

AFOEM top-five recommendations on low value practices

The **Australasian Faculty of Occupational and Environmental Medicine (AFOEM)** is a Faculty of the Royal Australasian College of Physicians (RACP) that connects and represents Occupational and Environmental Medicine Fellows and trainees in Australia and New Zealand.

The College worked with the President and EVOLVE Lead Fellow of AFOEM to compile and refine a list of nine

recommendations regarding low-value clinical practices in occupational and environmental medicine. This initial list served as the basis for an online survey.

Based on survey responses, each of the nine recommendations was assigned a score and ranked accordingly. Based on the ranking of the initial nine, and the review of newly suggested items, these five low-value practices and interventions were chosen.*

1 Do not order low back X-rays or other forms of low back imaging as part of a routine preplacement medical examination

2 Do not order X-rays or other imaging for acute non-specific low back pain, unless there are red flags or other clinical reasons to suspect serious spinal pathology

3 Do not prescribe opiates for the treatment of acute or chronic pain without assessing the patient's clinical condition, potential side effects, alternative analgesic options, work status, and capacity to perform safety-critical activities such as driving a motor vehicle

4 Do not certify a patient as totally unfit for work unless the work absence is clinically necessary and the patient is unfit for suitable alternative or restricted duties

5 Do not repeat chest X-rays when screening asbestos-exposed workers unless clinically indicated

ABOUT EVOLVE

EVOLVE is a physician-led initiative to ensure the highest quality patient care through the identification and reduction of low-value practices and interventions.

EVOLVE is patient-centred and evidence-based, with rigorous and transparent processes. Its focus is to stimulate clinical conversations – between colleagues, across specialties, and with patients – to ensure the care that's delivered is the best for each patient.

EVOLVE is part of a worldwide movement to analyse medical practices and reduce unnecessary interventions. It is an initiative in partnership between the RACP and the Specialty Societies, Divisions, Faculties and Chapters.

1 Do not order low back X-rays or other forms of low back imaging as part of a routine preplacement medical examination

The purpose of preplacement medical examinations should be to determine an individual's ability to perform the job. However, such examinations are generally not recommended unless there is a reason for using them to assess some specific occupational risks. Even if a routine preplacement medical examination is justified, low back X-rays and other imaging are not useful preplacement tests to undertake because they have not been found to predict future injuries. These tests also result in unnecessary radiation exposure.

2 Do not order X-rays or other imaging for acute non-specific low back pain, unless there are red flags or other clinical reasons to suspect serious spinal pathology

As little as two per cent of low back pain cases represent potentially serious conditions requiring surgical or medical intervention. The majority of acute low back pain episodes are benign, self-limiting cases that do not warrant any X-ray or imaging studies. Indeed, unnecessary X-rays and imaging can be harmful due to the potential adverse health effects associated with radiation exposure. Moreover, the attribution of symptoms to unrelated incidental findings can then lead to unnecessary surgery. It is therefore recommended that X-rays and imaging of the lower back should be performed only if there are red flags such as: a history of significant trauma, cauda equina syndrome, symptoms suggestive of a tumour or infection (fever, weight loss, and a history of cancer), and steroid use.

3 Do not prescribe opiates for the treatment of acute or chronic pain without assessing the patient's clinical condition, potential side effects, alternative analgesic options, work status, and capacity to perform safety-critical activities such as driving a motor vehicle

Studies demonstrate that prescribing opioids for workers suffering back injuries is correlated with significantly longer periods of disability and a higher risk of surgery. Some of these relationships may be attributable to the higher likelihood of opiate prescription for people with more serious injuries. However, other studies have documented that long-term opioid use for chronic pain is associated with serious risks such as abuse and dependence, overdose, myocardial infarction, and motor vehicle crashes. These risks may outweigh the benefits given there is also insufficient evidence on whether the pain relief provided by opioids is sustained in the long term.

The use of opiates can result in euphoria, drowsiness or inability to concentrate, so using opiates is incompatible with many jobs. Thus, opiate prescription for the treatment of acute or chronic pain should not be initiated without first assessing the patient's clinical condition, potential side effects, alternative analgesic options, work status, and their capacity to perform safety-critical activities.

4 Do not certify a patient as totally unfit for work unless the work absence is clinically necessary and the patient is unfit for suitable alternative or restricted duties

While some medical conditions necessitate time off work, for example a person recovering from surgery or experiencing debilitating pain, with many medical conditions there is a substantial discretionary element to work absence. So some patients may be able to participate in work if employers make appropriate accommodations.

There is substantial evidence to support a positive link between work and (physical, mental and social) health, as well as evidence that absence from work contributes to declining health, slower recovery times, and longer duration of disability. The certification of work absences due to medically discretionary injuries and illnesses should therefore be discouraged. When asked to provide an opinion on functional abilities to employers or insurers, medical practitioners' focus should be on abilities; restrictions should be objective, specific, and listed only when medically indicated.

