

SAND abstract No. 144 from the BEACH program 2009–10

Subject: GP ordering of full blood counts and lipid profiles for general practice patients

Organisation supporting this study: Australian GP Statistics and Classification Centre

Issues: The proportion of patients who receive lipid or full blood count (FBC) tests at that day's encounter; person initiating lipid/FBC tests; purpose of testing; differential diagnoses of investigative FBC tests; morbidities of patients receiving lipid tests.

Sample: 5,629 patients from 193 GPs; data collection period: 15/07/2008 – 18/08/2008 and 22/09/2009 – 16/10/2009.

Method: Detailed in the paper entitled *SAND method 2009–10* at: <www.fmrc.org.au/publications/SAND_abstracts.htm>.

Summary of results

The age and sex distribution of patients did not differ from all 2008–09 BEACH encounters. Of 5,629 patients, 693 (12.3%, 95% CI: 11.1–13.5) had a lipid and/or FBC test ordered at that day's encounter: 465 (8.3%) had a lipid test and 530 (9.4%) had a FBC. Sex was known for 459 patients with lipid tests: males had a higher order rate at 9.9% (95% CI: 8.4–11.4) than females 7.0% (95% CI: 5.9–8.1). There was no sex difference in the order rate of FBC tests.

Lipid tests

Of the 465 patients with lipid test ordered, 456 indicated who initiated the test order. The majority were suggested by GPs (87.1%), while 11.2% were suggested by patients, and 1.8% by another health professional.

Purpose(s) of ordering lipid test(s) were recorded for 455 patients. Monitoring was the most common reason for ordering (58.5% of patients), followed by investigative/diagnostic (18.2%), primary prevention (18.0%), secondary prevention (17.8%), and opportunistic testing (that is, adding the test once the decision to order was already made) (7.3%).

Of 452 respondents with a lipid test ordered, 43.8% had dyslipidaemia, 43.1% had hypertension, 25.7% were obese, 18.8% had a family history of dyslipidaemia, 18.8% had diabetes, and 12.2% had another cardiovascular disease. At least one of these morbidities/risk factors was present in 84.3% of patients receiving a lipid test.

FBC tests

Of the 530 patients with FBC ordered, 486 indicated who initiated the test order. The majority were suggested by GPs (92.2%), while 6.0% were suggested by the patient, and the remaining 1.9% were suggested by another health professional.

Purpose(s) of ordering FBC tests were recorded for 500 patients. An investigative or diagnostic purpose was the most common reason for ordering FBC tests (48.0% of patients), followed by monitoring (35.0%), opportunistic testing (10.6%), primary prevention (8.0%), and secondary prevention (4.8%).

GPs recorded 349 differential diagnoses for 230 patients with investigative FBC ordered. The most common was anaemia (29.2% of diagnoses), while iron deficiency (a common cause of anaemia) was indicated for a further 3.4%. Infections and infectious conditions were recorded for 28.7% of diagnoses, particularly unspecified infections (8.0% of diagnoses), and respiratory infections (6.0%).

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AIHW Australian GP Statistics and Classification Centre, 2010. SAND abstract No. 144 from the BEACH program: GP ordering of full blood counts and lipid profiles for general practice patients. Sydney: AGPSCC University of Sydney. ISSN 1444-9072

PLEASE READ CAREFULLY

The shaded section of the following forms asks questions about **SELECTED PATHOLOGY TESTS**.
 You may tear out this page as a guide to completing the following section of forms.

INSTRUCTIONS

Ask **ALL** of the **next 30 PATIENTS** the following questions **in the order in which the patients are seen**.

Please **DO NOT** select patients to suit the topic being investigated.

Please ensure you complete details of all pathology tests ordered at today's encounter in the main section of the form before completing the questions in the shaded section below.

Selected pathology tests

Please advise whether you ordered a **lipid test** and/or a **full blood count (FBC)** for this patient **at this encounter**.

Lipid test includes total cholesterol, HDL, LDL and triglycerides.

If you **did not order** a lipid test or full blood count at this encounter please tick the box labelled **'neither of the above'** and **end the questions here** for this patient.

Initiation of tests

Under each heading (lipid or FBC) please use the tick boxes to indicate **who suggested each test—you, the patient or another health professional** (e.g. specialist).

Please **tick only one option per test** using the tick boxes in the appropriate column 'Lipid' or 'FBC'.

Purpose of test

Please use the tick boxes to indicate for each test whether the test was:

- **investigative** or diagnostic for a new condition
- **monitoring** of an existing condition
- **primary prevention****/screening in an otherwise healthy patient (e.g. following RACGP red book guidelines for preventive activities)
- **secondary prevention****/screening in a patient with established risk factors for a condition but without the condition
- **opportunistic**** - the test was added to the pathology order once the decision to order another test was already made.

Tick as many as apply for each test.

Previous testing

Please indicate whether this patient has had a lipid/FBC test on **any previous occasion**.

If you do not know if the patient has previously been tested please tick the box labelled **'don't know'**.

Time since last test

If 'yes' to either test please advise **how long** it has been **since the patient last had a lipid/FBC test**.

If you do not know when the last test was ordered please tick the box labelled **'don't know'**.

