

Bibliography

Agency for Health Care Policy and Research 1994. Acute low back problems in adults: assessment and treatment. Clin Pract Guidel Quick Ref Guide Clin iii – 25.

Alderson M 1988. Morbidity and health statistics. Southampton: Stickton Press.

American College of Rheumatology Ad Hoc Committee on Clinical Guidelines 1996. Guidelines for the initial evaluation of the adult patient with acute musculoskeletal symptoms. Arthritis Rheum 39:1–8.

Anderson RE, Drayer BP, Braffman B, Davis PC, Deck MD, Hasso AN, Johnson BA, Masaryk T, Pomeranz SJ, Seidenwurm D, Tanenbaum L & Masdeu JC 2000. Acute low back pain – radiculopathy. American College of Radiology. ACR Appropriateness Criteria. Radiology 215 (Supp.): 479–85.

Anis AH, Stiell IG, Stewart DG & Laupacis A 1995. Cost-effectiveness analysis of the Ottawa Ankle Rules. Ann Emerg Med 26:422–8.

Apthorp LA, Daly CA, Morrison ID & Field S 1998. Direct access MRI for general practitioners – influence on patient management. Clin Radiol 53:58–60.

Australian Institute of Health and Welfare (AIHW) 2000. BreastScreen Australia Achievement Report 1997–1998. AIHW Cat. No. CAN 13. (Cancer Series no. 13) Canberra: Australian Institute of Health and Welfare.

Baldor RA, Quirk ME & Dohan D 1993. Magnetic resonance imaging use by primary care physicians. J Fam Pract 36:281–5.

Balfe DM, Levine MS, Ralls PW, Bree RL, DiSantis DJ, Glick SN, Megibow AJ, Saini S, Shuman WP, Greene FL, Laine LA & Lillemoe K 2000. Evaluation of left lower quadrant pain. American College of Radiology. ACR Appropriateness Criteria. Radiology 215 (Supp.): 167–71.

Balint G, Szebenyi B & Kirwam J 1998. The use of guidelines for managing and treating osteoarthritis. Dis Manage Health Outcomes 3:131–42.

Balkau B, Vray M & Eschwege E 1994. Epidemiology of peripheral arterial disease. J Cardiovasc Pharmacol 23 (Supp. 3): S8–S16.

Barnes RW 1991. Noninvasive diagnostic assessment of peripheral vascular disease. Circulation 83:I20–I27.

Bauer SJ, Hollander JE, Fuchs SH & Thode HC, Jr. 1995. A clinical decision rule in the evaluation of acute knee injuries. J Emerg Med 13:611–15.

Bearcroft PW, Small JH & Flower CD 1994. Chest radiography guidelines for general practitioners: a practical approach. Clin Radiol 49:56–8.

- Becker LA, Green LA, Beaufait D, Kirk J, Froom J & Freeman WL 1993a. Detection of intracranial tumors, subarachnoid hemorrhages, and subdural hematomas in primary care patients: a report from ASPN, Part 2 [see comments]. *J Fam Pract* 37:135-41.
- Becker LA, Green LA, Beaufait D, Kirk J, Froom J & Freeman WL 1993b. Use of CT scans for the investigation of headache: a report from ASPN, Part 1 [see comments]. *J Fam Pract* 37: 129-34.
- Bellamy N 1995. Outcome measurement in osteoarthritis clinical trials. *J Rheumatol Suppl* 43:49-51.
- Bellamy N 1999. Clinical trials design: structure modifying agents for osteoarthritis. Future guidelines: areas for development. *Osteoarthritis Cartilage* 7:424-6.
- Berry E, Kelly S, Hutton J, Harris KM & Smith MA 2000. Identifying studies for systematic reviews. An example from medical imaging. *Int J Technol Assess Health Care* 16:668-72.
- Bettmann MA, Boxt LM, Gomes AS, Grollman J, Henkin RE, Higgins CB, Kelley MJ, Needleman L, Pagan-Marin H, Polak JF, Stanford W, Levin DC & Gardiner GA 2000. Diagnostic imaging in patients with claudication. American College of Radiology. ACR Appropriateness Criteria. *Radiology* 215 (Supp.): 61-5.
- Bierma-Zeinstra SM, Lipschart S, Njoo KH, Bernsen R, Verhaar J, Prins A & Bohnen AM 2000. How do general practitioners manage hip problems in adults? *Scand J Prim Health Care* 18:159-64.
- Blackmore CC, Black WC, Jarvik JG & Langlotz CP 1999. A critical synopsis of the diagnostic and screening radiology outcomes literature. *Acad Radiol* 6 (Supp. 1): S8-18.
- Bohm-Velez M, Mendelson E, Bree R, Finberg H, Fishman EK, Hricak H, Laing F, Sartoris D, Thurmond A & Goldstein S 2000. Suspected adnexal masses. American College of Radiology. ACR Appropriateness Criteria. *Radiology* 215 (Supp.): 931-8.
- Bree RL, Ralls PW, Balfe DM, DiSantis DJ, Glick SN, Levine MS, Megibow AJ, Saini S, Shuman WP, Greene FL, Laine LA & Lillemoe K 2000. Evaluation of patients with acute right upper quadrant pain. American College of Radiology. ACR Appropriateness Criteria. *Radiology* 215 (Supp.): 153-7.
- Bridges-Webb C, Britt H, Miles DA, Neary S, Charles J & Traynor V 1992. Morbidity and treatment in general practice in Australia 1990-1991. *Med J Aust* 157 (Supp.): S1-S56.
- Britt H 1994. Patient reasons for encounter in general practice in Australia. University of Sydney.
- Britt H 1997. A new coding tool for computerised clinical systems in primary care – ICPC plus [see comments]. *Aust Fam Physician* 26 (Supp. 2): S79–S82.
- Britt H, Miller GC, Charles J, Knox S, Sayer GP, Valenti L, Henderson J & Kelly Z 2000. General practice activity in Australia 1999-2000. AIHW Cat. No. GEP 5. General Practice Series No. 5. Canberra: Australian Institute of Health and Welfare.

