

5 Summary of key priorities for implementation, algorithms and audit criteria

5.1 Key priorities for implementation

The National Clinical Guidelines for COPD makes nearly 200 specific recommendations concerning the management of COPD. These deal with diagnosis and assessment, management of stable COPD and management of exacerbations. The recommendations about managing stable COPD cover all aspects of the disease and include pharmacological and non-pharmacological approaches. An individual patient will not experience all the problems, but there is no predictable pattern or progression, and some may experience several problems. Some exacerbations can be managed at home whilst others require hospital treatment. In each of these settings there is more uniformity in the management but individual patients may still have specific problems, such as respiratory failure. The heterogeneity of COPD makes it difficult to choose the most important recommendations.

Exacerbations (see section 8.2) are important events for patients and the NHS. Patients experiencing frequent exacerbations have a worse prognosis and much of the cost of caring for COPD results from managing exacerbations. Strategies to reduce the frequency and impact of exacerbations are essential.

The guideline development groups have identified seven key areas where it was felt that recommendations were likely to have the biggest impact on the management of COPD.

These seven key areas were selected against two criteria:

- that they would make a large difference to patients and the NHS
- that they benefit a large number of people.

The key priorities eventually chosen:

- reflect the stated concerns of many people with COPD
- are largely patient-centred
- are all derived from the full guideline, but are newly written to combine issues with a common theme that are dealt with in separate but related recommendations.

The wording of the key priorities is derived from the recommendations in the main text. It was our intention to make them short, clear and comprehensive. If further detail is needed then reference should be made to the original recommendations.

The order of the key priorities given here is arbitrary and does not reflect their relative importance.

Chronic Obstructive Pulmonary Disease: National clinical guideline on management of chronic obstructive pulmonary disease in adults in primary and secondary care

The following recommendations have been identified as priorities for implementation.

Diagnose COPD

- A diagnosis of COPD should be considered in patients over the age of 35 who have a risk factor (generally smoking) and who present with exertional breathlessness, chronic cough, regular sputum production, frequent winter 'bronchitis' or wheeze. The presence of airflow obstruction should be confirmed by performing spirometry.
- All health professionals managing patients with COPD should have access to spirometry and be competent in the interpretation of the results.

Stop smoking

- Encouraging patients with COPD to stop smoking is one of the most important components of their management. All COPD patients still smoking, regardless of age should be encouraged to stop, and offered help to do so, at every opportunity.

Effective inhaled therapy

- Long-acting inhaled bronchodilators (beta₂-agonists and / or anticholinergics) should be used to control symptoms and improve exercise capacity in patients who continue to experience problems despite the use of short-acting drugs.
- Inhaled corticosteroids should be added to long-acting bronchodilators to decrease exacerbation frequency in patients with an FEV₁ less than or equal to 50% predicted who have had two or more exacerbations requiring treatment with antibiotics or oral corticosteroids in a 12-month period.

Pulmonary rehabilitation for all who need it

- Pulmonary rehabilitation should be made available to all appropriate patients with COPD.

Use non-invasive ventilation

- Non-invasive ventilation (NIV) should be used as the treatment of choice for persistent hypercapnic ventilatory failure during exacerbations not responding to medical therapy. It should be delivered by staff trained in its application, experienced in its use and aware of its limitations.
- When patients are started on NIV, there should be a clear plan covering what to do in the event of deterioration and ceilings of therapy should be agreed.

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Manage exacerbations

- The frequency of exacerbations should be reduced by appropriate use of inhaled corticosteroids and bronchodilators, and vaccinations.
- The impact of exacerbations should be minimised by:
 - giving self-management advice on responding promptly to the symptoms of an exacerbation
 - starting appropriate treatment with oral steroids and/or antibiotics
 - use of non-invasive ventilation when indicated
 - use of hospital-at-home or assisted-discharge schemes.

