NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE

Final draft guidance

Mepolizumab for maintenance treatment of uncontrolled chronic obstructive pulmonary disease with raised blood eosinophils

1 Recommendations

1.1 Mepolizumab can be used as an add-on maintenance treatment option for uncontrolled chronic obstructive pulmonary disease (COPD) with raised blood eosinophils in adults, if:

- they are having triple therapy including an inhaled corticosteroid (ICS), a long-acting beta-2-agonist (LABA) and a long-acting muscarinic antagonist (LAMA), and
- the company provides mepolizumab according to the commercial arrangement (see section 2).

Uncontrolled COPD is defined as 1 or more severe exacerbations or 2 or more moderate exacerbations in the previous 12 months. Raised blood eosinophils is defined as a blood eosinophil count of 0.3 x 10^9 cells per litre or more (300 cells per microlitre or more).

1.2 Assess response to mepolizumab at 12 months. Stop mepolizumab if, compared with the 12 months before starting it, the number of severe exacerbations:

- is higher, or
- is the same, and the number of moderate exacerbations is higher.

1.3 These recommendations are not intended to affect treatment with mepolizumab that was started in the NHS before this guidance was

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published. People having treatment outside these recommendations may continue without change to the funding arrangements in place for them before this guidance was published, until they and their NHS healthcare professional consider it appropriate to stop.

What this means in practice

Mepolizumab must be funded in the NHS in England for the condition and population in the recommendations, if it is considered the most suitable treatment option. Mepolizumab must be funded in England within 90 days of final publication of this guidance.

There is enough evidence to show that mepolizumab provides benefits and value for money, so it can be used routinely across the NHS in this population.

Why the committee made these recommendations

Usual treatment for uncontrolled COPD with raised blood eosinophils is an ICS, a LABA and a LAMA. This is called triple therapy. Double therapy including a LABA and a LAMA may be also used if an ICS is not suitable. Usual treatment may also include dupilumab as an add-on maintenance treatment to triple therapy, or double therapy if ICSs are not suitable.

The clinical trials for this evaluation used the following definitions:

- uncontrolled COPD is 1 or more severe exacerbations or 2 or more moderate exacerbations in the previous 12 months
- raised blood eosinophils is an eosinophil count of 0.3×10^9 cells per litre or more (300 cells per microlitre or more).

The company included a rule that mepolizumab is stopped at 12 months if the COPD has not responded well enough.

Clinical trial evidence shows that mepolizumab plus triple therapy reduces the number of moderate or severe exacerbations compared with placebo plus triple therapy.

Mepolizumab plus triple therapy has not been directly compared in a clinical trial with dupilumab plus triple or double therapy. Indirect comparisons suggest that it may not be as effective at reducing exacerbations, though this is uncertain. Mepolizumab is cost saving compared with dupilumab.

The cost-effectiveness estimates are within the range that NICE considers an acceptable use of NHS resources. So, mepolizumab can be used.

2 Information about mepolizumab

Marketing authorisation indication

2.1 Mepolizumab (Nucala, GlaxoSmithKline) is indicated for 'add-on maintenance treatment of adult patients with uncontrolled COPD of an eosinophilic phenotype on a combination of an inhaled corticosteroid (ICS), a long acting beta2-agonist (LABA) and a long-acting muscarinic antagonist (LAMA)'.

Dosage in the marketing authorisation

2.2 The dosage schedule is available in the summary of product characteristics for mepolizumab.

Price

2.3 The list price of mepolizumab is £840.00 for a 100-mg per 1-ml prefilled pen or prefilled syringe (excluding VAT; BNF online, accessed April 2026).

2.4 The company has a commercial arrangement (simple discount patient access scheme). This makes mepolizumab available to the NHS with a discount. The size of the discount is commercial in confidence.

Sustainability

2.5 For information, the Carbon Reduction Plan for UK carbon emissions is available on GlaxoSmithKline's UK webpage.

3 Committee discussion

The evaluation committee considered evidence submitted by GlaxoSmithKline, a review of this submission by the external assessment group (EAG), and responses from stakeholders. See the committee papers for full details of the evidence.