Britt H, Miller GC, McGeechan K & Sayer GP. 1999a [cited 30-10-2000a]. Pathology ordering by general practitioners in Australia 1998. AIHW Cat. No. GEP 4. Canberra: Department of Health and Aged Care. Available from Internet: <http://www.health.gov.au:80/haf/docs/pathorder.htm>

Britt H, Miller GC & Valenti L 2001. 'It's different in the bush': a comparison of general practice activity in metropolitan and rural areas of Australia 1998-2000. AIHW Cat. No. GEP 6. General Practice Series No. 6. Canberra: Australian Institute of Health and Welfare.

Britt H, Sayer GP, Miller GC, Charles J, Scahill S, Horn F & Bhasale A 1999b. *BEACH* Bettering the Evaluation and Care of Health: a study of general practice activity, six-month interim report. AIHW Cat. No. GEP 1. General Practice Series no. 1. Canberra: Australian Institute of Health and Welfare.

Britt H, Sayer GP, Miller GC, Charles J, Scahill S, Horn F, Bhasale A & McGeechan K 1999c. General practice activity in Australia 1998-99. AIHW Cat. No. GEP 2. General Practice Series no. 2. Canberra: Australian Institute of Health and Welfare.

Brunader R 1996. Accuracy of prenatal sonography performed by family practice residents. *Fam Med* 28:407-10.

Busse R, Hoopmann M & Schwartz FW 1999. Which factors determine the use of diagnostic imaging technologies for gastrointestinal complaints in general medical practice? *Int J Technol Assess Health Care* 15:629-37.

CaLCLno GF 1993. Sampling from the HIC data set. In: Proceedings of General Practice Evaluation Program: 1993 Work-In-Progress Conference. Canberra: DHHLGCS, 31-37.

Cascade PN 2000. The American College of Radiology. ACR Appropriateness Criteria project. *Radiology* 214:3-46.

Charlesworth CH & Sampson MA 1994. How do general practitioners compare with the outpatient department when requesting upper abdominal ultrasound examinations? *Clin Radiol* 49:343-45.

Chawda SJ, Watura R & Lloyd DC 1997. Magnetic resonance imaging of the lumbar spine: direct access for general practitioners. *Br J Gen Pract* 47:575-6.

Clarke KW, Gray D & Hampton JR 1994. Evidence of inadequate investigation and treatment of patients with heart failure [see comments]. *Br Heart J* 71:584-7.

Classification Committee of the World Organization of Family Doctors (WICC) 1997. *ICPC-2: International Classification of Primary Care*. Oxford: Oxford University Press.

Commonwealth Department of Health and Aged Care (DHAC) 1998. *Medicare Benefits Schedule book*. Canberra: Department of Health and Family Services.

Commonwealth Department of Health and Aged Care (DHAC) 2000. *General practice in Australia: 2000*. Canberra: DHAC.

