

BEACH



Incident management in general practice

BEACH

(Bettering the Evaluation And Care of Health)

(a continuous national study of general practice activity in Australia)

Dr Helena Britt

A/Professor & Director

Australian GP Statistics & Classification Centre

A collaborating unit of the AIHW & the University of Sydney

Australia





Hospital utilisation

} In 2005-06

| there were 7.3 million separations from Australian hospitals

| In 2005-06 there were 6.3 million accident emergency department occasions of service

} There were 130 reported major sentinel events.

(AIHW)



General practice



} In 2006:

- | 95 million GP consultations claimed through Medicare (c/f 13 million hospital separations/Emergency)
- | with about 20,000 GPs and 17 million people

} In 2006 in general practice

- | If an event occurred 1/100,000 consultations.....
it occurred ~ 950 times across Australia
- | If an event occurred 1/1,000 consultations.....
it occurred ~95,000 times across Australia p.a.





Incident management in general practice

} ‘the absence of recent system wide data on patient safety..... makes a mockery of the tenets of continuous quality improvement’

Wilson RM, Van Der Weyden MB, The safety of Australian healthcare: 10 years after QAHCS [editorial]. Med J Aust 2005; 182:260-61

} we “manage what we measure”

} ‘You can’t fix what you don’t know about’

Bagian JP, Lee C, Gosbee J et al. Developing and deploying a patient safety program in a large health care delivery system: you can’t fix what you don’t know about. Jt Comm J Qual Imprv 2001;27:522-532

How many, and what types, of incidents are happening in general practice?





Past work

} 1993 Incident monitoring in general practice study (in collaboration with RACGP)

(Britt H, Miller G, Steven I et al Collecting data on potentially harmful events: a method for monitoring incidents in general practice. Fam Pract 1997;14: 101-06)

Bhasale AL, Miller GC, Reid S, Britt H. Analysing potential harm in Australian general practice: an incident monitoring study. Med J Aust 1998;169:73-76

} funded by Professional Indemnity Review

} Identified main types of incidents, not the number

} Was the first attempt to monitor incidents in general practice

} Formed the basis of the few other studies undertaken internationally in last 12 years.





What did it tell us?

- } Pharmacological incidents constituted 50% of all GP reported clinical safety incidents
- } Omitted/delayed treatment, and missed/delayed diagnosis were also common.
- } 70-80% of all incidents were seen as preventable (by GP)

Bhasale AL, Miller GC, Reid S, Britt H. Analysing potential harm in Australian general practice: an incident monitoring study. *Med J Aust* 1998;169:73-76

What have we learnt since then?



BEACH



The Australian GP Statistics & Classification Centre (AGPSCC)

- } A collaborating unit of the Australian Institute of Health and Welfare and the University of Sydney, within the Family Medicine Research Centre
- } Responsible for the BEACH program
 - | conducted under the AIHW Act,
 - | Ethics approval from the University and AIHW Ethics Committees



BEACH



BEACH

a continuous national study of general practice activity

Aims

- } to provide a reliable and valid continuous national data source of timely GP–patient encounter information
- } to inform the community of the care provided to the vast majority of the population by GPs - the gate keepers of our medical system
- } to assess patient health risk factors, prevalence of disease, or longer term management--on selected subjects in sub-samples of patients- up to 20 sub-studies per year
(SAND- Supplementary Analysis of Nominated Data)



BEACH

BEACH



- } Began April 1, 1998
- } Now in its 10th year (April 1, 2007)
- } Data available ~ 900,000 encounters
- } >9,000 participants
 - | Representing 7,500+ GPs
 - | >40% of recognised GPs participated to date
- } Data being used by the profession, researchers, governments & industry



BEACH

BEACH methods



- } A cross sectional encounter based study
- } Paper based data collection
- } National GP random sample (drawn by DoHA)
- } 1,000 GPs per year
- } 20 GPs per week x 50 weeks a year - ever changing
- } 100 consecutive encounters per GP
- } All types of encounters included
- } National data for 100,000 encounters p.a.
- } Data base now = >900,000 records





BEACH variables (see recording form)

- } G.P characteristics (GP completed questionnaire)
- } Practice characteristics (GP completed questionnaire)
- } Patient characteristics
- } Encounter details
- } Patient reasons for encounter (up to 3)
- } Problems managed (up to 4)





BEACH variables

- } Management (of each problem)
 - { Medications prescribed, supplied, advised (up to 4)
 - { Non-pharmacological treatments (up to 2/problem)
 - Clinical treatments
 - Therapeutic procedures
 - { New referrals & admissions (up to 2- linked to problem)
 - { Pathology tests ordered (up to 5 –linked)
 - { Imaging & other tests ordered (up to 2 - linked)

