01-Mar02

RFE label	n	% of total RFEs	Per 100 encs	Lower 95% CI	Upper 95% CI
Prescription all*	55.195	11.08	20.2	13.8	26.6
Pain, abdominal epigastric	46.376	9.31	16.97	10.8	23.1
Abdominal pain*	46.341	9.3	16.96	11.3	22.7
Peptic ulcers, other	26.975	5.42	9.87	5.8	14
Dyspepsia/indigestion	22.9	4.6	8.38	4	12.7
Test results*	20.257	4.07	7.41	3.9	10.9
Follow-up encounter unspecified digestive	10.34	2.08	3.78	1.7	5.8
Back complaint*	9.2491	1.86	3.38	1.9	4.9
Cardiac check-up*	8.3624	1.68	3.06	1.7	4.4
Cough	7.7604	1.56	2.84	1.4	4.3
Heartburn	7.7563	1.56	2.84	1.2	4.5
Duodenal ulcer	7.5215	1.51	2.75	1.1	4.4
General check-up*	7.0018	1.41	2.56	1.3	3.9
Hypertension*	6.4317	1.29	2.35	0.9	3.8
Rash*	6.408	1.29	2.34	0.8	3.9
Shoulder symptom/complaint	6.1509	1.23	2.25	1	3.5
Vomiting	5.751	1.15	2.1	1.1	3.1
Diabetes*	5.5891	1.12	2.05	1	3.1

Joint symptom/complaint NOS	5.3406	1.07	1.95	1	2.9
Neck symptom/complaint	5.2538	1.05	1.92	0.9	3
Total RFEs	498.09	100	182.27	152.7	211.9

Frequency of medication provision – PEPTIC ULCER (D85,D86) – Apr01-Mar02.

Medications include any *prescribed* medications, *advised OTC* (over the counter) medications or medications provided from the GP’s own supplies (up to 4 per problem).

Number of observations (n), rate per 100 PEPTIC ULCER (D85,D86) problems managed, 95% confidence interval (CI), rate per 100 medications and 95% confidence interval (CI) are provided for each data point.

Medications were prescribed/provided/advised at a rate of 82.6 per 100 contacts with peptic ulcer. The majority of medications were prescribed, though just over 10% were provided directly to the patient by the GP. The referral rate was relatively high but pathology test rates and imaging were less frequent than average (Table 5).

BEACH Survey Report - Analysis date: 24FEB03

Table 5: Frequency of medication provision - Peptic ulcer Apr01-Mar02

Data	n	Per 100		Per 100 medications	Lower		Upper	
		Peptic ulcer Apr01-Mar02	95% CI		95% CI	95% CI	95% CI	
Medications	225.6	82.55	76.2	88.9	100	100	100	100
- Prescribed	198.67	72.7	65.1	80.3	88.06	85	91.1	91.1
- Advised OTC	3.2494	1.19	0	104.9	1.44	0	74.5	74.5
- GP supplied	23.68	8.66	0	63.6	10.5	0	69	69

Medications prescribed by ATC class – for PEPTIC ULCER (D85,D86) – Apr01-Mar02.

In table 6 prescribed medications have been grouped according to the Anatomical Therapeutic Chemical (ATC) classification ¹. Drugs for peptic ulcer and GORD were most commonly prescribed , accounting 98.8% of all medications prescribed.

BEACH Survey Report - Analysis date: 24FEB03

Table 6: Top medication classes prescribed - Peptic ulcer Apr01-Mar02

ATC class	n	Per 100 probs	Lower 95% CI	Upper 95% CI	Per 100 medications	Lower 95% CI	Upper 95% CI
Drugs for peptic ulcer and gastro-oesophageal reflux disease (GORD)	186.2	68.16	61.5	74.8	93.75	90.6	96.9
Antacids	3.385	1.24	0	36.6	1.7	0	33
Propulsives	1.802	0.66	0	142.9	0.91	0	143
Cholesterol and triglyceride reducers	1.715	0.63			0.86		
Antiregurgitants	1.44	0.53			0.73		
Laxatives	1.443	0.53			0.73		
Belladonna and derivatives, plain	1.391	0.51			0.7		
Corticosteroids, plain	1.228	0.45			0.62		
Subtotal	198.6				100		
Total prescribed	198.6	72.7	65.1	80.3	100		

¹ Anatomical Therapeutic Chemical (ATC) classification index, WHO Collaborating Centre for Drug Statistics Methodology.

