Preoperative Testing
Reviewed 2003

Scope

This guideline applies to testing prior to surgery in patients of all ages.

**RECOMMENDATION 1: **Test only when indicated

Preoperative testing should be performed only when indicated by the:

- history
- physical examination
- specific procedure being performed
- type of anesthesia being used.

In most cases of low-risk surgery performed without general anesthesia, such as cataract removal or cystoscopy, no preoperative testing is required.

**RECOMMENDATION 2: **Avoid repeat testing when possible

Avoid retesting if recent results are available and within normal limits, unless the patient’s clinical status has changed significantly. For example:

- laboratory tests and ECGs performed within the previous three months
- chest x-rays performed within the previous six months.

Rationale

Peri-operative mortality and morbidity are known to increase with the severity of pre-existing disease. Surgeons and anesthetists are therefore justifiably concerned with the underlying health status of patients undergoing surgery and anesthesia. A careful preoperative assessment allows the surgeon and anesthetist to optimize the patient’s condition before surgery and tailor the approach to the individual patient’s situation.

Routine laboratory tests, i.e., diagnostic tests performed regardless of the clinical status of the individual patient, have long been used as part of the preoperative assessment. The current literature, however, demonstrates that there is little justification for routine diagnostic investigations. Moreover, patient management is rarely affected by the results of routine tests, given the low rates of positive findings and poor predictive values of tests in asymptomatic populations.

Accordingly, a number of recent guidelines have recommended that routine testing of asymptomatic patients be discontinued, particularly prior to procedures that do not involve significant blood loss. The literature also supports limited routine testing of symptomatic patients prior to surgery.
The table on page ii of the attached Preoperative Outpatient Diagnostic Requisition summarizes the tests most likely to be considered for particular categories of patients. However, it must be stressed that each patient may require additional tests according to individual clinical circumstances.

References


Sponsors

This guideline was developed by the Guidelines and Protocols Advisory Committee, approved by the British Columbia Medical Association and adopted by the Medical Services Commission.

Funding for this guideline was provided in full or part through the Primary Health Care Transition Fund.

Effective Date: March 2003

This guideline is based on scientific evidence current as of the effective date.

Guidelines and Protocols Advisory Committee
1515 Blanshard Street 2-3
Victoria BC V8W 3C8
Phone: (250) 952-1347 E-mail: hlth.guidelines@gems6.gov.bc.ca
Fax: (250) 952-1417 Web site: www.healthservices.gov.bc.ca/msp/protoguides

The principles of the Guidelines and Protocols Advisory Committee are:

• to encourage appropriate responses to common medical situations
• to recommend actions that are sufficient and efficient, neither excessive nor deficient
• to permit exceptions when justified by clinical circumstances.
PREOPERATIVE OUTPATIENT DIAGNOSTIC REQUISITION

☐ No Tests Required

☐ Hemoglobin Only   ☐ Glucose - Fasting   ☐ INR
☐ Hematology profile ☐ Creatinine    ☐ Group & Screen
☐ Platelets        ☐ Potassium     ☐ Crossmatch
                  ☐ Sodium        ☐ Rh(D)

☐ Chest X-ray       ☐ ECG

OTHER TESTS

INSURER CODE
☐ MSP  ☐ WCB  ☐ ICBC  ☐ OTHER: ____________________________

SIGNATURE OF PHYSICIAN

DATE

SAMPLE

Hospitals may adapt this sample requisition as they see fit provided that no additional tests are added to the requisition and that the summary of the Preoperative Testing guideline (see reverse) is included.
Guideline Summary: Preoperative Testing
Reviewed 2003

1. Preoperative testing should be performed only when indicated by the:

- history
- physical examination
- specific procedure being performed
- type of anesthesia being used.

In most cases of low-risk surgery performed without general anesthesia, such as cataract removal or cystoscopy, no preoperative testing is required.

2. Avoid retesting if recent results are available and within normal limits, unless the patient’s clinical status has changed significantly. For example:

- normal laboratory tests and ECGs performed within the previous three months
- chest x-rays performed within the previous six months.

Preoperative tests to be considered for common clinical problems and symptoms

<table>
<thead>
<tr>
<th>Patient Category</th>
<th>Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neonates and infants up to one year</td>
<td>Hemoglobin</td>
</tr>
<tr>
<td>Women who cannot rule out pregnancy</td>
<td>Pregnancy test</td>
</tr>
<tr>
<td>Pregnant women undergoing procedures where they may be exposed to fetal red blood cell antigens</td>
<td>Rh(D) typing</td>
</tr>
<tr>
<td>Hepatic disease</td>
<td>INR, hematology profile, platelets, ALT</td>
</tr>
<tr>
<td>Renal disease</td>
<td>Na, K, creatinine, hemoglobin, platelets</td>
</tr>
<tr>
<td>Diabetes</td>
<td>Na, K, creatinine, FBG, ECG after age 40</td>
</tr>
<tr>
<td>Diuretic use</td>
<td>Na, K</td>
</tr>
<tr>
<td>Coumadin use</td>
<td>INR, hemoglobin</td>
</tr>
</tbody>
</table>

Note: Patients may require additional tests according to individual clinical circumstances.