

Rationalising long-term use of proton pump inhibitors (PPIs) and the potential of step-down care

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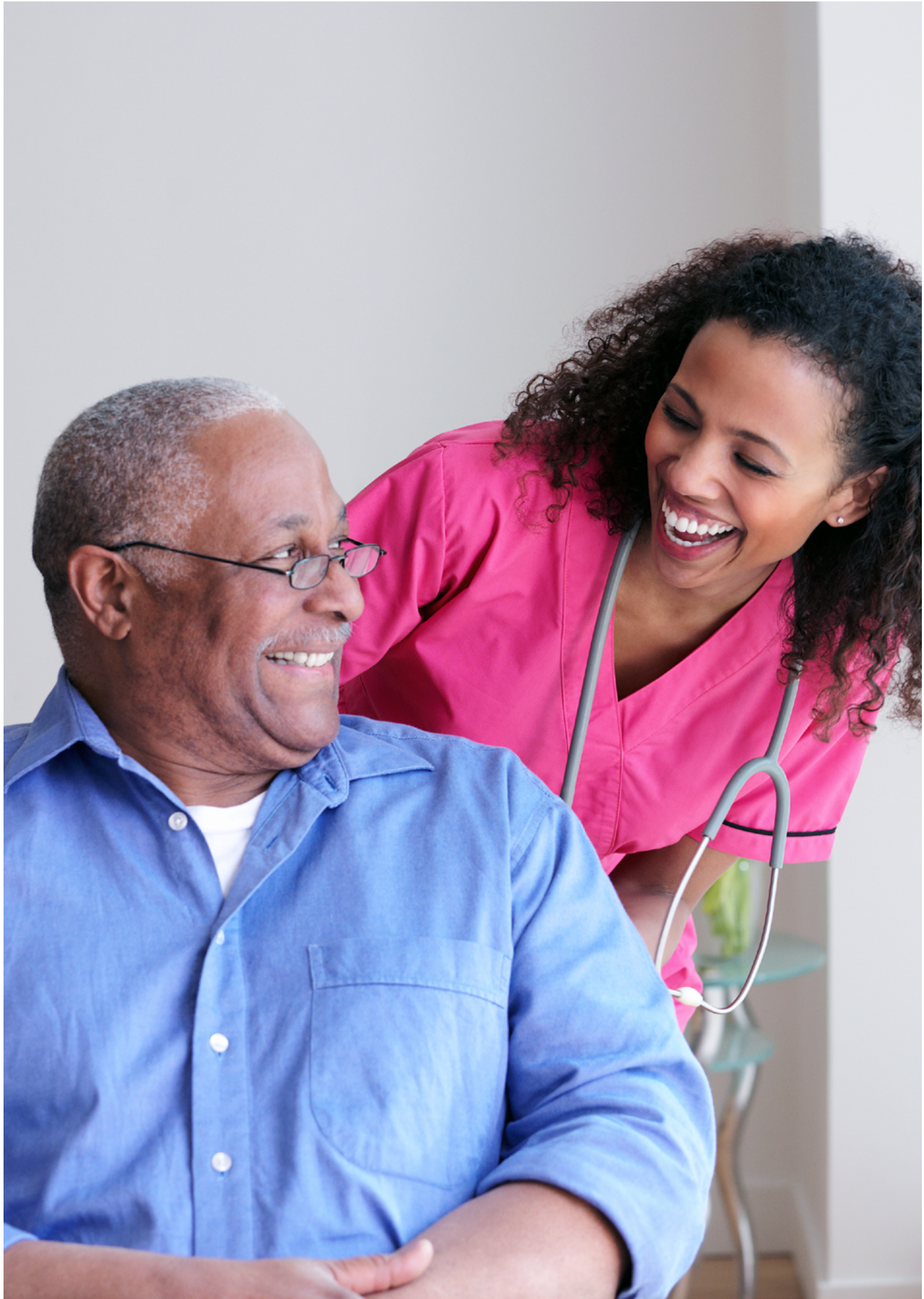
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The burden of gastro-oesophageal reflux disease (GORD) and dyspepsia in primary care

Acid-related disorders, such as dyspepsia* and GORD,[†] are commonly treated with PPIs. These inhibitors work by blocking gastric acid production and are among the most prescribed pharmaceuticals worldwide.^{1,2} Although some of the costs associated with treating dyspepsia are decreasing, the growing use of therapies overall means that management of these conditions continues to place a substantial burden on the NHS.³