The condition

Details of condition

3.1 Chronic obstructive pulmonary disease (COPD) is a progressive condition characterised by obstruction of the airways, reduced lung function and episodic flare-ups of respiratory symptoms, known as exacerbations. Common symptoms include shortness of breath, chronic cough, sputum production, wheezing, chest tightness and exercise intolerance. COPD is diagnosed using spirometry to detect persistent airflow obstruction. The severity of airflow obstruction is determined based on post-bronchodilator forced expiratory volume in the first second (FEV_1). COPD is considered uncontrolled when a person has had 1 or more severe exacerbations or 2 or more moderate exacerbations in the previous 12 months. NICE's guideline on COPD in over 16s (from now NG115) defines moderate exacerbations as a sustained worsening of respiratory status that requires treatment with systemic corticosteroids, antibiotics or both. It defines severe exacerbations as a rapid deterioration in respiratory status that requires hospitalisation. About 20% to 40% of people with COPD have raised levels of eosinophils (a type of white blood cell). This is called an eosinophilic phenotype and is associated with a higher risk of exacerbations. The patient experts explained that the onset and severity of exacerbations can be unpredictable, and that symptoms tend to worsen over time. They explained that symptoms of COPD, such as breathlessness, can impair the ability to leave the house, carry out daily

tasks (including work) and participate in normal activities. This can lead to social isolation that may negatively impact mental health. The patient experts highlighted that anxiety and depression are common comorbidities associated with COPD. The committee concluded that the symptoms and exacerbations associated with moderate to severe COPD can substantially affect health-related quality of life.

Clinical management

Treatment options

3.2 Usual pharmacologic treatment for uncontrolled COPD with raised blood eosinophils in adults is triple therapy, which is a combination of:

- an inhaled corticosteroid (ICS) and
- a long-acting beta2-agonist (LABA) and
- a long-acting muscarinic antagonist (LAMA).

If symptoms have not improved after 3 months, or an ICS is not appropriate, double therapy with a LABA and LAMA may be used. Dupilumab maintenance treatment is recommended as an add-on to triple or double therapy (see NICE's technology appraisal guidance on dupilumab for maintenance treatment of uncontrolled chronic obstructive pulmonary disease with raised blood eosinophils, from now TA1142). The clinical expert explained that since the publication of TA1142 there is ongoing work in clinical practice to update the COPD care pathway. This is to incorporate biologics (such as dupilumab) alongside other methods of COPD management, including the 5 fundamentals of COPD care (see NICE's visual summary on COPD in over 16s: non-pharmacological management and use of inhaled therapies; PDF only). The clinical expert also explained that it would be possible to provide homecare delivery for mepolizumab and that self-administration would be possible for most people. They explained that they would not expect a difference in treatment delivery compared with

dupilumab. The patient experts explained that having a long-acting treatment that is self-administered at home would improve quality of life. The committee noted that dupilumab is available as a long-acting treatment that is self-administered at home. It concluded that mepolizumab would offer another treatment option as add-on therapy for people with uncontrolled COPD with raised blood eosinophils.

Target population

3.3 The company positioned mepolizumab as an add-on maintenance treatment for uncontrolled COPD with raised blood eosinophils in adults on triple therapy. It defined raised blood eosinophils as a blood eosinophil count (BEC) of 0.3 x 10^9 cells per litre or more (300 cells per microlitre or more). The clinical expert clarified that this population is easily identifiable in clinical practice because the number of exacerbations is straightforward to measure and BECs are already done as part of routine care. The committee concluded that the company's positioning of mepolizumab was appropriate.

Comparators

3.4 The company stated in its submission that the relevant comparator was standard care, which is usually triple therapy. It also acknowledged that dupilumab plus standard care, which was in appraisal at the time of submission, would be a relevant comparator if it received positive guidance. At the time of the appraisal committee meeting, dupilumab with double or triple therapy was recommended for uncontrolled COPD with raised blood eosinophils. The clinical experts explained that dupilumab plus standard care is positioned at the same point in the treatment pathway and recommended for the same population as mepolizumab plus standard care is under evaluation for. The committee noted that mepolizumab's marketing authorisation specifies that it can only be used with triple therapy, whereas dupilumab is recommended with triple or double therapy. The committee concluded that dupilumab plus standard

care and standard care alone were both relevant comparators in this appraisal.