(view form)



Australian Government

Australian Institute of
Health and Welfare





SAND (*Supplementary Analysis of Nominated Data*) substudies in BEACH

- } “The bit on the bottom of the form”
- } Questions directed to the GP and patient about the patient, irrespective of content of the encounter
- } Often semi-longitudinal, often assess prevalence of a problem among attending patients, current management, past management, outcomes etc.
- } Up to 20 subjects p.a. x about 3000 patients





SAND substudies of ADEs

Study 1 (2003-04)

Frequency, type and severity of adverse drug events (ADEs); frequency of hospitalisation; and how often GP believed events preventable.

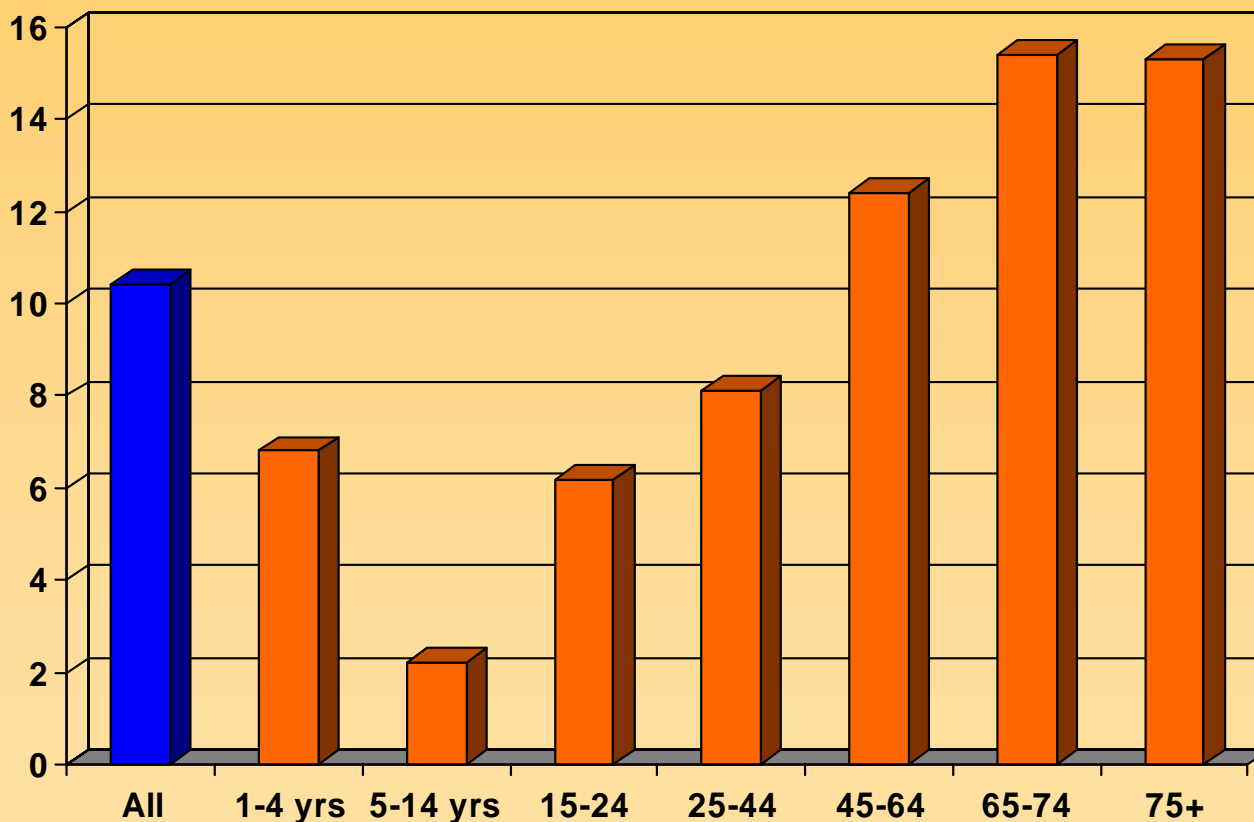
Study 2(2007...current)

Frequency, suspected causative agent, type and severity of events; frequency of hospitalisation; and GP confidence in causality





Per cent of patients reporting ADE last 6 mths (from sample of 8,285 from 282 GPs) 2003-04 ⁽¹⁾