Multi-disciplinary working

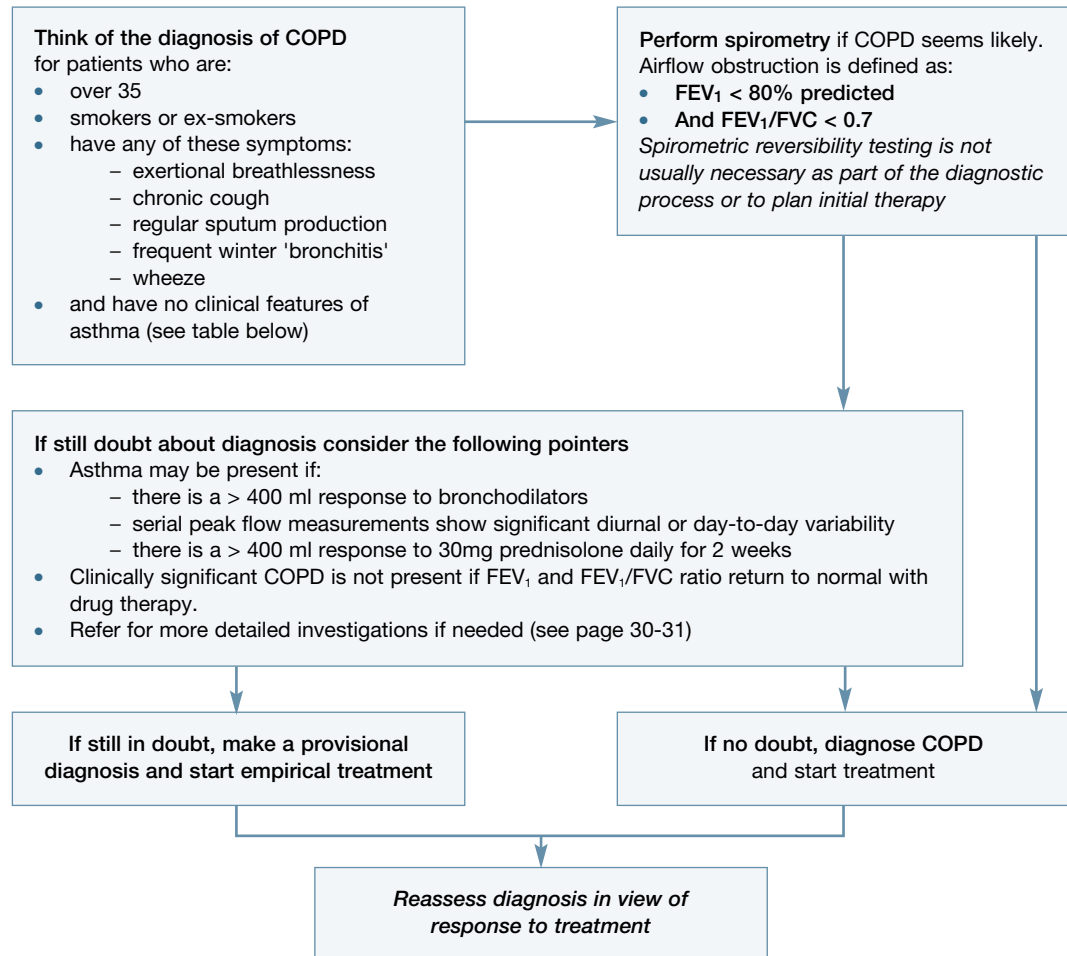
- COPD care should be delivered by a multi-disciplinary team.