Stopping rule

3.5 The company proposed a stopping rule for mepolizumab, which specified that only people with COPD that is responding to treatment continue having mepolizumab after 12 months. It defined 'responders' as people who, compared with the previous 12 months, have either:

- fewer severe exacerbations or
- an equal number of severe exacerbations and no increase in moderate exacerbations.

This stopping rule was not included in the clinical trials for mepolizumab (see section 3.6). But it was in line with the stopping rule included in TA1142. The clinical expert explained that the same stopping rule as that specified in TA1142 could be applied to mepolizumab. This is because the number of exacerbations is an objective measure that can be used to define responders and is easily used in clinical practice. The clinical expert explained that drug monitoring, and assessment of whether to stop or continue mepolizumab based on response, would likely be managed in primary care. But they stated it was still possible for mepolizumab to be prescribed in secondary care, as required for the commercial arrangement for mepolizumab to apply. The committee considered whether non-responders to mepolizumab would potentially have dupilumab after stopping treatment. The clinical expert explained that this was uncertain and that extra testing (for example, to define chronic bronchitis status) would likely be needed to determine suitability for dupilumab after mepolizumab, because its modes of action is different to mepolizumab. But the committee noted there was no evidence informing a treatment pathway with multiple biologics. The committee concluded that the stopping rule was appropriate to include in its recommendation.

Clinical effectiveness

MATINEE, METREX and METREO

3.6 The clinical evidence for mepolizumab came from 3 clinical trials; MATINEE, METREX and METREO. These were all phase 3 double-blind randomised controlled trials (RCTs). They assessed the effectiveness of mepolizumab (given subcutaneously once every 4 weeks) plus standard care, compared with placebo plus standard care. All 3 trials included people 40 years and over with moderate to very severe COPD (defined as Global Initiative for Chronic Obstructive Lung Disease classification stages 2 to 4). All participants in the trials had had 2 or more moderate exacerbations (defined as requiring systemic corticosteroids or antibiotics) or at least 1 severe exacerbation (defined as requiring hospitalisation) in the last 12 months. The primary outcome for all 3 trials was the annualised rate of moderate or severe exacerbations. For MATINEE this was up to 104 weeks and for METREX and METREO the duration was 52 weeks.

The company pooled data from people with a BEC of 0.3 x 10^9 cells per litre to align with the specified threshold for raised blood eosinophils. This included everyone in MATINEE, and a subset of people from METREX and METREO with a BEC of 0.3 x 10^9 cells per litre at screening. This pooled population is termed the pooled modified intention-to-treat (mITT)-300 population.

For MATINEE alone, the adjusted annualised rate of moderate or severe exacerbations in the mepolizumab plus standard care arm (n=403) was 0.80 (95% confidence interval [CI] 0.70 to 0.91) and in the placebo plus standard care arm (n=401) it was 1.01 (95% CI 0.89 to 1.15). When compared with placebo plus standard care, mepolizumab plus standard care also showed:

- a statistically significant reduction in the annualised rate of moderate or severe exacerbations up to 104 weeks (rate ratio [RR] 0.79, 95% CI 0.66 to 0.94; p=0.011)
- a statistically significant improvement in the time to first moderate or severe exacerbation up to 104 weeks (hazard ratio [HR] 0.77, 95% CI 0.64 to 0.93; p=0.009), and
- an improvement (not statistically significant) in the rate of severe exacerbations (RR 0.66, 95% CI 0.43 to 1.01; p=0.055).

For the pooled mITT-300 population, there was a statistically significant reduction in the annualised rate of moderate or severe exacerbations in the mepolizumab plus standard care arm (n=568) compared with the placebo plus standard care arm (n=578) across 52 to 104 weeks of follow up (RR 0.79, 95% CI 0.68 to 0.91; p=0.011). There was also a statistically significant improvement in the time to first moderate or severe exacerbation (this result is confidential so cannot be reported here). There was also an improvement in the rate of severe exacerbations in the mepolizumab plus standard care arm of the mITT-300 population, but this was not statistically significant (this value is confidential so cannot be reported). The committee concluded that mepolizumab plus standard care resulted in an improvement in the annualised rate of moderate or severe exacerbations, and the time to first moderate or severe exacerbation compared with standard care alone. But the evidence for mepolizumab's effect on severe exacerbation rate specifically was uncertain.