Investigative FBC test

If a **FBC** was ordered today for investigative purposes please write your **differential diagnosis(es)** in the space provided. Please **rank multiple differential diagnoses**, 1. being the most probable to 3. the least probable.

If you **do not have** a differential diagnosis please write **'none'**.

A differential diagnosis is defined as *'the process of weighing the probability of one disease versus that of other diseases possibly accounting for a patient's illness'*.

Source: www.medterms.com, accessed 27/5/08

Lipid medication and other conditions

For patients who have a **lipid test ordered today** please indicate whether the patient:

- is **currently taking a lipid lowering medication**
- has any of the **listed conditions or risk factors**.

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|--|---|--------------------------|-------|-----|---------|--------------------------|--------------------------|--------------|--------------------------|--------------------------|------------------------------|--------------------------|--------------------------|--|--|-------|-----|--------------------|--------------------------|--------------------------|-----------------|--------------------------|--------------------------|-----------------------------|--------------------------|--------------------------|---|--------------------------|--------------------------|----------------------|--------------------------|--------------------------|--|--|-------|-----|----------|--------------------------|--------------------------|---------|--------------------------|--------------------------|-----------------|--------------------------|--------------------------|---|--|-------|-----|------------------|--------------------------|--------------------------|---------------|--------------------------|--------------------------|----------------|--------------------------|--------------------------|---------------|--------------------------|--------------------------|-----------------|--------------------------|--------------------------|--|---|--|
| At today's encounter did you order a: <input type="checkbox"/> Lipid test <input type="checkbox"/> Full blood count <input type="checkbox"/> Neither of the above → End questions | Who suggested the test(s)? <i>(Please tick one option per test)</i> <table border="0"> <tr> <td></td> <td>Lipid</td> <td>FBC</td> </tr> <tr> <td>GP.....</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>Patient.....</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>Other health professional...</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> </table> | | Lipid | FBC | GP..... | <input type="checkbox"/> | <input type="checkbox"/> | Patient..... | <input type="checkbox"/> | <input type="checkbox"/> | Other health professional... | <input type="checkbox"/> | <input type="checkbox"/> | Today's test(s) is/are: <i>(Tick all that apply)</i> <table border="0"> <tr> <td></td> <td>Lipid</td> <td>FBC</td> </tr> <tr> <td>Investigative.....</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>Monitoring.....</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>Preventive (primary)**.....</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>Preventive (secondary - pt has known risk)**.....</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>Opportunistic**.....</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> </table> <p>**See definitions on green sheet</p> | | Lipid | FBC | Investigative..... | <input type="checkbox"/> | <input type="checkbox"/> | Monitoring..... | <input type="checkbox"/> | <input type="checkbox"/> | Preventive (primary)**..... | <input type="checkbox"/> | <input type="checkbox"/> | Preventive (secondary - pt has known risk)**..... | <input type="checkbox"/> | <input type="checkbox"/> | Opportunistic**..... | <input type="checkbox"/> | <input type="checkbox"/> | Has this patient had this test before? <table border="0"> <tr> <td></td> <td>Lipid</td> <td>FBC</td> </tr> <tr> <td>Yes.....</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>No.....</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>Don't know.....</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> </table> | | Lipid | FBC | Yes..... | <input type="checkbox"/> | <input type="checkbox"/> | No..... | <input type="checkbox"/> | <input type="checkbox"/> | Don't know..... | <input type="checkbox"/> | <input type="checkbox"/> | The test was last ordered: <table border="0"> <tr> <td></td> <td>Lipid</td> <td>FBC</td> </tr> <tr> <td><3 mnth ago.....</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>3-6 mnth.....</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>7-12 mnth.....</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>>12 mnth.....</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>Don't know.....</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> </table> | | Lipid | FBC | <3 mnth ago..... | <input type="checkbox"/> | <input type="checkbox"/> | 3-6 mnth..... | <input type="checkbox"/> | <input type="checkbox"/> | 7-12 mnth..... | <input type="checkbox"/> | <input type="checkbox"/> | >12 mnth..... | <input type="checkbox"/> | <input type="checkbox"/> | Don't know..... | <input type="checkbox"/> | <input type="checkbox"/> | For FBC test: If 'investigative' what is/are your differential diagnosis(es)? 1. _____ 2. _____ 3. _____ | For LIPID tests: Is this patient currently taking lipid lowering medication? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know | Does this patient have: <input type="checkbox"/> Dyslipidaemia <input type="checkbox"/> Family Hx dyslipidaemia <input type="checkbox"/> Obesity <input type="checkbox"/> Diabetes <input type="checkbox"/> Hypertension <input type="checkbox"/> Other CVD <input type="checkbox"/> None of the above |
| | Lipid | FBC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GP..... | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Patient..... | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Other health professional... | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Lipid | FBC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Investigative..... | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Monitoring..... | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Preventive (primary)**..... | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Preventive (secondary - pt has known risk)**..... | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Opportunistic**..... | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Lipid | FBC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Yes..... | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| No..... | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Don't know..... | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Lipid | FBC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <3 mnth ago..... | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3-6 mnth..... | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7-12 mnth..... | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| >12 mnth..... | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Don't know..... | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |