Information in referrals to public outpatient specialist clinics for back pain: audit results and consensus recommendations

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Low back pain affects 80% of Australians at some point in life,[1] half of whom will seek medical care.[2] Most cases can be managed conservatively, but some require referral to specialist care.[3] Our aim was to determine the clinical information that facilitates efficient patient triage to timely specialist review and should therefore be included in referral letters. We surveyed nine neurosurgeons, orthopaedic spinal surgeons, rheumatologists and physiotherapists in an online questionnaire. We also audited the clinical information in 300 randomly selected referrals for back pain to the Royal Melbourne Hospital between 1 January 2014 and 31 December 2016. The audit was approved by the Melbourne Health Human Research Ethics Committee (reference, QA 2014148).

Clinical information that the hospital specialists regarded as essential in all referrals for back pain were pain location, presence of referred limb pain, limb weakness, assessment for "red flags" (indicating potentially sinister causes of low back pain), prior spinal surgery, and at least one form of spinal imaging (Box). Symptom duration and altered limb sensation were also considered useful indicators. Red flags or limb weakness, either in the patient history or on examination, were identified as key determinants for expediting specialist review.

Back pain referrals were made by general practitioners (86%), other hospital specialty services (8%), and the hospital emergency department (6%). Referrals were made to the neurosurgery (62%), orthopaedic spinal surgery (30%), and rheumatology departments (8%). About one-quarter of referrals mentioned pain but provided no further clinical information. Most referrals did not include information about red flags (83%) or examination findings (87%) (Box). In the 160 referrals for lumbar radiculopathy, findings of lower limb neurological examination and straight leg raise testing were respectively reported in 22% and 7.5% of referrals. In contrast, 90% of referrals included spinal imaging results (x-ray, 23%; computed tomography [CT], 52%; magnetic resonance imaging [MRI], 28%).

Our findings highlight the discrepancy between the information needed by the clinicians who triage back pain referrals and that provided in referrals. The infrequent mention of assessment for red flags may indicate that patients presenting with such features had already been appropriately referred elsewhere (eg, to hospital emergency departments) rather than for routine outpatient review. Specialists differed about the preferred imaging modality, but all considered at least one form as essential when referring patients. Standard x-ray rather than advanced spinal imaging (eg, CT, MRI) was considered sufficient, consistent with guideline recommendations for initial imaging of uncomplicated low back pain of more than 6 weeks' duration.[4]

Study limitations included the fact that the survey and audit were conducted in a single tertiary centre, limiting the generalisability of our findings. Further, we were unable to correlate individual diagnoses after specialist review with referral information to determine whether adverse outcomes ensued. Nevertheless, we recommend that assessment of back pain should focus on eliciting a history and examining the patient for red flags, referred limb pain, limb weakness, and prior spinal surgery. Including this information in referrals will facilitate appropriate triage and prevent delays in care.

Information provided by referrers in an audit of 300 back pain referrals, and what should be included according to nine hospital specialists

Referral information	Referral information provided	Specialists who want it provided
Total number (referrals, specialists)	300	9
History		
Pain location	221 (74%)	9
Pain duration	138 (46%)	8
Back pain referred to limbs	170 (56%)	9
Limb weakness*	66 (22%)	9
Altered limb sensation	66 (22%)	6
Red flags*	50 (17%)	9
Inquired about cauda equina syndrome*	24 (8%)	9
Prior spinal surgery	12 (4%)	9
Physical examination		
Neurological examination for limb (motor) weakness*	39 (13%)	9
Examination for cauda equina syndrome*	1 (0.3%)	9
Spinal imaging		
X-ray	69 (23%)	6
Computed tomography	157 (52%)	4
Magnetic resonance imaging	83 (28%)	4

* Five most important criteria for specialists when prioritising patients for outpatient review. ◆

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