5.2 Algorithms

Algorithm 1: Diagnosing COPD

Definition of chronic obstructive pulmonary disease (COPD)

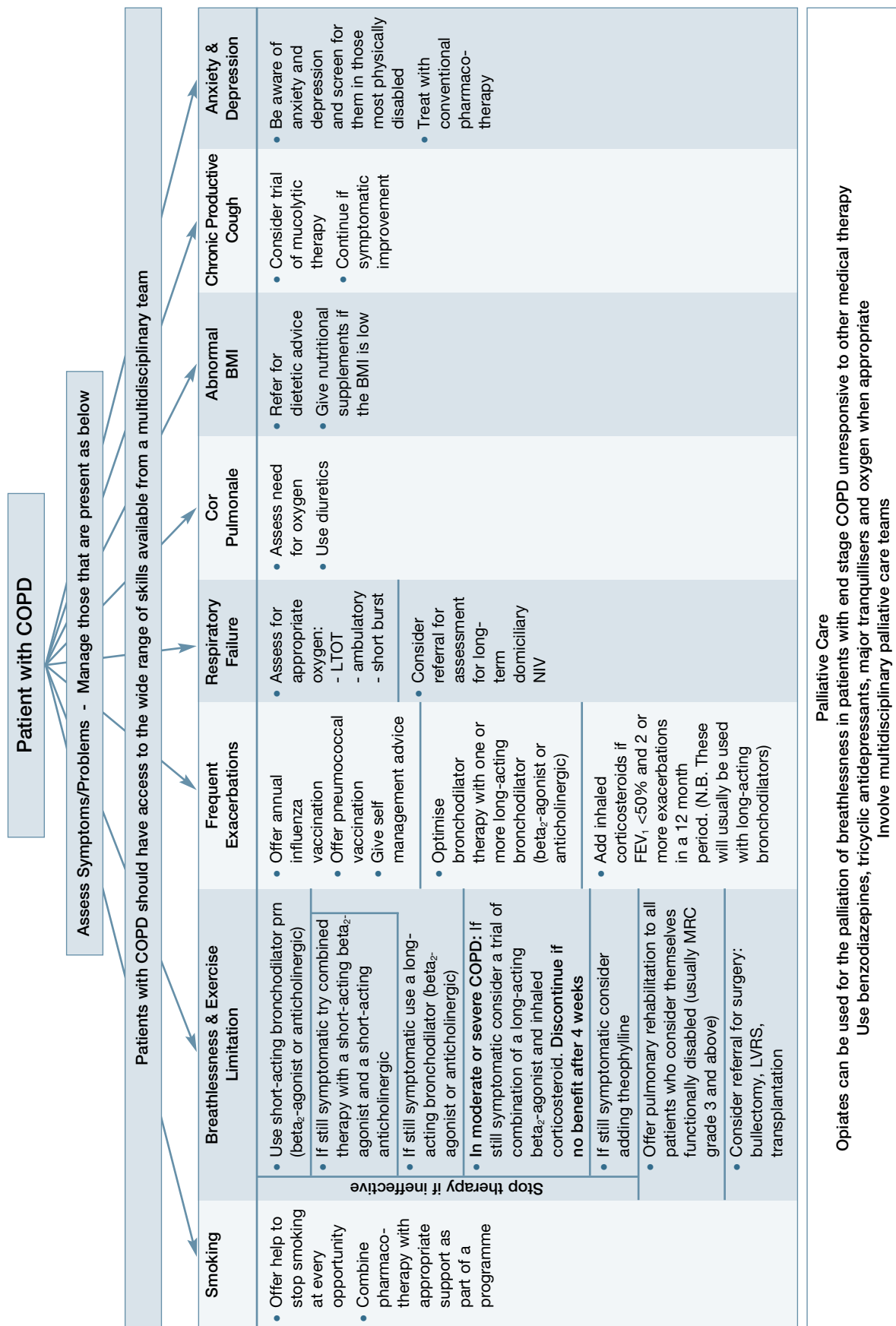
COPD is characterised by airflow obstruction. The airflow obstruction is usually progressive, not fully reversible and does not change markedly over several months. The disease is predominantly caused by smoking.



