

SAND abstract No. 163 from the BEACH program 2010–11

Subject: Chronic kidney disease in general practice patients

Organisation supporting this study: FMRC in collaboration with Kidney Health Australia

Issues: For patients aged 24+ years – the proportion: who had undergone kidney function tests in the previous 12 months; with conditions associated with chronic kidney disease (CKD); with risk factors for CKD; with drug dosage adjustments due to kidney function (and test used); prevalence of CKD; stages of CKD; and underlying causes of CKD.

Sample: 2,734 patients from 91 GPs; data collection period: 30/03/2010 – 03/05/2010

Method: Detailed in the paper entitled *SAND method 2010–11* at:

<http://sydney.edu.au/medicine/fmrc/publications/sand-abstracts>. 'Heart disease or failure' was defined as: clinical or investigative signs of typical angina; past myocardial infarct; unstable angina; past coronary artery bypass graft; past percutaneous coronary intervention; coronary artery disease, or congestive cardiac failure. Stages of disease were defined according to National Kidney Foundation Guidelines.

Summary of results

In the sample, 2,256 patients were 24 years or older, and 2,199 (97.5%) of these responded to kidney test questions. Complete kidney function check (both serum creatinine and proteinuria/microalbuminuria) was performed for 13.3% (95% CI: 9.3–17.3); 50.2% had a serum creatinine test only; 1.2% had a urine test only, and 28.0% had neither test in the previous 12 months. Status was not known for 7.4%. At least one test had been performed in the previous 12 months for 64.7%.

Of 2,256 patients, responses to CKD-associated conditions were reported for 2,104 (93.3%). Of these, 918 patients (43.6%) had at least one: 33.1% had hypertension; 13.6% had heart disease or failure; 13.4% had diabetes; and 3.5% had previous cerebrovascular attack or transient ischaemic attack (multiple responses allowed). More than half (56.4%) had none of the listed conditions.

Of the above 918 patients, current risk status was reported for 896 (97.6%), of whom 70.9% were taking an ACE Inhibitor or angiotensin II receptor blocker (ARB); 61.5% had total cholesterol level of ≥ 4 mmol/L; 53.3% had diabetes and HbA1c $\geq 7\%$; 49.4% had BP $\geq 130/80$ mmHg; 21.0% had HbA1c $\geq 7\%$; and 13.2% had Hb < 120 g/L.

Of the 2,256 patients sampled, responses to medication dose adjustment were reported for 1,746 (77.4%). For 88 of these (5.0%), medication dosage had been altered because of kidney function. Of these, the type of glomerular filtration rate (GFR) used was reported for 68 patients (77.3%), and the majority (61 patients, 89.7%) reported eGFR automatically generated by pathology results. The Cockcroft Gault formula was used for 4 patients (5.9%).

Of the 2,256 patients originally sampled, responses to diagnosis of CKD were reported for 1,920 (85.1%). Of these, 207 (10.8%) had diagnosed CKD, and 203 reported the Stage of disease. The majority were at Stage 3 (53.2%); 27.1% were at Stage 2; 10.8% were at Stage 4. The smallest proportions were at Stage 1 (4.9%) and Stage 5 (3.9%).

Of the 207 patients with diagnosed CKD, the underlying cause was reported for 200 (96.6%). The most common cause was vascular disease (56.5%), 31.5% reported diabetes, 2.5% (5 patients) had glomerulonephritis, and for one patient polycystic kidney disease was the underlying cause of their CKD. For 28 patients (14.0%) the underlying cause was not known.

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Family Medicine Research Centre, University of Sydney. SAND abstract No. 163 from the BEACH program: Chronic kidney disease in general practice patients. Sydney: FMRC University of Sydney, 2011. ISSN 1444-9072

PLEASE READ CAREFULLY

The shaded section of the following forms asks questions about **CHRONIC KIDNEY DISEASE**.
 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. I.e. if the patient is **NOT** aged 18 years and over you may leave this section **BLANK**.

Assessment of renal function

Please ask these questions for **patients aged 18 years and over**. Please use the tick boxes to advise whether this patient has had their **kidney function** tested in the past 12 months, and with **what test/s**. Please tick as many as apply.