All Medications - generic – PEPTIC ULCER (D85,D86) – Apr01-Mar02.

All medications (prescribed, over the counter and GP supplied) are included in this table.

The number of medications (n) and this number expressed as a percentage of all medications given for peptic ulcer are shown. (see Table 7). Omeprazole accounted for almost three-quarters of all medications provided for peptic ulcer at these encounters.

Table 7: All medications for Peptic ulcer Apr01-Mar02

Drug label	n	% Peptic ulcer medications
Total medications	225.6	
Omeprazole	72.715	32.23
Ranitidine	56.369	24.99
Pantoprazole	30.507	13.52
Famotidine	14.876	6.59
Lansoprazole	8.3093	3.68
Omeprazole/Amoxicillin/Clarit	8.0508	3.57
Cimetidine	7.7441	3.43
Simethicone/Magnesium/Alu	5.3268	2.36
Nizatidine	5.2838	2.34
Algin/Bicarb/Cal carb/Magnes	2.2216	0.98
Simvastatin	1.7152	0.76
Ssd silver sulfadiaz/Chlor.glu	1.5506	0.69
Docusate /Senna	1.4435	0.64
Metronidaz/Tetracycl/Bismuth	1.4258	0.63
Sucralfate	1.3931	0.62
Atropine sulphate	1.3915	0.62
Omeprazole/Amoxycil/Metronidaz	1.3036	0.58
Mometasone	1.2289	0.54
Metoclopramide	1.1258	0.5
Rabeprazole	0.9439	0.42
Cisapride	0.677	0.3

Prescribed daily dose – PEPTIC ULCER (D85,D86) – Apr01-Mar02.

Only medications that are prescribed by the GP, are to be taken daily and whose dosage is recorded in either micrograms, milligrams or grams are included in the calculation of the prescribed daily dose.

The number of medications (n), the mean, median, minimum and maximum prescribed daily doses for each generic medication are shown. Note that the Mean PDD can be affected by a few outliers. It is more reliable to use the median. (See Table 8).

Table 8: Prescribed daily dose - Peptic ulcer Apr01-Mar02

Generic label	n	Mean		Median		Minimum		Maximum	
		PDD	Measure	PDD	Measure		Measure		Measure
Omeprazole	59	25.6	mg	20	mg	20	mg	80	mg
Ranitidine	46	290.5	mg	300	mg	150	mg	600	mg
Pantoprazole	19	44.2	mg	40	mg	20	mg	80	mg
Famotidine	10	40	mg	40	mg	40	mg	40	mg
Lansoprazole	6	30	mg	30	mg	30	mg	30	mg
Cimetidine	5	537.4	mg	800	mg	200	mg	800	mg
Nizatidine	4	300	mg	300	mg	300	mg	300	mg
Simvastatin	1	20	mg	20	mg	20	mg	20	mg
Cisapride	1	40	mg	40	mg	40	mg	40	mg
Rabeprazole	1	20	mg	20	mg	20	mg	20	mg
Metoclopramide	1	60	mg	60	mg	60	mg	60	mg

**Other treatments provided in the management of peptic ulcers
Apr01-Mar02.**

Up to two treatments other than medication can be recorded for each problem. These other treatments are coded using ICPC2-Plus.

Advice and general health education were given at a rate of 37 per 100 contacts with peptic ulcer (Table 9).