Generalisability

3.7 The mepolizumab clinical trials (see section 3.6) excluded people with current or historic uncontrolled comorbidities or unstable or life-threatening cardiac disease. The EAG decided this was reasonable but emphasised the uncertainty in the applicability of trial results to the broader COPD population eligible for mepolizumab, including people with

comorbidities. It also explained that a significant proportion of people with COPD are not offered the 5 fundamentals of care in the NHS (see NICE's visual summary on COPD in over 16s: non-pharmacological management and use of inhaled therapies; PDF only). This may impact the efficacy of standard care and the baseline rate of exacerbations. The clinical expert explained that the population in the clinical trials is largely representative of the population in clinical practice. The committee concluded that MATINEE, METREX and METREO (when restricted to the mITT-300 population) are generalisable to people with COPD who would be likely to have mepolizumab in the NHS.

COPD-HELP

3.8 An additional trial comparing mepolizumab plus standard care with placebo (COPD-HELP) was identified by the company but not included in the clinical effectiveness data used in the model. The trial population included adults 40 years and over who were admitted to hospital with an acute exacerbation of COPD, and in the previous 12 months had had a BEC of 0.3 x 10^9 cells per litre or more. The primary endpoint was the time to first hospital readmission or death over a period of 24 to 48 weeks. The company explained that COPD-HELP was not included in the clinical effectiveness evidence because it focused on a more severe population than the population in the other clinical trials. It stated that the COPD-HELP population had a larger symptom burden, cardiovascular comorbidity and disease activity compared with the pooled mITT-300 population. But it also explained that COPD-HELP still showed a reduction in the rate of moderate or severe exacerbations with mepolizumab compared with standard care (RR 0.81, 95% CI 0.66 to 1.00). The clinical expert explained that COPD-HELP assesses a different population and has a different primary outcome, so it was reasonable to exclude this study. The committee acknowledged that the population was more severe than the pooled mITT-300 population, but it may have been informative for the outcomes in the most severe health states in the model (see section 3.11). Despite this limitation, the committee decided that excluding

COPD-HELP from the clinical effectiveness data was acceptable for decision making.

Indirect treatment comparison with dupilumab

3.9 Because there was no direct evidence comparing mepolizumab plus standard care with dupilumab plus standard care, the company did Bucher indirect treatment comparisons (ITCs) and matching-adjusted indirect comparisons (MAICs). It also provided a multi-level network meta-regression (ML-NMR) for the adjusted annualised rate of moderate or severe exacerbations, which was the primary outcome across all trials in the ITCs. The mepolizumab trials included in the ITCs were MATINEE, METREX and METREO. COPD-HELP was not included (see section 3.8). The dupilumab trials included in the ITCs were BOREAS and NOTUS. Both are phase 3 double-blind RCTs comparing dupilumab plus standard care (which comprised triple therapy or double therapy if ICSs were not appropriate) with placebo plus standard care. The trials recruited people with moderate to severe COPD and:

- a BEC of 0.3 x 10^9 cells per litre or more at the screening visit
- a history of 2 or more moderate exacerbations or 1 or more severe exacerbations within the previous 12 months, and
- symptoms of chronic bronchitis.

The company did 2 sets of ITCs that used different definitions of chronic bronchitis at baseline:

- investigator-assessed chronic bronchitis, which was only available from MATINEE (for mepolizumab) and BOREAS and NOTUS (for dupilumab)
- chronic bronchitis as defined by the COPD version of Saint George's Respiratory Questionnaire (SGRQ-C) responses, which was available from MATINEE, METREX and METREO (for mepolizumab) and BOREAS and NOTUS (for dupilumab).

