



BMJ Best Practice

Supporting better outcomes
in the acute setting

The new **BMJ Best Practice Comorbidities tool**;
the only clinical decision support tool to treat the
whole patient.

**AVAILABLE
ON THE APP**

BMJ Best Practice provides access to the latest clinical information in a concise, structured way that enables clinical decisions to be made quickly.

Tackling the comorbidity challenge

One in three adults over 65 years of age suffer from 3 or more multiple chronic conditions. This poses a significant problem for healthcare systems.

When comorbidities are not taken into account in the acute setting patients receive suboptimal care, leading to worse clinical outcomes and longer lengths of stay.

However, healthcare professionals can struggle to access relevant information when clinical guidelines only focus on single conditions.

“If the healthcare professionals recognise the comorbidities at an early stage and addresses them, the impact on that patient’s stay in hospital will be significant”

Professor Gerry Rayman,

**Lead Consultant for Diabetes and Endocrinology,
Ipswich Hospital, East Suffolk and North Essex NHS
Foundation Trust**



A light blue silhouette of a human figure is positioned on the left side of the page. Overlaid on the upper part of the silhouette is a light blue gear icon. To the right of the gear is a light blue bar chart with four bars of varying heights. The background of the silhouette is a light blue circle.

"12.9% of Canadians report 2+ chronic diseases and ~4% report 3+ chronic diseases more widely known as multi-morbidity. [1]"

Treating the whole patient

The BMJ Best Practice Comorbidities tool prompts healthcare professionals to consider a patient's comorbidities when accessing treatment information on an acute topic. When comorbidities are selected, a tailored patient management plan is produced instantly.

BMJ Best Practice is the only clinical decision support tool to do this.

Written by leading specialists, this tool provides treatment advice based on the latest evidence and is presented in a way that's realistic for daily practice. It emphasises the most important take-home points and, where evidence is scarce or equivocal, expert opinion is provided.

"We continuously consult with healthcare professionals around the world to ensure that BMJ Best Practice is developed in a way that meets real needs. Every feature we introduce has been researched, developed and tested thoroughly with them."

Dr Luisa Dilner,
Head of BMJ Research and Development

The Comorbidities tool in practice

An 82 year old man comes to the emergency department with an acute exacerbation of COPD. He also has type two diabetes.

OVERVIEW	THEORY	DIAGNOSIS	MANAGEMENT	FOLLOW UP	RESOURCES
Summary	Epidemiology Aetiology Case history	Recommendations History and exam Investigations Differentials Criteria	Recommendations Treatment algorithm Emerging Prevention Patient discussions	Monitoring Complications Prognosis	Guidelines Images and videos References Patient leaflets Calculators Evidence

Treatment algorithm

Having searched for COPD, the doctor goes to the topic summary page and selects treatment algorithm to find advice and guidance on management.

Add your patient's comorbidities

Treatment recommendations for **Pulmonary embolism** will change dependent on your patient's comorbidities

Select comorbidities

- Hypertension
- Coronary artery disease
- Heart failure
- Stroke
- Depression
- Diabetes
- Asthma
- COPD
- Chronic kidney disease (CKD)
- Dementia

Please remember that treatment regimes may change for comorbidities not yet covered by this list.

CLOSE


They are prompted to consider their patient's existing conditions.

OVERVIEW	THEORY	DIAGNOSIS	MANAGEMENT	FOLLOW UP	RESOURCES
Summary	Epidemiology Aetiology Case history	Recommendations History and exam Investigations Differentials Criteria	Recommendations Treatment algorithm Emerging Prevention Patient discussions	Monitoring Complications Prognosis	Guidelines Images and videos References Patient leaflets Calculators Evidence

Treatment algorithm

Please note that formulations/routes and doses may differ between drug names and brands, drug formularies, or locations. Treatment recommendations are specific to patient groups: [see disclaimer](#)

Comorbidities: Diabetes

Look out for this icon:  for treatment options that are affected, or added, as a result of your patient's comorbidities.

ACUTE



They are alerted that treatment options may be affected by the selected comorbidities

Treatment algorithm

Please note that formulations/routes and doses may differ between drug names and brands, drug formularies, or locations. Treatment recommendations are specific to patient groups: [see disclaimer](#)

Comorbidities: Diabetes

ACUTE

- on presentation
 - 1st line short-acting bronchodilator
 - Plus systemic corticosteroid 
 - Consider oxygen
 - Consider ventilation
 - Consider antibiotic therapy
 - Consider supplemental treatment
 - Plus review diabetes medication (NEVER stop insulin in a person with type 1 diabetes) 

the selected comorbidities are shown at the top of the screen...

...and affected treatment recommendations and urgent considerations are clearly indicated by the Comorbidities symbol

When the doctor selects the treatment option, the adjustment is highlighted

...with recommendations based on evidence and expert opinion

Acute exacerbation of chronic obstructive pulmonary disease

OVERVIEW ▼ THEORY ▼ DIAGNOSIS ▼ MANAGEMENT ▼ FOLLOW UP ▼ RESOURCES ▼

Comorbidities: Diabetes EDIT

Plus ^ review diabetes medication (NEVER stop insulin in a person with type 1 diabetes) ↻

Diabetes

Treatment recommended for ALL patients in selected patient group

Never stop basal insulin (long-acting or background insulin, e.g., detemir or glargine) in a patient with type 1 diabetes who presents with an acute illness.[151]

- Insulin deficiency (e.g., due to delayed or missed doses) will rapidly cause ketoacidosis.[151]

Generally, any patient with type 2 diabetes who is on basal insulin should continue to take it, but this may not always be the case so check with senior and/or diabetes specialist team (*based on expert opinion*).

Seek senior and/or diabetes specialist team advice on whether insulin dose adjustments are appropriate in patients with type 1 or type 2 diabetes.

Inform the diabetes inpatient team whenever a patient with diabetes is admitted.

- They are available for advice and support.

If a variable rate intravenous insulin infusion (VRIII) is started:

...ketoacidosis if the VRIII is accidentally interrupted (e.g., by cannula ... or switched off (e.g., during ward transfer).

There are also helpful tips and prompts - in this case, when to consult a senior or specialist team.

Treating the acute presentation alongside existing conditions enables healthcare professionals to quickly treat and stabilise patients with comorbidities. This improves the quality of care, and efficiencies are made through the effective management of the patient. This means better clinical outcomes, shorter hospital stays and fewer readmissions.

Contact us for more information:
bestpractice.bmj.com/info/comorbidities

[1] Prevalence and patterns of chronic disease multimorbidity and associated determinants in Canada.
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4910465/>

bestpractice.bmj.com/info/comorbidities