- Criqui MH, Denenberg JO, Langer RD & Fronck A 1997. The epidemiology of peripheral arterial disease: importance of identifying the population at risk. *Vasc Med* 2:221-6.
- D'Orsi C, Mendelson E, Bassett L, Bohm-Velez M, Cardenosa G, Evans WP, III, Monsees B, Thurmond A & Goldstein S 2000. Work-up of nonpalpable breast masses. American College of Radiology. ACR Appropriateness Criteria. *Radiology* 215 (Supp.): 965-72.
- Dalinka MK, Alazraki N, Berquist TH, Daffner RH, DeSmet AA, el Khoury GY, Goergen TG, Keats TE, Manaster BJ, Newberg A, Pavlov H, Haralson RH, III, McCabe JB & Sartoris D 2000. Imaging evaluation of suspected ankle fractures. American College of Radiology. ACR Appropriateness Criteria. *Radiology* 215 (Supp.): 239-41.
- Davis PC, Drayer BP, Anderson RE, Braffman B, Deck MD, Hasso AN, Johnson BA, Masaryk T, Pomeranz SJ, Seidenwurm D, Tanenbaum L & Masdeu JC 2000. Head trauma. American College of Radiology. ACR Appropriateness Criteria. *Radiology* 215 (Supp.): 507-24.
- Dougados M 1995. Clinical assessment of osteoarthritis in clinical trials. *Curr Opin Rheumatol* 7:87-91.
- Evans WP, III, Mendelson E, Bassett L, Bohm-Velez M, Cardenosa G, D'Orsi C, Monsees B, Thurmond A & Goldstein S 2000. Appropriate imaging work-up of palpable breast masses. American College of Radiology. ACR Appropriateness Criteria. *Radiology* 215 (Supp.): 961-4.
- Everett CB & Preece E 1996. Women with bleeding in the first 20 weeks of pregnancy: value of general practice ultrasound in detecting fetal heart movement [see comments]. *Br J Gen Pract* 46:7-9.
- Finlayson CA & MacDermott TA 2000. Ultrasound can estimate the pathologic size of infiltrating ductal carcinoma. *Arch Surg* 135:158-9.
- Flamm CR 1999. Estimating costs and cost-effectiveness for diagnostic technologies. *Acad Radiol* 6 (Supp.1): S134.
- Freeborn DK, Shye D, Mullooly JP, Eraker S & Romeo J 1997. Primary care physicians' use of lumbar spine imaging tests: Effects of guidelines and practice pattern feedback. *J Gen Intern Med* 12:619-25.
- Fritzsche P, Amis ES, Jr., Bigongiari LR, Bluth EI, Bush WH, Jr., Choyke PL, Holder L, Newhouse JH, Sandler CM, Segal AJ, Resnick MI & Rutsky EA 2000. Acute onset flank pain, suspicion of stone disease. American College of Radiology. ACR Appropriateness Criteria. *Radiology* 215 (Supp.): 683-6.
- Gallagher EJ & Trotzky SW 1998. Sustained effect of an intervention to limit ordering of emergency department lumbosacral spine films. *J Emerg Med* 16:395-401.
- Garcia CJ, Espinoza A, Dinamarca V, Navarro O, Daneman A, Garcia H & Cattani A 2000. Breast US in children and adolescents. *Radiographics* 20:1605-12.

- Geitung JT, Kvamme OJ & Gothlin JH 1998. Quality assurance and clinical utility in radiology: a study of abdominal ultrasound. *Acad Radiol* 5 (Supp.2): S349-S350.
- Geitung JT, Skjaerstad LM & Gothlin JH 1999. Clinical utility of chest roentgenograms. *Eur Radiol* 9:721-3.
- Hart DJ & Spector TD 1995. Radiographic criteria for epidemiologic studies of osteoarthritis. *J Rheumatol Suppl* 43:46-8.
- Health Insurance Commission (HIC). 2001 [cited 18-6-2001]. Medicare Benefits Schedule (MBS) Group Statistics reports. Health Insurance Commission. Available from Internet: http://www.hic.gov.au/statistics/dyn_mbs/forms/mbsgtab4.shtml
- Hillman BJ, Joseph CA, Mabry MR, Sunshine JH, Kennedy SD & Noether M 1990. Frequency and costs of diagnostic imaging in office practice – a comparison of self-referring and radiologist-referring physicians [see comments]. *N Engl J Med* 323:1604-8.
- Hochberg MC 1996. Quantitative radiography in osteoarthritis: analysis. *Baillieres Clin Rheumatol* 10:421-8.
- Hofman PA, Nelemans P, Kemerink GJ & Wilminck JT 2000. Value of radiological diagnosis of skull fracture in the management of mild head injury: meta-analysis. *J Neurol Neurosurg Psychiatry* 68:416-22.
- Hogstrom B & Sverre JM 1996. Health economics in diagnostic imaging. *J Magn Reson Imaging* 6:26-32.
- Horowitz JD & Stewart S 2001. Heart failure in older people: the epidemic we had to have. *Med J Aust* 174: 432-3.
- Kahn CE, Pingree MJ & Longworth NJ 1998. A multipurpose model of radiology appropriateness criteria. *Acad Radiol* 5:188-97.
- Kahn CE, Jr. 1998. An Internet-based ontology editor for medical appropriateness criteria. *Comput Methods Programs Biomed* 56:31-6.
- Kahn CE, Jr., Sanders GD, Lyons EA, Kostelic JK, MacEwan DW & Gordon WL 1993. Computed tomography for nontraumatic headache: current utilization and cost-effectiveness. *Can Assoc Radiol J* 44:189-93.
- Kerlikowske K 1997. Efficacy of screening mammography among women aged 40 to 49 years and 50 to 69 years: comparison of relative and absolute benefit. *J Natl Cancer Inst Monogr* 79-86.
- Kerry S, Oakeshott P, Dundas D & Williams J 2000. Influence of postal distribution of the Royal College of Radiologists' guidelines, together with feedback on radiological referral rates, on X-ray referrals from general practice: a randomized controlled trial. *Fam Pract* 17:46-52.