The results are summarised in table 1. The results of the Bucher ITCs mostly numerically favoured dupilumab regardless of how chronic bronchitis was defined. The results of the MAIC favoured mepolizumab when using investigator-defined chronic bronchitis, but mostly favoured dupilumab when using SGRQ-C defined chronic bronchitis. The confidence intervals across all outcomes included 1. The results of the ML-NMR are confidential so cannot be reported here.

Table 1 Results of indirect treatment comparisons for mepolizumab and dupilumab

Annualised rate	Bucher ITC rate ratio (95% CI)	MAIC rate ratio (95% CI)
Moderate to severe exacerbations (investigator defined chronic bronchitis)	1.09 (0.78 to 1.53)	0.91 (0.60 to 1.37)
Severe exacerbations (investigator defined chronic bronchitis)	1.04 (0.47 to 2.30)	0.68 (0.27 to 1.72)
Moderate to severe exacerbations (SGRQ-C defined chronic bronchitis)	1.09 (0.84 to 1.41)	1.13 (0.80 to 1.58)
Severe exacerbations (SGRQ-C defined chronic bronchitis)	1.02 (0.52 to 1.99)	1.01 (0.47 to 2.16)

The committee's preferred comparative data

3.10 The company used the results of the investigator-defined chronic bronchitis from the MAIC for the comparative treatment effect of mepolizumab compared with dupilumab in its economic model. It explained that this approach of defining chronic bronchitis more closely matches the methods of outcome assessment, increasing comparability across the trials in the ITC. The clinical expert explained that SGRQ-C is a statistical measure, so defining chronic bronchitis based on investigator assessment may be more clinically meaningful. The EAG highlighted that MATINEE, BOREAS and NOTUS were all done during the COVID-19

pandemic, and research suggests there were fewer exacerbations during that period. This may have limited the ability of these trials to demonstrate efficacy. Given that METREX and METREO (both trials of mepolizumab) were done before the pandemic and were included in the ITCs, the relative effectiveness of dupilumab may have been underestimated. The EAG suggested that based on the results of the ITCs the effectiveness of mepolizumab and dupilumab may be similar, but this is uncertain. The clinical expert advised that the results of the ITCs suggested no difference in comparative effect and thought it was reasonable to assume similarity. The committee decided that the evidence for the comparative effectiveness of mepolizumab compared with dupilumab was highly uncertain. It decided that the MAIC was unreliable and subject to bias. This was because, although this was an anchored MAIC, the company had adjusted for a large number of prognostic factors in addition to key effect modifiers such as baseline BEC. This decreased the statistical power of the analysis. The committee also noted that after matching, the baseline BEC in the mepolizumab population in the ITC was less similar to the population in the dupilumab pooled trials. So, it decided that the company's approach to matching may have resulted in a larger difference in the key effect modifiers than without matching. This may have produced a more biased result in favour of mepolizumab. The committee considered the ITC results and the different mechanisms of action (see section 3.5). It concluded that it had not been presented with sufficient evidence to conclude that mepolizumab plus standard care is as effective as dupilumab plus standard care, and that it may be less effective. So, the committee preferred to use the Bucher ITC results without population adjustment for decision making. These results were more pessimistic and indicated a negative treatment effect for mepolizumab compared with dupilumab (1.09 for rate of moderate or severe exacerbations regardless of the definition of chronic bronchitis used).

Economic model

Company's modelling approach

3.11 The company constructed an exacerbation-based Markov model with model states based on severity, frequency and time since exacerbations. The model included 13 health states plus 12 additional parallel discontinuation states for people stopping mepolizumab or dupilumab. There were also frequent exacerbation states for people with at least 1 exacerbation within 12 months of their first exacerbation. Lung function decline was not explicitly modelled, but the EAG stated that the overall modelling structure was reasonable. The committee was concerned about the potential impact of excluding lung function from modelling. The clinical expert explained that stopping exacerbations is the key aim of treatment, and that they would expect to see a decline in lung function over time as exacerbations continue. They also explained that routinely measuring lung function is difficult and that exacerbation rate is a reasonable measure of treatment effectiveness. This is because exacerbations are objectively measured and have the biggest impact on mortality and morbidity, and exacerbations also impact other comorbidities. The EAG noted that the company assumed equal treatment effects across first and subsequent exacerbation states. It stated that because there was the potential for treatment effects to vary across these states, the company's approach may have contributed to structural uncertainty in the model. The company explained that there was not enough data on first events or subsequent exacerbations to reliably inform separate treatment-effect estimates in the model. The committee thought that COPD-HELP (see section 3.8) may have been a useful source of additional efficacy data for the part of the population in more severe health states in the model. It also noted that the impact of excluding lung function from the model was uncertain, and that using the same treatment effect for first and subsequent exacerbations added to this uncertainty. But it concluded that the exacerbation-based model was acceptable for decision making.