Table 9: Other treatments - Peptic ulcer Apr01-Mar02

Treatment	n	% of other treatments	Lower 95% CI	Upper 95% CI	Per 100 Peptic ulcer Apr01-Mar02	Lower 95% CI	Upper 95% CI
Observation/Health education/advice	31.648	58.85	36.7	81	11.58	0	51.2
Therapeutic counselling/Listening	5.9157	11.00	0	72.2	2.16	0	62.7
Other diagnostic procedures	4.0696	7.57			1.49		
Clarification/Discussion of patient's RFE/demand	1.6688	3.1	0	100	0.61	0	143.7
Total other treatments	53.774	100	100	100	19.68	0	43.9

Referral and admissions – PEPTIC ULCER (D85,D86) – Apr01-Mar02.

Only new referrals to a specialist or allied health professional and new hospital admissions are recorded. Continuation referrals are not included. Up to two referrals or admissions can be recorded for each problem (Table 10).

Pathology – PEPTIC ULCER (D85,D86) – Apr01-Mar02.

Pathology are any *pathology tests* ordered or undertaken as a result of the problem. The same pathology test may be ordered for more than one problem, and conversely more than one test may be ordered for the same problem. Up to five pathology tests may be recorded at each encounter and are linked to the problem(s) under management (Table 11).

Imaging – PEPTIC ULCER (D85,D86) – Apr01-Mar02.

Imaging are any separate imaging *tests* ordered or undertaken as a result of the problem. An imaging test may be ordered for more than one problem and the same problem may have more than test ordered for it. Up to three imaging tests may be recorded at each encounter (Table 12).

Table 10: Referral and admissions - Peptic ulcer Apr01-Mar02

Referrals and admissions	n	% of referrals/admissions	Lower 95% CI	Upper 95% CI	Per 100 Peptic ulcer Apr01-Mar02	Lower 95% CI	Upper 95% CI	National Estimated Encounters
Referral;gastroenterologist	28.655	48.48	17.8	79.1	10.49	0	41.1	31000
Referral;surgeon	4.7624	8.06	0	100	1.74	0	83.1	5200
Referral;A&E	2.1304	3.6	0	100	0.78	0	146.4	2300
Referral	1.1776	1.99			0.43			1300
Total referrals/admissions	36.725	100	100	100	13.44	0	38.9	39800

Table 11: Most common pathology tests ordered -Peptic ulcer Apr01-Mar02

Pathology	n	% of pathology	Lower 95% CI	Upper 95% CI	Per 100 Peptic ulcer Apr01-Mar02	Lower 95% CI	Upper 95% CI	National Estimated Encounters
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Test;full blood count	14.288	26.35	18.7	34	5.23	0	51.6	15500
Test;H Pylori	10.689	19.71	0	49.5	3.91	0	54.3	11600
Test;liver function	8.5751	15.82	1.7	29.9	3.14	0	62.3	9300
Test;ESR	4.615	8.51	0	40.7	1.69	0	112.2	5000
Test;E & LFT	4.4895	8.28	0	52.9	1.64	0	124.7	4900
Total pathology	54.221	100	100	100	19.84	0	101.3	58700

Table 12: Imaging - Peptic ulcer Apr01-Mar02

Imaging	n	% of imaging	Lower 95% CI	Upper 95% CI	Per 100 Peptic ulcer Apr01-Mar02	Lower 95% CI	Upper 95% CI	National Estimated Encounters
Barium swallow	2.4673	29.16	0	100	0.9	0	69.2	2672
Ultrasound;abdomen	1.6769	19.82	0	100	0.61	0	87.5	1816
Barium meal	1.1917	14.08			0.44	0		1290
Ultrasound;abdomen upper	1.177	13.91			0.43	0		1274
X-ray;abdomen	1.1606	13.72			0.42	0		1257
X-ray;chest	0.5551	6.56			0.2	0		601
Gastroscopy	0.2329	2.75			0.09	0		252
Total imaging	8.4615	100	100	100	3.1	0	45.1	9162