1. Miller G, Britt H, Valenti L. Adverse drug events in general practice patients in Australia. MJA 2006;184:321-324





Most ADEs are recognised side effects

Variable	2003-04 (n=852)		Interim 07 (n=279)	
	%	95% CI	%	95% CI
ADE type¹				
Recognised side effect	65.7	61.6-69.8	76.9	72.0-81.9
Drug sensitivity	11.8	9.2 -14.5	6.6	3.5-9.7
Allergy	11.0	7.9-14.2	11.0	6.8-15.2
Drug interaction	2.2	1.0-3.5	1.1	0.0-2.4
Contraindication	0.5	0.00-1.0	0.00	--
Overdose	1.6	0.6-2.6	0.7	0.00-1.8
Dispensing error	0.2	0.00-0.5	0.00	--
Don't know	4.5	2.8-6.2	4.4	1.7-7.1
Other	2.6	1.1-4.0	2.2	0.2-4.2

Recognised... so are not reported to ADRAC !





ADE severity, hospitalisation

	2003-04 (n=852)		Jan-Feb 07 (n= 295)	
Severity ²	%	95% CI	%	95% CI
Mild	53.9	48.3-58.5	51.7	44.3-59.0
Moderate	35.8	31.1-40.4	39.6	32.5-46.6
Severe	10.0	6.9-13.1	8.8	5.4-12.2
Hospitalised	7.6	3.6-11.6	5.2	2.4-8.0

Conclusion: For every 200 patients walking through the door of a general practice, 20 will have had an ADE in last 6 months, and 1-2 will have been hospitalised as a result. (We don't know how many had an ADE & died as a result).





Causative agents and severity (frequency at ATC level 1)(n=295)

Drug group	Frequency		Moderate		Severe		Hospitalised	
	Col %	95% CI	Row %	95% CI	Row %	95% CI	Row %	95% CI
Nervous system	28.5	23.1-33.9	43.7	31.7-55.7	8.1	2.1-14.0	5.8	1.1-10.5
Cardiovascular	20.0	15.0-25.0	34.4	21.1-47.8	11.5	2.2-20.8	3.3	0.0-9.9
Systemic Anti-infectives (antibiotics)	19.3	13.6-25.1	40.7	27.3-54.0	5.1	0.0-10.8	6.8	1.2-12.4
Musculo-skeletal	7.9	5.0-10.8	20.8	4.9-36.7	20.8	4.0-37.6	8.3	0.0-19.7
Alimentary and metabolism	7.2	4.4-10.1	54.6	32.3-76.8	13.6	0.0-27.8	9.5	0.0-22.6

Prelim. results: Musculoskeletal largely NSAIDS

Nervous system, largely narcotic analgesics

Cardiovascular – largely statins

Alimentary/metab – largely PPIs





Implications

- } Our proliferating pharmacopoeia of increasingly powerful and effective drugs has a corollary of increased risk to patient safety.
- } Quantifying and evaluating this risk is essential to the improvement of patient safety.