- Khunti K, Baker R & Grimshaw G 2000. Diagnosis of patients with chronic heart failure in primary care: usefulness of history, examination, and investigations. *Br J Gen Pract* 50:50-4.
- King LJ & Healy JC 1999. Imaging of the painful shoulder. *Man Ther* 4:11-18.
- Kish L 1965. Survey sampling. New York: John Wiley & Sons.
- Klinkman MS 1996. Episodes of care for abdominal pain in a primary care practice [see comments]. *Arch Fam Med* 5:279-85.
- Krum H 2001. Guidelines for management of patients with chronic heart failure in Australia. *Med J Aust* 174:459-66.
- Krum H, Tonkin AM, Currie R, Djundjek R & Johnston CI 2001. Chronic heart failure in Australian general practice. The Cardiac Awareness Survey and Evaluation (CASE) Study. *Med J Aust* 174: 439-44.
- Laing F, Mendelson E, Bohm-Velez M, Bree R, Finberg H, Fishman EK, Hricak H, Sartoris D, Thurmond A & Goldstein S 2000. First trimester bleeding. American College of Radiology. ACR Appropriateness Criteria. *Radiology* 215 (Supp.): 879-93.
- Langlotz CP 1999. Overcoming barriers to outcomes research on imaging: lessons from an abstract decision model. *Acad Radiol* 6 (Supp.1): S29-S34.
- Lee SK, Lee T, Lee KR, Su YG & Liu TJ 1995. Evaluation of breast tumors with color Doppler imaging: a comparison with image-directed Doppler ultrasound. *J Clin Ultrasound* 23: 367-73.
- Linn FH, Rinkel GJ, Algra A & van Gijn J 2000. The notion of 'warning leaks' in subarachnoid haemorrhage: are such patients in fact admitted with a rebleed? *J Neurol Neurosurg Psychiatry* 68:332-6.
- Mair FS, Crowley TS & Bundred PE 1996. Prevalence, aetiology and management of heart failure in general practice. *Br J Gen Pract* 46:77-9.
- March LM & Bachmeier CJ 1997. Economics of osteoarthritis: a global perspective. *Baillieres Clin Rheumatol* 11: 817-34.
- Marsland DW, Wood M & Mayo F 1980. Content of family practice. New York: Appleton-Century-Crofts.
- Martin TA, Quiroz FA, Rand SD & Kahn CE, Jr. 1999. Applicability of American College of Radiology Appropriateness Criteria in a General Internal Medicine Clinic. *Am J Roentgenol* 173:9-11.
- Masaryk T, Drayer BP, Anderson RE, Braffman B, Davis PC, Deck MD, Hasso AN, Johnson BA, Pomeranz SJ, Seidenwurm D, Tanenbaum L & Masdeu JC 2000. Cerebrovascular disease. American College of Radiology. ACR Appropriateness Criteria. *Radiology* 215 (Supp.): 415-35.

Masdeu JC, Drayer BP, Anderson RE, Braffman B, Davis PC, Deck MD, Hasso AN, Johnson BA, Masaryk T, Pomeranz SJ, Seidenwurm D & Tanenbaum L 2000. Atraumatic isolated headache – when to image. American College of Radiology. ACR Appropriateness Criteria. Radiology 215 (Supp.): 487-93.

McIlvenny S & O’Kane J 1995. An audit of general practitioner referrals for pelvic ultrasound. Fam Pract 12: 438-42.

Mushlin AI 1999. Challenges and opportunities in economic evaluations of diagnostic tests and procedures. Acad Radiol 6 (Supp.1): S128-S131.

Needleman L, Polak JF, Bettmann MA, Boxt LM, Gomes AS, Grollman J, Henkin RE, Higgins CB, Kelley MJ, Pagan-Marin H & Stanford W 2000. Suspected lower extremity deep vein thrombosis. American College of Radiology. ACR Appropriateness Criteria. Radiology, 215 (Supp.): 49-53.

Newhouse JH, Amis ES, Jr., Bigongiari LR, Bluth EI, Bush WH, Jr., Choyke PL, Fritzsche P, Holder L, Sandler CM, Segal AJ, Resnick MI & Rutsky EA 2000. Radiologic investigation of patients with hematuria. American College of Radiology. ACR Appropriateness Criteria. Radiology 215 (Supp.): 687-91.

Nichol G, Stiell IG, Wells GA, Juergensen LS & Laupacis A 1999. An economic analysis of the Ottawa knee rule. Ann Emerg Med 34:438-47.

Njalsson T, Sigurdsson JA, Sverrisson G & Brekkan A 1995. Use of X-rays in family practice. A multicentre study. Fam Pract 12:143-8.

Oakeshott P, Kerry SM & Williams JE 1994. Randomized controlled trial of the effect of the Royal College of Radiologists’ guidelines on general practitioners’ referrals for radiographic examination [see comments]. Br J Gen Pract 44:197-200.