Rates of moderate and severe exacerbations

3.12 To model the treatment effect on moderate and severe exacerbations, the company used RRs from the clinical-effectiveness data. For the comparison with standard care alone, the treatment effects were based on the mITT-300 population data for mepolizumab compared with standard care (these values are confidential so cannot be reported here). For the comparison with dupilumab the RRs were based on the MAIC, in which chronic bronchitis was defined by investigator assessment (see section 3.9). An increased treatment effect was modelled from 52 weeks onwards for 'responders' to mepolizumab or dupilumab. The treatment effects for moderate and severe exacerbations were modelled separately, but in all the mepolizumab clinical trials the primary endpoint was a combination of moderate and severe exacerbations. The treatment effect for severe exacerbations was based on data from a small proportion of severe exacerbations during the trials (the proportion of severe exacerbations is confidential so cannot be reported here). The committee noted that in TA1142 the primary outcome for the dupilumab trials (BOREAS and NOTUS) was also a combination of moderate and severe exacerbations. In those trials, the severe exacerbation rates represented a small proportion of the total exacerbations measured. In TA1142, the committee preferred to model the effect on moderate and severe exacerbations using a combined RR for both health states to align with the combined moderate or severe exacerbations outcome. The EAG highlighted that the RRs are similar for moderate and severe exacerbations for the comparison with standard care alone. It explained that scenarios using a combined RR of moderate or severe exacerbations had minimal impact on the cost-effectiveness estimates. The clinical expert explained that there was no biological mechanism that would support a large difference in treatment effect between moderate and severe exacerbations. The EAG also highlighted a scenario in which no treatment effect was assumed for severe exacerbations between mepolizumab and dupilumab (RR of 1). This scenario also resulted in only small changes in the cost-effectiveness

estimates. The committee concluded that using either separate or combined RRs had minimal impact on the cost-effectiveness results.

Use of double therapy in the baseline population

3.13 To model baseline characteristics, utility values and baseline exacerbation rates the committee used the mepolizumab trials (section 3.6). But it also used the IMPACT and ECLIPSE studies, which did not meet the criteria to be included in the treatment-effect estimates. The EAG stated that 61% of the population of IMPACT and 34% of the pooled overall baseline population were on double therapy. This is not in line with the marketing authorisation for mepolizumab. The EAG explained that IMPACT showed a smaller improvement with double therapy than with triple therapy. So, the utility data calculated using this may underestimate population disutility in a population of people having triple therapy as in the model. The EAG also emphasised face-validity issues with the utility values (the utility values are confidential so cannot be reported here). For example, the disutility value at 'frequent severe (9 to 12 months)' health state is smaller than the 'severe (9 to 12 months)' health state. But the EAG explained that using alternative utility values had a limited impact on cost effectiveness and that including these additional studies was likely reasonable. The committee concluded that including data from ECLIPSE and IMPACT in the baseline population in the model was acceptable for decision making.

Cost-effectiveness estimates

Comparison with standard care alone

3.14 There were no differences between the company's and the EAG's base cases for mepolizumab plus standard care compared with standard care alone. The company's and the EAG's base-case incremental cost-effectiveness ratio (ICER) was £18,347 for the comparison against standard care alone. The committee decided this comparison was suitable

for decision making. It concluded that mepolizumab plus standard care is cost effective compared with standard care alone.