*Dyspepsia describes a complex of upper gastrointestinal symptoms that are typically present for four or more weeks, including upper abdominal pain or discomfort, heartburn, acid reflux, nausea and/or vomiting.⁴

[†]GORD is a common cause of dyspepsia. It is usually a chronic condition in which reflux of gastric contents into the oesophagus causes heartburn and acid regurgitation.⁴

Current guidance and approach to reflux management

Current NICE guidance recommends a multidisciplinary and patient-centred approach to reflux management. Community pharmacists are recognised to support both the initial and ongoing management of patients by providing advice on lifestyle modifications, appropriate use of over-the-counter (OTC) and prescription-only medicines, and when further medical review may be required.³

Where symptoms persist or require pharmacological treatment, PPIs form the cornerstone of treatment. For patients with dyspepsia, NICE recommends empirical full-dose PPI therapy for 4 weeks, while patients with GORD may be offered a full-dose PPI for 4 or 8 weeks.³

Long-term treatment should be tailored to the patient's current symptom burden, using the lowest level of therapy needed to maintain control. This may involve reducing the PPI dose or, where suitable, returning to self-management with alginate and/or antacid therapy as needed.³

The evolving PPI landscape

PPI prescribing in the NHS has steadily increased over time. In England alone, more than 35 million omeprazole prescriptions were dispensed in 2022–2023, following a threefold increase between 2006 and 2016.² Prescribing prevalence has grown despite stable rates of new starters, indicating that a growing proportion of patients remain on PPIs for extended periods.^{2,5}

Recent evidence suggests that prescribing patterns do not always align with guideline recommendations. Across 62 primary care practices in England, 62% of patients receiving continuous PPI treatment had no recorded indication associated with their PPI prescription.² Further, 38% of patients had no documented medication review in the preceding year.² Among patients with diagnoses for which NICE recommends short-term PPI treatment, almost all had remained on treatment beyond the recommended duration, with many continuing to receive multiple prescriptions annually.² These findings suggest that opportunities to reassess ongoing treatment may be missed in routine clinical practice.² This in turn potentially leaves patients on PPIs unnecessarily, contributing to a PPI class cost to the NHS of over £192 million.*²

Although long-term PPI use remains appropriate for many patients,^{§3} recent evidence suggests that PPI therapy can be reduced in suitable patients without a meaningful increase in reflux symptom burden.⁶ Long-term PPI use has been associated with potential adverse outcomes (e.g. dementia, bone fractures, kidney disease, enteric infections and community-acquired pneumonia), particularly in elderly or comorbid populations.^{2,7} However, there are limitations to the studies involved so these data must be interpreted with caution and outcome-specific risks considered in the context of each patient.⁷ Regular medication review and use of the lowest effective treatment strategy may help ensure that therapy remains aligned with ongoing clinical need and avoid unnecessary burden on healthcare resources.^{7,8}

*Data from NHSBSA prescription cost analysis 2022–2023.²

[§]PPIs may be suitable for long-term use (>8 weeks, maintenance) for: prior unsuccessful attempts to reduce or discontinue because of recurrent upper gastrointestinal symptoms that impair quality of life; high-grade oesophagitis or peptic stricture; Zollinger-Ellison syndrome; Barrett's oesophagus; eosinophilic oesophagitis; prior bleeding gastric or duodenal ulcer (H. pylori negative); idiopathic pulmonary fibrosis; chronic use of NSAIDs with moderate to high bleeding risk; co-administration with digestive enzyme replacement in chronic pancreatitis.⁹

Barriers to changing reflux management

Insights developed from expert discussion at an advisory board

Prescribing decisions are shaped by the context in which care is delivered. Long-term PPI treatment often spans different healthcare settings and professionals, creating practical challenges for reviewing ongoing treatment needs.¹⁰

Reflux management struggles to compete with other priorities in primary care

GORD and dyspepsia are frequently managed in primary care, but gastroenterology receives less attention and fewer dedicated resources than many other long-term conditions. There are no dedicated Quality and Outcomes Framework (QOF) incentives for gastrointestinal care,¹¹ and limited focus on gastroenterology within primary care leadership and professional education. In a pressured practice, proactive PPI review must therefore compete with activities linked to established targets, funded services and more prominent clinical priorities. GPs may have limited time or incentive to revisit treatment that appears stable, particularly when patients do not raise concerns themselves.¹⁰