Peh WC 1998. Imaging the painful shoulder: an update. Hosp Med 59:783-7.

Perre CI, de Hooge P, Hustinx PA & Muller JW 1993. [Ultrasonographic study of the palpable breast tumor is very useful]. Ned Tijdschr Geneesk 137:2374-7.

Pigman EC, Klug RK, Sanford S & Jolly BT 1994. Evaluation of the Ottawa clinical decision rules for the use of radiography in acute ankle and midfoot injuries in the emergency department: an independent site assessment. Ann Emerg Med 24:41-5.

Polmear AF, Kenney IJ & Barnard SA 1999. Should GPs have direct access to imaging for children with urinary tract infections? An observational study. Br J Gen Pract 49:115-17.

Quebec Task Force on Spinal Disorders 1987. Scientific approach to the assessment and management of activity-related spinal disorders. A monograph for clinicians. Report of the Quebec Task Force on Spinal Disorders. Spine 12:S1-S59.

- Ralls PW, Balfe DM, Bree RL, DiSantis DJ, Glick SN, Levine MS, Megibow AJ, Saini S, Shuman WP, Greene FL, Laine LA & Lillemoe K 2000. Evaluation of acute right lower quadrant pain. American College of Radiology. ACR Appropriateness Criteria. Radiology 215 (Supp.): 159–66.
- Ravaud P 1996. Quantitative radiography in osteoarthritis: plain radiographs. *Baillieres Clin Rheumatol* 10: 409–14.
- Revicki DA, Yabroff KR & Shikier R 1999. Outcomes research in radiologic imaging: identification of barriers and potential solutions. *Acad Radiol* 6 (Supp.1):S20–S28.
- Roberts T, Mugford M & Piercy J 1998. Choosing options for ultrasound screening in pregnancy and comparing cost effectiveness: a decision analysis approach. *Br J Obstet Gynaecol* 105:960–70.
- Robling M, Kinnersley P, Houston H, Hourihan M, Cohen D & Hale J 1998. An exploration of GPs' use of MRI: a critical incident study. *Fam Pract* 15:236–43.
- Rosen MP, Davis RB & Lesky LG 1997. Utilization of outpatient diagnostic imaging. Does the physician's gender play a role? *J Gen Intern Med* 12:407–11.
- Royal Australian and New Zealand College of Radiologists (RANZCR) 2001. Imaging guidelines. RANZCR: Sydney.
- Royal College of Radiologists (RCR) 1998a. Making the best use of a Department of Clinical Radiology – Guidelines for doctors. London: Royal College of Radiologists.
- Royal College of Radiologists (RCR) 1998b. Making the best use of a Department of Clinical Radiology – Guidelines for doctors – Electronic version. Available from Internet: <http://www.realhealthcare.co.uk/rcr.htm>
- Royal College of Radiologists Working Party 1992. A multicentre audit of hospital referral for radiological investigation in England and Wales. *World Hosp* 28:7–13.
- Royal College of Radiologists Working Party 1993. Influence of Royal College of Radiologists' guidelines on referral from general practice. *Br Med J* 306:110–11.
- Saag KG 1997. Health services research. *Curr Opin Rheumatol* 9:118–25.
- Sandler CM, Amis ES, Jr., Bigongiari LR, Bluth EI, Bush WH, Jr., Choyke PL, Fritzsche P, Holder L, Newhouse JH, Segal AJ, Resnick MI & Rutsky EA 2000. Imaging in acute pyelonephritis. American College of Radiology. ACR Appropriateness Criteria. Radiology 215 (Supp.): 677–81.
- Sartoris DJ 1994. Clinical value of bone densitometry. *AJR Am J Roentgenol* 163:133–5.
- SAS Institute Inc. 1996. SAS Proprietary Software Release 6.12.
- Sayer GP 1999. Estimating and generalising with clustered sampling in general practice. *Aust Fam Physician* 28:S32–S34.

Sayer GP, Britt H, Horn F, Bhasale A, McGeechan K, Charles J, Miller GC, Hull B & Scahill S 2000. Measures of health and health care delivery in general practice in Australia. AIHW Cat. No. GEP 3. General Practice Series no. 3. Canberra: Australian Institute of Health and Welfare.

Schelling M, Gnirs J, Braun M, Busch R, Maurer S, Kuhn W, Schneider KT & Graeff H 1997. Optimized differential diagnosis of breast lesions by combined B-mode and color Doppler sonography. *Ultrasound Obstet Gynecol* 10:48-53.

Seaberg DC & Jackson R 1994. Clinical decision rule for knee radiographs. *Am J Emerg Med* 12: 541-3.

Seaberg DC, Yealy DM, Lukens T, Auble T & Mathias S 1998. Multicenter comparison of two clinical decision rules for the use of radiography in acute, high-risk knee injuries. *Ann Emerg Med* 32:8-13.