Current risk status

If the patient has any of the conditions listed in the previous question please use the tick boxes to indicate whether the patient **currently** (or at the time of **most recent testing**) meets any of the **listed risk levels/factors**.

Glomerular filtration rate (GFR) calculation used

If **yes** please indicate which **GFR calculation** was used to evaluate kidney function informing the dose adjustment decision.

Stage of disease*

If the patient has been diagnosed with CKD, please advise what **stage of the disease** currently applies to this patient.

If you **do not know** (e.g if test results are not available) please tick the box labelled 'don't know'

Stage*	Description	GFR (mL/min/1.73m ²)
1	Kidney damage with normal or ↑ GFR	≥ 90
2	Kidney damage with mild ↓ GFR	60 - 89
3	Moderate ↓ GFR	30 - 59
4	Severe ↓ GFR	15 - 29
5	Kidney failure	<15 (or dialysis)

*Stages classified as per National Kidney Foundation Guidelines Part 4 - 'Definition and Stages of Chronic Kidney Disease'.

Conditions

Please advise whether the patient **has** any of the **listed conditions**. Tick as many as apply.
Heart disease or failure* is defined as: *clinical or investigative signs of typical angina, past myocardial infarct, unstable angina, past CABG, past percutaneous coronary intervention, coronary artery disease or congestive cardiac failure.*
 If the patient has **none** of the listed conditions please tick the box labelled '**none of the above**'.

Drug dose adjustment

Please indicate whether any drug **dosage** has been **adjusted due to the patient's kidney function** in the **last 12 months**.

CKD diagnosis

Please advise whether the patient has been **diagnosed with Chronic Kidney Disease (CKD)**, either today or prior to today's consultation.
 If the patient has **never** been diagnosed with CKD **please end the questions here**.

Underlying cause of CKD

Please specify the **underlying cause of CKD** for this patient, if one has been identified.
 If a specific cause has **not yet been determined**, please tick the box labelled '**unknown**'.

<p>For patients 18+ yrs: In the past 12 mths has kidney function / damage <i>(tick all that apply)</i> been assessed? <input type="checkbox"/> Yes - serum creatinine test <input type="checkbox"/> Yes - urine test for proteinuria/microalbuminuria <input type="checkbox"/> No <input type="checkbox"/> Don't know</p>	<p>Does this patient have: <i>(tick all that apply)</i> <input type="checkbox"/> Diabetes <input type="checkbox"/> Hypertension <input type="checkbox"/> Heart disease or failure*<i>(see green sheet)</i> <input type="checkbox"/> Previous CVA or TIA <input type="checkbox"/> None of the above</p>	<p>If 'yes' to any of these listed diseases does the patient have: Yes No BP ≥130/80mmHg <input type="checkbox"/> <input type="checkbox"/> Total chol ≥4mmol/L... <input type="checkbox"/> <input type="checkbox"/> HbA1c ≥7% <input type="checkbox"/> <input type="checkbox"/> Hb <120g/L..... <input type="checkbox"/> <input type="checkbox"/> Taking ACEi or ARB.... <input type="checkbox"/> <input type="checkbox"/></p>	<p>Was any drug dosage adjusted due to the patient's kidney function in the past 12 mths? <input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>If 'yes' which GFR was used? <input type="checkbox"/> eGFR automatically generated by lab <input type="checkbox"/> Calc. by clinician using Cockcroft-Gault formula <input type="checkbox"/> Other GFR formula <input type="checkbox"/> Don't know</p>	<p>Has the patient been diagnosed with Chronic Kidney Disease (CKD)? <input type="checkbox"/> Yes <input type="checkbox"/> No → End Qs</p>	<p>If 'yes' what is their Stage* of disease? <input type="checkbox"/> Stage 1 <input type="checkbox"/> Stage 2 <i>(see definitions on green sheet)</i> <input type="checkbox"/> Stage 3 <input type="checkbox"/> Stage 4 <input type="checkbox"/> Stage 5 <input type="checkbox"/> Don't know</p>	<p>Underlying cause of CKD is: <input type="checkbox"/> Glomerulonephritis <input type="checkbox"/> Diabetes <input type="checkbox"/> Vascular disease <input type="checkbox"/> Polycystic kidney disease <input type="checkbox"/> Other <i>(please specify)</i> <input type="checkbox"/> Unknown</p>
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