Clinical features differentiating COPD and asthma

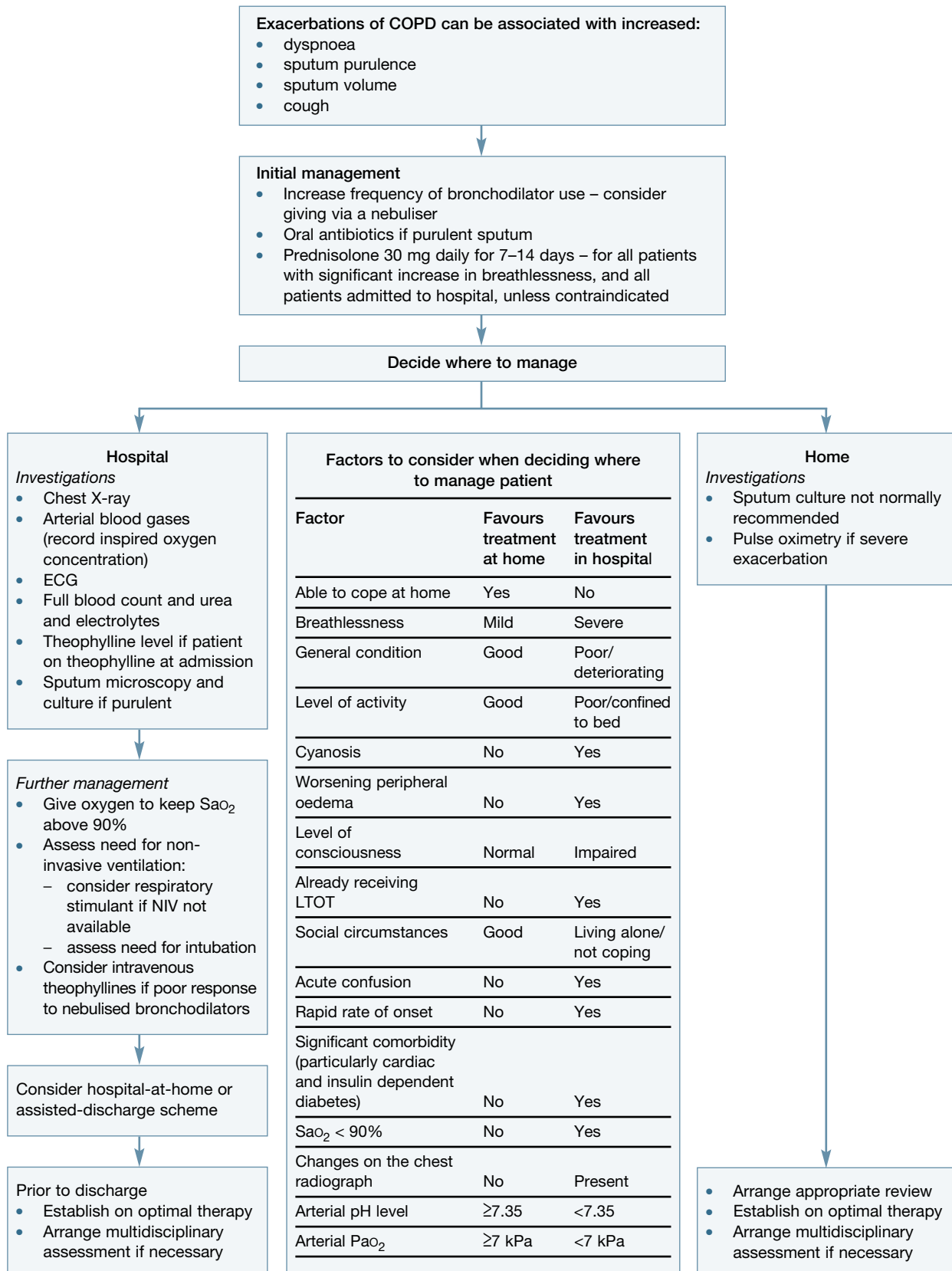
	COPD	Asthma
Smoker or ex-smoker	Nearly all	Possibly
Symptoms under age 35	Rare	Often
Chronic productive cough	Common	Uncommon
Breathlessness	Persistent and progressive	Variable
Night time waking with breathlessness and or wheeze	Uncommon	Common
Significant diurnal or day to day variability of symptoms	Uncommon	Common