Segal AJ, Amis ES, Jr., Bigongiari LR, Bluth EI, Bush WH, Jr., Choyke PL, Fritzsche P, Holder L, Newhouse JH, Sandler CM, Resnick MI & Rutsky EA 2000. Recurrent lower urinary tract infections in women. American College of Radiology. ACR Appropriateness Criteria. *Radiology* 215: (Sup.):671-6.

Shye D, Freeborn DK, Romeo J & Eraker S 1998. Understanding physicians' imaging test use in low back pain care: the role of focus groups [see comments]. *Int J Qual Health Care* 10: 83-91.

Sjonell G & Stahle L 1999. Scientific foundation of mammographic screening is based on inconclusive research in Sweden. *Br Med J* 319:55.

Skillern LH & Pearce JM 1993. An audit of general practitioner requests for pelvic ultrasound: analysis of referral patterns and outcome. *Br J Obstet Gynaecol* 100:1131-5.

Southern P, Teale A, Dixon A, Freer C, Sims C, Rubenstein D, Wilkinson I, Hall L & Williams A 1991. An audit of the clinical use of magnetic resonance imaging of the head and spine. *Health Trends* 23:75-9.

Stiell IG, Greenberg GH, McKnight RD, Nair RC, McDowell I, Reardon M, Stewart JP & Maloney J 1993. Decision rules for the use of radiography in acute ankle injuries. Refinement and prospective validation. *JAMA* 269:1127-32.

Stiell IG, Greenberg GH, McKnight RD, Nair RC, McDowell I & Worthington JR 1992a. A study to develop clinical decision rules for the use of radiography in acute ankle injuries. *Ann Emerg Med* 21:384-90.

Stiell IG, Greenberg GH, McKnight RD & Wells GA 1995a. Ottawa ankle rules for radiography of acute injuries. *N Z Med J* 108:111.

Stiell IG, Greenberg GH, Wells GA, McDowell I, Cwinn AA, Smith NA, Cacciotti TF & Sivilotti ML 1996. Prospective validation of a decision rule for the use of radiography in acute knee injuries. *JAMA* 275:611-15.

Stiell IG, Greenberg GH, Wells GA, McKnight RD, Cwinn AA, Cacciotti T, McDowell I & Smith NA 1995b. Derivation of a decision rule for the use of radiography in acute knee injuries. *Ann Emerg Med* 26:405-13.

Stiell IG, McDowell I, Nair RC, Aeta H, Greenberg G, McKnight RD & Ahuja J 1992b. Use of radiography in acute ankle injuries: physicians' attitudes and practice. *CMAJ* 147:1671-78.

Stiell IG, McKnight RD, Greenberg GH, McDowell I, Nair RC, Wells GA, Johns C & Worthington JR 1994. Implementation of the Ottawa ankle rules. *JAMA* 271:827-32.

Stiell IG, McKnight RD, Greenberg GH, Nair RC, McDowell I & Wallace GJ 1992c. Interobserver agreement in the examination of acute ankle injury patients. *Am J Emerg Med* 10:14-17.

Stiell IG, Wells GA, Hoag RH, Sivilotti ML, Cacciotti TF, Verbeek PR, Greenway KT, McDowell I, Cwinn AA, Greenberg GH, Nichol G & Michael JA 1997. Implementation of the Ottawa Knee Rule for the use of radiography in acute knee injuries. *JAMA* 278:2075-9.

Stiell IG, Wells GA, McDowell I, Greenberg GH, McKnight RD, Cwinn AA, Quinn JV & Yeats A 1995c. Use of radiography in acute knee injuries: need for clinical decision rules. *Acad Emerg Med* 2: 966-73.

Stolberg HO, Holt A, Thomas J, Williams L & Moran LA 1999. A database designed for utilization management in diagnostic imaging. *Can Assoc Radiol J* 50: 227-32.

Suarez-Almazor ME, Belseck E, Russell AS & Mackel JV 1997. Use of lumbar radiographs for the early diagnosis of low back pain. Proposed guidelines would increase utilization [see comments]. *JAMA* 277:1782-6.

Swedish Cancer Society and the Swedish National Board of Health and Welfare 1996. Breast-cancer screening with mammography in women aged 40-49 years. *Int J Cancer* 68:693-9.

Swen WA, Jacobs JW, Algra PR, Manoliu RA, Rijkmans J, Willems WJ & Bijlsma JW 1999. Sonography and magnetic resonance imaging equivalent for the assessment of full-thickness rotator cuff tears. *Arthritis Rheum* 42:2231-8.

Teefey SA, Hasan SA, Middleton WD, Patel M, Wright RW & Yamaguchi K 2000. Ultrasonography of the rotator cuff. A comparison of ultrasonographic and arthroscopic findings in one hundred consecutive cases. *J Bone Joint Surg Am* 82:498-504.

Teefey SA, Middleton WD & Yamaguchi K 1999. Shoulder sonography. State of the art. *Radiol Clin North Am* 37:767-85.

The Royal Australian and New Zealand College of Radiologists (RANZCR) 2001. Imaging Guidelines. Sydney: The Royal Australian and New Zealand College of Radiologists.

