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| **2BB — Pre-operative ECG** |
| **Summary of Intervention** |
| Performance of a resting electrocardiogram (ECG) in asymptomatic adult patients undergoing low-risk, non-cardiac elective surgery during the preoperative assessment is not necessary.  **This guidance applies to adults aged 19 years and over.** |
| **Number of interventions in 18/19** |
| Data are not currently available |
| **Proposal** |
| Pre-operative electrocardiograms should not be routinely performed in low risk, non-cardiac, adult elective surgical patients.  However, they may be appropriately performed when the following criteria apply:  — Patients with an American Society of Anaesthesiologists (ASA) physical classification status of 3 or greater and no ECG results available for review in the last 12 months  — Patients with a history of cardiovascular or renal disease, or diabetes  — Patients with any history of potential cardiac symptoms (e.g. cardiac chest pain, palpitations, unexplained syncope or breathlessness) or a new murmur, that has not previously been investigated  — Patients over the age of 65 attending for major surgery.  Where pre-operative tests are completed outside the centre in which surgery will be completed, avoid unnecessarily repeating these tests on admission and ensure appropriate transfer of images takes place. |
| **Rationale for Recommendation** |
| In the UK, most patients are seen in preoperative assessment clinics within 12 weeks of elective surgery, where a structured history and examination is performed by a nurse. Relevant preoperative investigations may also be  taken according to locally developed protocols.  Routine preoperative investigations are expensive, labour intensive, and of questionable value unless shown to affect quality of care or clinical outcomes. Tests which have not been shown to change outcomes or influence perioperative management may cause anxiety for patients, delays in treatment due to results of uncertain relevance, and referral for further investigations or treatment. In addition, some investigations can be associated with increased patient morbidity. A more structured approach is therefore required.  In general, patients who are otherwise healthy or having relatively non-invasive surgery may require few, if any, pre-operative tests.  NICE recommend that ECGs should not be routinely offered before low risk, non-cardiac elective surgery. Low risk surgery includes minor or intermediate procedures, such as excision of skin lesions, abscess drainage, knee arthroscopy or hernia repair.  However, some patient groups should have ECG pre-operatively. This can include patients who have a history of cardiovascular disease (such as heart attack, stroke, heart failure, peripheral arterial disease), palpitations or comorbidities that would predispose them to cardiovascular disease such as diabetes or renal disease. In addition, patients who are assessed as higher risk, and therefore scored as an ASA physical classification status of 3 or more (patient has severe systemic disease), with no ECG in the preceding 12 months, would benefit from further investigation.  Finally, an ECG would be prudent in patients over the age of 65 attending for major surgery. |
| **References** |
| 1. O’Neill F, Carter E, Pink N, Smith I. Routine preoperative tests for elective surgery: summary of updated NICE guidance. BMJ 2016; 354: doi: https://doi.org/10.1136/bmj.i3292.  2. NICE Guidelines. Routine preoperative tests for elective surgery. NICE Guidelines (NG45); 2016: https://www.nice.org.uk/guidance/NG45.  3. Klein AA, Arrowsmith JE. Should routine preoperative testing be abandoned? Anaesthesia 2010; 65: 974-76.  4. Association of Anaesthetists of Great Britain and Ireland. Pre-operative assessment and patient preparation: the role of the anaesthetist 2. AAGBI 2010: www.aagbi.org/sites/default/files/preop2010.pdf.  5. ASA Physical Status Classification System: <https://www.asahq.org/> standards-and-guidelines/asa-physical-status-classification-system. |