Comparison with dupilumab plus standard care

3.15 There were no differences between the company's and the EAG's base cases for mepolizumab plus standard care compared with dupilumab plus standard care. In both base cases, mepolizumab plus standard care was dominant; that is, cheaper and produced more incremental quality-adjusted life years. The committee preferred to base the comparative treatment effect of mepolizumab compared with dupilumab on the results of the Bucher ITC (see section 3.10). Using this assumption, mepolizumab plus standard care was less expensive and less effective than dupilumab plus standard care, resulting in ICERs in the south-west quadrant of the cost-effectiveness plane. The cost effectiveness of mepolizumab plus standard care compared with dupilumab plus standard care was assessed by calculating net health benefit. The incremental net health benefit of mepolizumab plus standard care compared with dupilumab plus standard care was positive across the range of willingness to pay thresholds that NICE normally considers a cost-effective use of NHS resources (the exact results cannot be reported here because of confidential comparator discounts). The committee concluded that mepolizumab plus standard care is cost effective compared with dupilumab plus standard care.

Other factors

Equality

3.16 The committee acknowledged that people from socioeconomically deprived backgrounds are more likely to have COPD and have more exacerbations, hospitalisations and mortality risks. They are also more likely to have comorbidities that may affect COPD management. The committee also acknowledged that the ability to access care or attend appointments may vary based on geographical location. But the

committee noted that access to care cannot be addressed in a technology appraisal. It acknowledged the inequalities associated with COPD, but considered that it had not been presented with convincing evidence of how mepolizumab may impact health inequalities.

Uncaptured benefits

3.17 The committee considered whether there were any uncaptured benefits of mepolizumab. It identified that home administration of mepolizumab would reduce the administrative burden of care and barriers to accessing treatment. It also identified that the impacts on caregiver quality of life had not been included in the modelling. The patient experts explained that there is significant caregiver burden associated with COPD. The committee noted that it was possible that ease of home administration was not captured in the quality-of-life measures, but this was uncertain. It also noted that it had not seen robust evidence of the size of caregiver burden and was not convinced that the role of mepolizumab in alleviating caregiver burden had been sufficiently demonstrated. So, it concluded that it was uncertain that there were significant uncaptured benefits that it should consider in decision making.

Conclusion

Recommendation

3.18 The committee concluded that compared with standard care alone, mepolizumab plus standard care reduces the rate of exacerbations. The committee acknowledged the high degree of uncertainty in the comparative effectiveness estimates for mepolizumab plus standard care compared with dupilumab plus standard care. But with the committee's preferred assumptions, the most likely cost-effectiveness estimates for mepolizumab plus standard care are within the range that NICE considers an acceptable use of NHS resources. So, mepolizumab can be used.

4 Implementation

4.1 Section 7 of the National Institute for Health and Care Excellence (Constitution and Functions) and the Health and Social Care Information Centre (Functions) Regulations 2013 requires integrated care boards, NHS England and, with respect to their public health functions, local authorities to comply with the recommendations in this evaluation within 90 days of its date of publication.

4.2 The Welsh ministers have issued directions to the NHS in Wales on implementing NICE technology appraisal guidance. When a NICE technology appraisal guidance recommends the use of a drug or treatment, or other technology, the NHS in Wales must usually provide funding and resources for it within 60 days of the first publication of the final draft guidance.

4.3 When NICE recommends a treatment 'as an option', the NHS must make sure it is available within the period set out in the paragraphs above. This means that, if a patient has uncontrolled COPD and the healthcare professional responsible for their care thinks that mepolizumab is the right treatment, it should be available for use, in line with NICE's recommendations.

5 Evaluation committee members and NICE project team

Evaluation committee members

The 4 technology appraisal committees are standing advisory committees of NICE. This topic was considered by committee A.

Committee members are asked to declare any interests in the technology being evaluated. If it is considered there is a conflict of interest, the member is excluded from participating further in that evaluation.

The minutes of each evaluation committee meeting, which include the names of the members who attended and their declarations of interests, are posted on the NICE website.

Chair

Radha Todd

Chair, technology appraisal committee A

NICE project team

Each evaluation is assigned to a team consisting of 1 or more health technology analysts (who act as technical leads for the evaluation), a technical adviser, a project manager, and an associate director or principal technical adviser.

Emma McCarthy

Technical lead

Albany Chandler

Technical adviser

Jennifer Upton

Project manager

Ian Watson

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