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| **2S — Low back pain imaging** |
| **Summary of Intervention** |
| The evaluation of low back pain by a medical provider should include a complete medical history and examination. It should be established if any “red flag” signs or symptoms are present that could indicate serious underlying pathology.  Serious underlying pathology includes but is not limited to:  — Infection  — Suspected cancer  — Spinal injury  — Spinal cord compression  — Inflammatory conditions  — Patients with cancer and symptoms suggestive of spinal metastases  — Spondyloarthritis in over 16s  — Cauda equina syndrome  **This guidance applies to adults aged 19 years and over.** |
| **Number of interventions in 18/19** |
| **253,956** |
| **Proposal** |
| Do not routinely offer imaging in a non-specialist setting for people with low back pain with or without sciatica in the absence of red flags, or suspected serious underlying pathology following medical history and examination. Imaging in low back pain should be offered if serious underlying pathology is suspected. Serious underlying pathology includes but is not limited to: cancer, infection, trauma, spinal cord injury (full or partial loss of sensation and/or movement of part(s) of the body) or inflammatory disease.  Further information can be accessed at the relevant NICE guideline for these conditions.  Patients presenting with low back pain and sciatica should be reviewed in accordance with the low back pain and sciatica guidance (https://www.nice.org.uk/guidance/ng59). Patients presenting with low back pain without  sciatica should be reviewed and if none of the above serious underlying pathology are suspected, primary care management typically includes reassurance, advice on continuation of activity with modification, weightloss,  analgesia, manual therapy and reviewing patients who are high risk of developing chronic pain (i.e. STaRT Back).  NICE guidelines recommend using a risk assessment and stratification tool, (e.g. STaRT Back), and following a pathway such as the National Back and Radicular Pain Pathway, to inform shared decision making and create a  management plan.  Consider a combined physical and psycological programme for management of sub-acute and chronic low back pain (greater than 3 to 6 months duration) e.g. Back Skills Training (BeST). Consider referral to a specialist centre for further assessment and management if required. Imaging within specialist centres is indicated only if  the result will change mnagement.  For further information please see the following NICE guidance:  — Low back pain and sciatica in over 16s: assessment and management (November 2016) https://www.nice.org.uk/guidance/ng59  — Low back pain and sciatica in over 16s: assessment and management (November 2016) - Quality statement 2: Referrals for imaging https:// www.nice.org.uk/guidance/qs155/chapter/Quality-statement-2-Referralsfor-  imaging  — National Pathway of Care for Low Back and Radicular Pain https://www.nice.org.uk/guidance/ng59/resources/endorsed-resource-nationalpathway-of-care-for-low-back-and-radicular-pain-4486348909. |
| **Rationale for Recommendation** |
| NICE recommends imaging does not often change the initial management and outcomes of someone with back pain. This is because the reported imaging findings are usually common and not necessarily related to the person's symptoms. Many of the imaging findings (for example, disc and joint degeneration) are frequently found in asymptomatic people. Requests for imaging by non-specialist clinicians, where there is no suspicion of serious underlying pathology, can cause unnecessary distress and lead to further referrals for findings that are not clinically relevant. Undertaking imaging when it is not indicated can lead to further additional and unnecessary investigations and treatment, including surgery, increasing the risk of harm to patients and driving up costs. There is evidence that most patients in whom a serious underlying pathology is not suspected and without red flag symptoms will recover from low back pain within six weeks.  In patients with symptoms suggestive of cauda equina syndrome, imaging should not be delayed. The spinal surgery GIRFT report has recommended there should be a low threshold for investigation and, following urgent referral by a senior clinician, an MRI should be undertaken as an emergency. The decision to perform an MRI does not require discussion with the local spinal services. The MRI must be undertaken as an emergency in the patient’s local hospital and a diagnosis achieved prior to any discussion with the spinal services. The MRI must take precedence over routine cases and any reasons for a delay or a decision not to perform an emergency scan should be clearly documented. Hospitals with MRI facilities that are not providing a 24/7 service (usually due to a lack of radiographer out of hours support) are being encouraged to provide this service. |
| **References** |
| 1. Low back pain and sciatica in over 16s: assessment and management (November 2016) - Quality statement 2: Referrals for imaging: https://www.nice.org.uk/guidance/qs155/chapter/Quality-statement-2-Referrals-forimaging.  2. NICE CG173 Neuropathic pain in adults: pharmacological management in non-specialist settings (2014): https://www.nice.org.uk/guidance/cg173.  3. Spondylarthritis in over 16: diagnosis and management: https://www.nice.org.uk/guidance/ng65.  4. Royal College of Radiologists iRefer: Making the best use of clinical radiology. Eighth edition. 2017: http://guidelines.irefer.org.uk/adult/#Tpc90.  5. STarT Back: https://www.nice.org.uk/guidance/ng59/resources/endorsed-resource-start-back-screening-tool-with-matched-treatmentoptions-4906309933.  6. Back Skills Training (BeST): Group cognitive behavioural treatment for low-back pain in primary care: a randomised controlled trial and cost effectiveness analysis. Prof Sarah E Lamb DPhil et al on behalf of the Back  Skills Training Trial investigators: <https://www.thelancet.com/journals/>lancet/article/PIIS0140-6736(09)62164-4/fulltext.  7. Williams CM, Maher CG, Hancock MJ, et al. Low Back Pain and Best Practice Care: A Survey of General Practice Physicians. Arch Intern Med. February 8, 2010 2010;170(3):271-277.  8. Chou R, Fu R, Carrino JA, Deyo RA. Imaging strategies for low back pain: systematic review and meta-analysis. Lancet. Feb 7 2009;373(9662):463-472.  9. Kendrick D, Fielding K, Bentley E, Miller P et al. The role of radiography in primary care patients with low back pain of at least 6 weeks duration: a randomised (unblinded) controlled trial. Health Technol Assess. 2001; 5 (30):1-  69. (UK).  10. Kerry S, Hilton S, Patel S, Dundas D et al. Routine referral for radiography of patients presenting with low back pain: Is patients' outcome influenced by GPs' referral for plain radiography? Health Technol Assess. 2000; 4 (20):1-129. (UK). National Low Back and Radicular Pain Pathway 2017.  11. Lemmeres GPG, van Lankveld W, Westert GP et al, Imaging versus no imaging for low back pain: a systematic review, measuring costs, healthcare utilization and absence from work, European Spine Journal, May 2019, 28(5):937-950.  12. Low back pain and sciatica in over 16s: assessment and management (November 2016): https://www.nice.org.uk/guidance/ng59.  13. Savigny P, Kuntze S, Watson P, et al. Low Back Pain: early management of persistent non-specific low back pain. London: National Collaborating Centre for Primary Care and Royal College of General Practitioners. |