Algorithm 2: Management of Stable COPD



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Algorithm 3: Managing Exacerbations of COPD



5.3 Suggested audit criteria for implementation

Key Priority	Criterion: data item needed	Exception
<p>1. Diagnose COPD</p> <p>A diagnosis of COPD should be considered in patients over the age of 35 who have a risk factor (generally smoking) and who present with exertional breathlessness, chronic cough, regular sputum production, frequent winter 'bronchitis' or wheeze. The presence of airflow obstruction should be confirmed by performing spirometry. All health professionals managing patients with COPD should have access to spirometry and be competent in the interpretation of the results.</p>	<p>Percentage of smokers over the age of 35 consulting with a chronic cough and/or breathlessness who have had spirometry performed</p> <p>Percentage of patients with a diagnosis of COPD who have had spirometry performed</p>	<p>Patients who are unable to perform spirometry, for example because of facial paralysis</p>
<p>2. Stop smoking</p> <p>Encouraging patients with COPD to stop smoking is one of the most important components of their management. All COPD patients still smoking, regardless of age should be encouraged to stop, and offered help to do so, at every opportunity.</p>	<p>Percentage of patients with COPD who are current smokers recorded in the general practice records as having been offered smoking cessation advice and or therapy</p>	
<p>3. Effective inhaled therapy</p> <p>Long-acting inhaled bronchodilators should be used to control symptoms and improve exercise capacity in patients who continue to experience problems despite the use of short-acting drugs. Inhaled corticosteroids should be added to long-acting bronchodilators in patients with an $FEV_1 \leq 50\%$ predicted who have had two or more exacerbations requiring treatment with antibiotics or oral corticosteroids in a 12-month period in order to decrease exacerbation frequency.</p>	<p>Percentage of patients $FEV_1 \leq 50\%$ predicted who have had two or more exacerbations requiring treatment with antibiotics or oral corticosteroids in a 12-month period who are prescribed inhaled steroid therapy.</p>	<p>Patients who decline inhaled steroid therapy</p>
<p>4. Pulmonary rehabilitation for all who need it</p> <p>Pulmonary rehabilitation should be made available to all appropriate patients with COPD.</p>	<p>Percentage of patients with COPD who have undergone pulmonary rehabilitation</p>	<p>Patients who decline rehabilitation</p>
<p>5. Use non-invasive ventilation</p> <p>Non-invasive ventilation (NIV) should be used as the treatment of choice for persistent hypercapnic ventilatory failure during exacerbations not responding to medical therapy. It should be delivered by staff trained in its application, experienced in its use and aware of its limitations. When patients are started on NIV, there should be a clear plan covering what to do in the event of deterioration and ceilings of therapy should be agreed.</p>	<p>Percentage of patients presenting with acute hypercapnic ventilatory failure who have received NIV</p>	<p>Patients who decline NIV</p>
<p>6. Manage exacerbations</p> <p>The frequency of exacerbations should be reduced by appropriate use of inhaled corticosteroids and bronchodilators, and vaccinations. The impact of exacerbations should be minimised by:</p> <ul style="list-style-type: none"> • giving self-management advice on responding promptly to the symptoms of an exacerbation • starting appropriate treatment with oral steroids and or antibiotics • use of non-invasive ventilation when indicated • use of hospital-at-home or assisted-discharge schemes 	<p>Percentage of patients with exacerbations receiving appropriate steroid and/or antibiotics</p>	<p>Patient choice</p>

Sentinel events audit

The recommendations above concern monitoring services as routinely delivered. A second approach to audit is to use adverse events to highlight particular areas of low quality service. This requires identification of agreed 'sentinel events'. In people with COPD readmission to hospital with one month of an admission with an exacerbation of COPD may represent such an event.

Criterion

Percentage of patients readmitted to hospital with an exacerbation of COPD within 28 days of discharge.

Patient-centred audit

Finally it is recommended that health care commissioning organizations should consider using a patient-centred audit approach intermittently, to investigate the totality of services and identify particular areas that need further development.



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