Thurmond A, Mendelson E, Bohm-Velez M, Bree R, Finberg H, Fishman EK, Hricak H, Laing F, Sartoris D & Goldstein S 2000. Role of imaging in abnormal vaginal bleeding. American College of Radiology. ACR Appropriateness Criteria. *Radiology* 215 (Sup.): 873-7.

- Tjahjono D & Kahn CE, Jr. 1999. Promoting the online use of radiology appropriateness criteria. *Radiographics* 19:1673–81.
- Tonelli C, Finzi G, Catamo A, Silvestrini C, Squeri M, Mombelloni A & Ponari O 1993. Prevalence and prognostic value of peripheral arterial disease in stroke patients. *Int Angiol* 12:342–3.
- Verbeek PR, Stiell IG, Hebert G & Sellens C 1997. Ankle radiograph utilization after learning a decision rule: a 12-month follow-up. *Acad Emerg Med* 4:776–9.
- Vignon E, Conrozier T, Piperno M, Richard S, Carrillon Y & Fantino O 1999. Radiographic assessment of hip and knee osteoarthritis. Recommendations: recommended guidelines. *Osteoarthritis Cartilage* 7:434–6.
- Vydareny KH 1997. New tools from the ACR (American College of Radiology): appropriateness criteria and utilization analysis. *Radiol Manage* 19:40–5.
- Watt I 2000. Bone disorders: a radiological approach. *Baillieres Best Pract Res Clin Rheumatol* 14:173–99.
- Westcott J, Davis SD, Fleishon H, Geftter WB, Henschke CI, McLoud TC, Pugatch RD, Sostman HD, Tocino I, White CS, Yankelevitz D & Bode FR 2000a. Acute respiratory illness. American College of Radiology. ACR Appropriateness Criteria. *Radiology* 215 (Supp.): 645–8.
- Westcott J, Davis SD, Fleishon H, Geftter WB, Henschke CI, McLoud TC, Pugatch RD, Sostman HD, Tocino I, White CS, Yankelevitz D, Bode FR & Critchfield C 2000b. Routine chest radiographs in uncomplicated hypertension. American College of Radiology. ACR Appropriateness Criteria. *Radiology* 215 (Supp.):627–9.
- Williams GR & Jiang JG 2000. Development of an ischemic stroke survival score. *Stroke* 31: 2414–20.
- Williams GR, Jiang JG, Matchar DB & Samsa GP 1999. Incidence and occurrence of total (first-ever and recurrent) stroke. *Stroke* 30:2523–8.
- Wilson IB, Dukes K, Greenfield S, Kaplan S & Hillman B 2001. Patients' role in the use of radiology testing for common office practice complaints. *Arch Intern Med* 161:256–63.

Glossary

A1 Medicare items: Medicare item numbers 1–51, 601, 602

Aboriginal: The patient identifies himself or herself as an Aboriginal person.

Activity level: The number of general practice A1 Medicare items claimed during the previous three months by a participating GP.

Allied health services: Those who provide clinical and other specialised services in the management of patients, including physiotherapists, occupational therapists, dieticians and pharmacists.

Care process: Each imaging test order was classified into one of four groups depending on the status of the problem to the patient and the level of diagnostic specificity inherent in the label assigned by the GP to the problem associated with the test order. Four care processes were designated for imaging tests ordered:

- *Investigative imaging.* Tests ordered to assist in the diagnostic process: included all imaging ordered for problems that fell in ICPC–2 Component 1 (Symptoms and complaints) irrespective of problem status.
- *Management imaging.* Tests ordered to assist in decisions about to how best to manage the problem that had already been defined in diagnostic terms by the clinician: included all imaging ordered for problems in ICPC–2 Component 7 (Diagnosis/disease) that were new to the patient.
- *Monitoring imaging.* Tests ordered to monitor a patient in the ongoing care of a defined problem: included all imaging orders for problems in Component 7 (Diagnosis/Disease) at follow-up encounters for that problem.
- *Undefined imaging.* Included all imaging ordered for problems in Components 2–6 (process codes) irrespective of the status of the problem to the patient

Chapters (ICPC–2): The main divisions within ICPC–2 PLUS; there are 17 chapters primarily representing the body systems.

Complaint: A symptom or disorder expressed by the patient when seeking care.

Component (ICPC–2): In ICPC–PLUS there are seven components which act as a second axis across all chapters.

Consultation: See *Encounter (enc.)*.

Diagnosis/problem: A statement of the provider’s understanding of a health problem presented by a patient, family or community. GPs are instructed to record at the most

specific level possible from the information available at the time. It may be limited to the level of symptoms.

- *new problem*: The first presentation of a problem, including the first presentation of a recurrence of a previously resolved problem but excluding the presentation of a problem first assessed by another provider.
- *old problem*: A previously assessed problem that requires ongoing care. Includes follow-up for a problem or an initial presentation of a problem previously assessed by another provider.

Encounter (enc.): Any professional interchange between a patient and a GP.