Patients are not consistently identified for review

Many patients receiving long-term PPIs are never actively identified for review. In the absence of automated prompts or structured case-finding, identification

may depend on individual HCPs noticing the duration of treatment and deciding to investigate further. This may help explain why medication reviews remain inconsistent despite recommendations for annual reassessment of long-term treatment.¹⁰

Pharmacists may be uniquely positioned to recognise prolonged PPI use through dispensing records and repeated patient interactions. However, opportunities for review may still be missed where there is no consistent mechanism for escalating these concerns or initiating formal reassessment of treatment needs.¹⁰

Long-term treatment review has no clear owner

PPI therapy may be initiated in secondary care, continued by a GP and repeatedly supplied through pharmacies. As patients move between healthcare settings, responsibility for reviewing their ongoing treatment need can become unclear, particularly when the indication, intended duration and review plan are not communicated clearly at the point of transfer. Continued prescribing can then become the default rather than the result of an active decision that long-term treatment remains appropriate. Pharmacists may identify opportunities for review through repeat dispensing but have limited scope to influence prescribing decisions directly within existing service models.¹⁰

The challenge becomes more pronounced when continuity of care is limited. Clinicians who are not responsible for a patient's longer-term follow-up may be reluctant to



change established treatment, particularly when it was initiated elsewhere or the patient believes that it remains effective. As a result, long-term prescribing may continue even when opportunities for reassessment exist.¹⁰

Patients may be reluctant to change treatment

For patients who associate PPIs with symptom control, treatment review may be perceived as the removal of an effective medicine rather than an attempt to optimise care. This can make discussions about dose reduction or discontinuation

difficult, particularly when the patient has taken treatment for many years or has not previously been told that it was intended as a time-limited course.¹⁰

Previous unsuccessful attempts can reinforce this reluctance. In some cases, rebound acid hypersecretion may contribute to symptom worsening during treatment withdrawal. Patients who experience breakthrough symptoms after reducing or discontinuing treatment may become increasingly resistant to future review discussions, particularly if they were not adequately prepared for the process or provided with a clear plan for symptom management.¹⁰



What does successful step-down care look like?

The decision to initiate step-down care should be individualised and first consider appropriate long-term PPI use due to indications outside of symptom control (e.g., Barrett's oesophagus, high-grade oesophagitis, Zollinger-Ellison syndrome, chronic NSAID use with bleeding risk factors) or if prior attempts to step-down/discontinue PPI were unsuccessful and leave patients with refractory GORD.⁹

NICE guidance advocates regular treatment review, use of the lowest effective PPI dose and consideration of step-down where appropriate, with alginate and/or antacid therapy forming part of ongoing self-management strategies in suitable patients.³ Despite this, opportunities for review are not always realised in routine practice, with many patients remaining on long-term therapy, and medication reviews being inconsistently documented.²

Identifying patients who may benefit from treatment review is only the first step. A recurring challenge in reflux management is the tendency to respond to persistent symptoms with continued or escalating acid suppression. However, persistent heartburn symptoms do not necessarily indicate uncontrolled acid production. In some patients, increasing the dose of acid suppression or switching between PPIs may be unlikely to address the underlying cause of symptoms.¹² Before deciding whether continued PPI therapy is necessary, clinicians should reassess symptom drivers and treatment goals.¹⁰

Patient engagement may increase the likelihood of successful step-down.^{6,13} Patients who have used PPIs for many years may view this treatment as essential, particularly if previous attempts to reduce or discontinue therapy have been unsuccessful. Discussions should therefore focus on why treatment is being reviewed, what the intended goals are and how symptoms will be managed during treatment change.¹⁰ These topics should be considered key components of patient education. Evidence from a large primary care deprescribing trial suggests that patient-facing educational support may be an important contributor to successful treatment change.⁶

Reflux symptoms should be considered in the context of an individual's overall health status, lifestyle and mental wellbeing, with ongoing management integrating lifestyle factors such as diet, meal timing and weight control, alongside counselling and mental health support.^{14,15} In suitable patients, on-demand treatment may provide an alternative to continuous acid suppression and support a more individualised approach to reflux management.¹⁴⁻¹⁶