**Patient-based substudies
from BEACH: abstracts and
research tools 1999–2006**

*Australian GP Statistics
and Classification Centre*



The University of Sydney



BEACH



104 sub-studies

**Available through
<http://www.fmrc.org.au>
(on home page)**

**Hard copies of reports from
<http://www.aihw.gov.au>
(cost \$35)**

**AGPSCC
Phone +61 2 9845 8151
email: gpstats@fmrc.org.au**



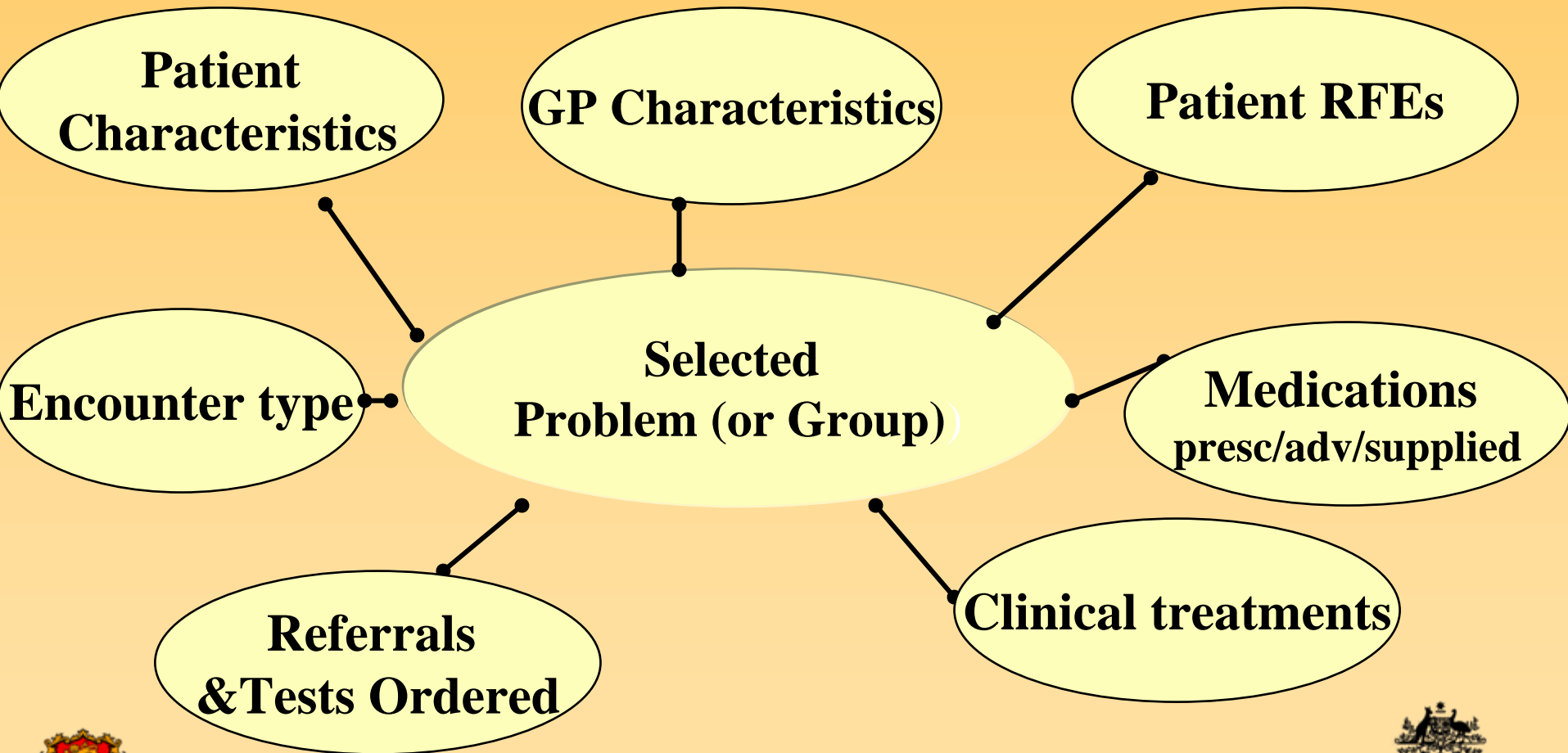
Let's return to the 900,000 encounters records in BEACH

- } A number of international studies have identified sentinel events that can be measured through peer review audits, or secondary analysis of routinely collected data etc.
- } Why aren't we analysing BEACH data to identify those most common in general practice? (e.g):
 - | Prescribed meds contra-indicated by other morbidity managed at encounter
 - | Co-prescribed at same encounter of interactive drugs





Relationships of variables





Proposal

- } Secondary analysis of the BEACH encounter data would
 - | Identify frequency of already identified sentinel events applicable to these data
 - | Identify new types of sentinel events and measure frequency.
 - | Run new SAND topics investigating prevalence of identified sentinel event in recent period.
 - | Identify 'hot bricks' – characteristics of GPs with high occurrence of sentinel events (for targeting)
 - | Feed information to professional organisations (e.g. RACGP) for planning/conduct of interventions



'You can't fix what you don't know about'

(Bagian)



- } Let's stop paying lip service to incidents in general practice.
- } Let's start 'knowing' through secondary analysis of BEACH
- } This does not equate with incident monitoring or management
... but it's a step we can take now



AstraZeneca 

International



MERCK SHARP & DOHME



JANSSEN-CILAG

A Johnson & Johnson Company



A U S T R A L I A



sanofi aventis

Because health matters



*Many thanks
to the GPs*

BEACH 06-07



Australian Government

**Australian Institute of
Health and Welfare**



National Prescribing Service Limited



AMA



**Additional funds from
DVA and NOHSC**



Beach 2006-07

General practice activity in Australia 2005-06

*Australian GP Statistics
and Classification Centre*



Available through
<http://www.fmrc.org.au>
(go to 'BEACH' and select
'publications')

Also see 'Abstracts' in the
publication section of our
website

Hard copies of reports from
<http://www.aihw.gov.au>
(cost \$15-27 each book in GEP
series)

AGPSCC
Phone +61 2 9845 8151
email: gpstats@fmrc.org.au