- *Indirect*: Encounter where there is no face-to-face meeting between the patient and the GP but a service is provided (e.g. prescription, referral).
- *Direct*: Encounter where there is a face-to-face meeting of the patient and the GP.

Direct encounters can be further divided into:

(a) *Medicare-claimable*

– A1 items of service: MBS item numbers 1–51, 601, 602

– *surgery consultations*: encounters identified by any one of MBS item numbers 3, 23, 36, 44

– *home visits*: encounters identified by any one of MBS item numbers 4, 24, 37, 47

– *hospital encounters*: encounters identified by any one of MBS item numbers 19, 33, 40, 50

– *nursing home visits*: encounters identified by any one of MBS item numbers 20, 35, 43, 51

– *other institutional visits*: encounters identified by any one of MBS item numbers 13, 25, 38, 40

– *other MBS encounters*: encounters identified by an MBS item number that does not identify place of encounter

(b) *Workers' compensation*: encounters paid by workers' compensation insurance

(c) *Other paid*: encounters paid from another source (e.g. State).

General practitioner (GP): 'A medical practitioner who provides primary comprehensive and continuing care to patients and their families within the community' (Royal Australian College of General Practitioners).

ICPC-2: The International Classification of Primary Care (Version 2).

ICPC-2 PLUS: An extended vocabulary of terms classified according to the ICPC-2.

Medication: Medication that is prescribed, advised for over-the-counter purchase or provided by the GP at the encounter.

Metropolitan stratum: See *Strata*

Morbidity: Any departure, subjective or objective, from a state of physiological well-being. In this sense, sickness, illness and morbid conditions are synonymous.

Patient status: The status of the patient to the practice

- *new patient:* The patient has not been seen before in the practice.
- *old patient:* The patient has attended the practice before.

Problem managed: See *Diagnosis/problem*

Provider: A person to whom a patient has access when contacting the health care system.

Reasons for encounter (RFEs): The subjective reasons given by the patient for seeing or contacting the general practitioner. These can be expressed in terms of symptoms, diagnoses or the need for a service.

Recognised GP: A medical practitioner who is:

- vocationally recognised under Section 3F of the *Health Insurance Act*, *or*
- a holder of the Fellowship of the Royal Australian College of General Practitioners who participates in, and meets the requirements for, quality assurance and continuing medical education as defined in the Royal Australian College of General Practitioners' (RACGP) Quality Assurance and Continuing Medical Education Program, *or*
- undertaking an approved placement in general practice as part of a training program for general practice leading to the award of the Fellowship of the Royal Australian College of General Practitioners or undertaking an approved placement in general practice as part of some other training program recognised by the RACGP as being of equivalent standard. (Medicare Benefits Schedule book, 1 November 1998).

Referral: The process by which the responsibility for part or all of the care of a patient is temporarily transferred to another health care provider. Only new referrals to specialists, allied health professionals, and for hospital and nursing home admissions arising at a recorded encounter are included. Continuation referrals are not included. Multiple referrals can be recorded at any one encounter.

Rubric: The title of an individual code in ICPC- 2.

Rural strata: See *Strata*.

Strata: Categories created for this report by grouping RRMA categories.

- *Metropolitan stratum:* A grouping of RRMA categories 1 and 2.
- *Large rural stratum:* A grouping of RRMA categories 3 and 6.
- *Small rural stratum:* A grouping of RRMA categories 4, 5 and 7.

Torres Strait Islander: The patient identifies himself or herself as a Torres Strait Islander.

Abbreviations

ACR	American College of Radiology
<i>BEACH</i>	Bettering the Evaluation and Care of Health, a national survey of GP activity
CAPS	Coding Atlas for Pharmaceutical Substances
CI	Confidence interval (in this report 95% CIs are reported)
CT	Computed tomography
DHAC	Commonwealth Department of Health and Aged Care
enc(s)	Encounter(s)
FMRC	Family Medicine Research Centre, University of Sydney
GP	General practitioner
GPSCU	AIHW General Practice Statistics and Classification Unit, University of Sydney
HIC	Health Insurance Commission
HMO	Health maintenance organisations
ICPC-2	International Classification of Primary Care (Version 2)
IVP	Intravenous pyelograms
LCL	Lower confidence limit (in this report the 95% LCL is used)
MBS	Medicare Benefits Schedule
MRI	Magnetic resonance imaging
MR	Magnetic resonance
NEC	Not elsewhere classified
NSAIDS	Non-steroidal anti-inflammatory drugs
NOS	Not otherwise stated
RACGP	Royal Australian College of General Practitioners
RANZCR	Royal Australian and New Zealand College of Radiologists
RCR	Royal College of Radiologists
RFE(s)	Patient reason(s) for encounter
RRMA	Rural, Remote and Metropolitan Area classification
RSE	Relative standard error
SRS	Simple random sample
STD	Sexually transmitted disease
UCL	Upper confidence limit (in this report the 95% UCL is used)
WONCA	World Organization of Family Doctors