The role of alginates in step-down care

Raft-forming alginates offer a different approach from both PPIs and antacids. PPIs reduce gastric acid production, while antacids provide temporary relief by neutralising acid.¹⁶ By contrast, alginates form a viscous raft near the gastro-oesophageal junction and the postprandial acid pocket, a reservoir for reflux and an important contributor to postprandial symptoms.^{16,17} Alginates help to reduce reflux symptoms by displacing the postprandial acid pocket and creating a physical barrier to reflux.^{16,17} Although alginates and antacids are often grouped together, their mechanism of action and clinical profile differ.¹⁶ Understanding this distinction is important when discussing symptom management during treatment review and step-down.¹⁶ Further education may help both healthcare professionals and patients understand the role of alginates in reflux management.

While several approaches may be used during PPI step-down, alginates currently have a more developed evidence base in this setting than antacids or H₂ receptor antagonists.^{8,15} A 2024 international evidence-based consensus strongly recommended the use of alginate-containing therapies for the management of reflux-like symptoms.¹⁸ This consensus, in addition to other recent reviews/meta-analyses, found that alginate-containing therapies provided greater symptom relief than placebo or monotherapy with antacids, and were effective at managing reflux-like symptoms in patients receiving PPI therapy (both breakthrough symptoms and during PPI tapering).^{14,16-18}

These findings suggest that alginates may help maintain symptom control in patients, reducing long-term PPI therapy.⁸

PPIs remain essential for many patients, including those with severe oesophagitis or another continuing indication for acid suppression.³ However, for appropriately selected patients, alginates may support symptom control during PPI dose reduction and provide an on-demand option following successful step-down.^{8,13} Evidence from real-world deprescribing programmes also suggests that alginate-supported step-down can be successfully implemented in primary care,¹³ while potentially providing cost savings by reducing inappropriate long-term PPI use.⁸ The decision to use alginates should be guided by individual patient needs and treatment goals.

Box 1: Potential cost savings associated with alginate-supported PPI step-down

A nurse-led UK deprescribing programme involving more than 6,000 eligible patients combined patient education with alginate rescue therapy to support reduction of long-term PPI use. After 12 months, 75.1% of patients had successfully stepped down or off PPI therapy, including 40.3% who discontinued treatment completely.¹³

Using data from this programme, a UK budget impact analysis estimated the potential effect of transitioning patients with inappropriate long-term PPI use to episodic alginate treatment. Modelling suggested that transitioning 20% of



eligible patients could generate £11.5 million in drug acquisition cost savings for the NHS over 5 years, increasing to £16.6 million when costs associated with adverse effects were included.⁸

Priority actions to support treatment review and step-down in reflux management

Guidance already supports review of long-term PPI therapy, yet many patients remain on treatment without regular reassessment. The following recommendations focus on practical changes that could help make treatment review and appropriate step-down a routine part of reflux management.

Box 2: Recommendations to optimise reflux management in primary care
Insights developed from expert discussion at an advisory board

- Translate existing guidance into practical tools and pathways to support routine review of long-term PPI therapy, such as automated prompts on medical records for annual treatment reviews¹⁰
- Incorporate routine review of long-term PPI therapy in patients with GORD and dyspepsia within QOF to promote reassessment of ongoing treatment need¹⁰
- Expand the role of pharmacists beyond patient support and medication advice to include case-finding and referral of patients receiving long-term PPI therapy for review¹⁰
- Introduce a gastroenterology clinical champion within primary care to raise the profile of reflux management and treatment review¹⁰
- Educate patients on the rationale for reviewing long-term PPI therapy and how symptoms can be managed following step-down (e.g., through self-management with OTC medication as needed)¹⁰
- Improve HCP education on long-term PPI review and step-down, including:¹⁰
 - Reassessment of symptom drivers before escalating acid suppression
 - Differentiation of alginates and antacids
 - The role of alginates in supporting appropriate PPI step-down



Abbreviations

GORD, gastro-oesophageal reflux disease; GP, general practitioner; HCP, healthcare professional; NSAID, non-steroidal anti-inflammatory drug; OTC, over-the-counter; PPI, proton pump inhibitor; QOF, Quality and Outcomes Framework.

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