5 Do not repeat chest X-rays when screening asbestos-exposed workers unless clinically indicated

Asbestosis usually takes years to decades to develop after the initial exposure and chest X-rays cannot immediately indicate whether or not asbestos fibres have been inhaled. Given the long latency period, screening and early detection of asbestosis by chest X-ray is unlikely to confer any health advantage or psychological benefit on asbestos-exposed individuals. Moreover, there is now evidence that low-dose multi-detector CT (MDCT) rather than chest X-ray is justified for initial examination because it is more sensitive.

Therefore, while it may be appropriate to obtain a baseline chest X-ray at the time of first assessment, for screening purposes the radiation risk outweighs the benefit of frequent chest X-rays.

Radiation exposure is also a concern for repeated CT scans. Further screening may be justified only if exposure to asbestos has continued and, in this case, the frequency and extent of exposure should determine the requirement for repeat screening. In addition, low-dose CT may be appropriate in individual cases, if there is considered to be an increased risk of lung cancer.

**How this list was developed...*

The College worked with the President and EVOLVE Lead Fellow of AFOEM to compile and refine a list of nine recommendations regarding low-value clinical practices in occupational and environmental medicine. These were adapted from the American College of Occupational and Environmental Medicine and Occupational Medicine Specialists of Canada 2014 Choosing Wisely recommendations.

This initial list served as the basis for an online survey asking respondents if they agreed, disagreed or were unsure if these recommendations were evidence based and of relevance to OEM in Australasia. Respondents were also asked to nominate any other relevant recommendations not already included.

Based on survey responses, each of the nine recommendations was assigned a score and ranked accordingly. Additional suggested practices were reviewed and considered along with the feedback on the initial proposed items. Based on the ranking of the initial nine, and the review of newly suggested items, these top-five recommendations were chosen.

A number of specialties within the College, which have clinical practices or expertise of relevance to this list, were invited to comment on the final wording of the recommendations.

Australasian Faculty of Occupational and Environmental Medicine – top-five recommendations on low value practices

EVIDENCE SUPPORTING RECOMMENDATION 1

Gibson ES, Martin RH, Terry CW. Incidence of low back pain and pre-placement x-ray screening. *J Occup Med.* 1980; 22(8): 515–9.

Schaafsma FG, Mahmud N, Reneman MF, et al. Pre-employment examinations for preventing injury, disease and sick leave in workers. *Cochrane Database Syst Rev.* 2016; 1: CD008881.

EVIDENCE SUPPORTING RECOMMENDATION 2

Graves JM, Fulton-Kehoe D, Martin DP, et al. Factors associated with early magnetic resonance imaging utilization for acute occupational low back pain: a population-based study from Washington State workers' compensation. *Spine.* 2012; 37(19): 1708–1718

Suri P, Boyko EJ, Goldberg J, et al. Longitudinal associations between incident lumbar spine MRI findings and chronic low back pain or radicular symptoms: retrospective analysis of data from the longitudinal assessment of imaging and disability of the back (LAIDBACK). *BMC musculoskeletal disorders.* 2014; 15: 152.

Webster BS, Bauer AZ, Choi Y, et al. Iatrogenic consequences of early magnetic resonance imaging in acute, work-related, disabling low back pain. *Spine.* 2013; 38(22): 1939–1946.

EVIDENCE SUPPORTING RECOMMENDATION 3

Dowell D, Haegerich TM, Chou R. CDC Guideline for Prescribing Opioids for Chronic Pain – United States, *Recommendations and Reports.* 2016; 65(1):1–49.

Franklin GM, Stover BD, Turner JA, et al. Early opioid prescription and subsequent disability among workers with back injuries: the Disability Risk Identification Study Cohort. *Spine.* 2008; 33(2): 199–204.

National Opioid Use Guideline Group (NOUGG). Canadian Guideline for Safe and Effective Use of Opioids for Chronic Non-Cancer Pain. 2010.

Webster BS, Verma SK, Gatchel RJ. Relationship between early opioid prescribing for acute occupational low back pain and disability duration, medical costs, subsequent surgery and late opioid use. *Spine.* 2007; 32(19): 2127–2132.

EVIDENCE SUPPORTING RECOMMENDATION 4

Australasian Faculty of Occupational & Environmental Medicine / Royal Australasian College of Physicians Australian and New Zealand Consensus Statement on the Health Benefits of Work 2011

van der Noordt M, Ijzelenberg H, Droomers M, Proper IK. Health effects of employment: a systematic review of prospective studies. *Occupational and Environmental Medicine.* 2014; 17: 730–736.

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EVIDENCE SUPPORTING RECOMMENDATION 5

Eisenhower C, Felten MK, Tamm M, et al. Radiological surveillance of formerly asbestos-exposed power industry workers: rates and risk factors of benign changes on chest X-ray and MDCT. *Journal of Occupational Medicine and Toxicology.* 2014; 9: 18.

Safe Work Australia Asbestos Guidelines

Vierikko T, Kivistö S, Järvenpää R, et al. Psychological impact of computed tomography screening for lung cancer and occupational pulmonary disease among asbestos-exposed workers. *Eur J Cancer Prev.* 2009; 18(3): 203–206.

Weissman DN. Role of Chest Computed Tomography in Prevention of Occupational Respiratory Disease: Review of Recent Literature. *Semin Respir Crit Care Med.* 2015; 36(3): 433–448.