



**Cambridgeshire and
Peterborough
Clinical Commissioning Group**

Shortage of Metoprolol 50mg and 100mg tablets

Date: 28th February 2019

Description of product affected

Metoprolol is a cardioselective beta-blocker, licensed for use in adults for the following indications¹:

- Hypertension
- Angina pectoris
- Tachyarrhythmias, in particular supraventricular tachycardia
- Maintenance treatment after a myocardial infarction
- Prophylaxis of migraine

Doses across the various indications range from 50mg to 200mg, in single or divided doses (usually twice daily).

Background

- There are intermittent supply issues affecting metoprolol 50mg and 100mg as some manufacturers have recently discontinued these products and others are having supply difficulties.
- Supplies of both strengths are currently available but may be limited; further stock is arriving over the coming weeks however supply is likely to be intermittent for a number of months.
- Suppliers of alternative beta-blockers have been contacted to determine if they can meet any additional demand and currently, the manufacturers of carvedilol have indicated they would be unable to meet demand if patients were switched to this product.
- Manufacturers of bisoprolol, atenolol and propranolol have indicated they have capacity to support any additional demand on their products.

Alternative agents and suggested management options

- The patient should be encouraged to try several pharmacies in order to fulfil the prescription as different pharmacies use a range of wholesaler and distributors. The patient may wish to ring pharmacies in advance of attending to ascertain availability.

- The decision about what to do will need to be individualised to each patient.
- There is no robust evidence to suggest metoprolol is the beta blocker of choice in certain patient groups.
- Table 1 provides an overview of the licensed uses of metoprolol and some of the other commonly used beta-blockers.
- The choice of beta-blocker will depend on co-morbidities, local recommendations (see below), and cost. Where possible, prescribe a drug that is taken only once a day and prescribe generically².
- Within primary care the formulary choice which should be considered the **1st line beta-blocker for hypertension is Bisoprolol**.

Table 1: Licensed indications of the more commonly used beta-blockers

Indications Drugs	Hypertension	Heart failure	Angina	Arrhythmias	Post-Myocardial infarction ^a	Migraine prophylaxis
Metoprolol ^{1d}	√	Used off-label ^b	√	√	√	√ ^c
Bisoprolol ^{3d}	√	√	√	-	-	-
Atenolol ^{5d}	√	-	√	√	√	
Propranolol ⁶	√	-	√	√	√	√

- In their clinical guideline on the secondary prevention of myocardial infarction, NICE makes no recommendations on choice of beta-blocker⁷. CKS have however recommended metoprolol (standard release), propranolol (standard release), timolol, or atenolol because these are licensed for long-term prophylaxis following myocardial infarction in people without left ventricular dysfunction⁸.*
- Whilst metoprolol is not licensed for management of heart failure, it is sometimes used for this indication based on evidence from the MERIT-HF trial, which used metoprolol succinate.*
- Although metoprolol is licensed for migraine prophylaxis, the NICE clinical guideline on the management of headaches recommends propranolol as the beta-blocker of choice⁹.*
- Considered cardioselective, therefore have less effect on the beta2 receptors and may be more suitable for patients with asthma or COPD.*

Dose equivalence and conversion

- There is no definitive guidance for dose conversion between beta-blockers and clinical judgement will be required in considering where the metoprolol dose sits within the dose range of the alternative beta-blocker.
- When switching patients to alternate beta-blockers, blood pressure, pulse rate, and signs and symptoms of the underlying disorder should be monitored to guide dosing. Table 2 provides dose ranges for some commonly used beta-blockers described above.
- It is important to involve any patients (and their carers, as appropriate) in the discussion regarding any planned change to their medication **BEFORE** making the change.
- If the any of the recommendations are not clinically acceptable or there is any uncertainty about what to do or how to do it then management options should be discussed with the responsible consultant specialist depending on the indication.

Unlicensed specials

Whilst unlicensed special liquids of metoprolol are available, use of an unlicensed product in primary care is not recommended where an alternative licensed product is clinically suitable for the patient. Please consult the Medicines Optimisation Team (CAPCCG.prescribingpartnership@nhs.net) before prescribing unlicensed products or specials.

Table 2: Licensed target dose ranges for various indications (dose adjustments may be required based on clinical response and co-morbidities e.g. renal impairment)

	Metoprolol ¹	Atenolol ⁴	Bisoprolol ³	Propranolol ⁵
Hypertension	100-200mg daily (single or divided doses)	25-100mg OD	5-20mg OD	40mg BD or TDS, max 320mg per day
Heart failure	Used off-label ^{b(above)}	-	Initially 1.25mg OD, titrated upwards to 10mg OD	-
Angina	50-100mg BD	50-100mg OD or 50mg BD	5-20mg OD	40mg BD or TDS, max 240mg per day
Arrhythmias	100-200mg per day	50-100mg OD	-	10-40mg TDS or QDS
Post-Myocardial infarction	100mg BD	50-100mg OD	-	40mg QDS followed by 80mg BD after 2 days (initiated between days 5 and 21 after myocardial infarction)
Migraine prophylaxis	50-100mg BD	-	-	40mg BD or TDS, to max of 160mg daily

References

1. Metoprolol Tartrate 50 mg tablets SPC (Accord Healthcare Ltd); DOR = 20/10/2017
2. NICE. Clinical Knowledge Summaries: Hypertension - not diabetic (Last revised in January 2018): <https://cks.nice.org.uk/hypertension-not-diabetic#!prescribingInfoSub:37>
3. Bisoprolol 10mg film-coated tablets SPC (Accord Healthcare Ltd); DOR = 31/05/2014
4. Atenolol Tablets BP 25mg SPC (Accord-UK Ltd); DOR = 14th April 2017
5. Propranolol 40mg film-coated tablets SPC (Accord Healthcare Limited); DOR = 14/06/2018
6. NICE. Myocardial infarction: cardiac rehabilitation and prevention of further cardiovascular disease. Clinical Guideline 172 (November 2013): <https://www.nice.org.uk/guidance/cg172#>
7. NICE. Clinical Knowledge Summaries: MI – Secondary prevention (October 2015): <https://cks.nice.org.uk/mi-secondary-prevention#!prescribingInfoSub:8>
8. NICE. Headaches in over 12s: diagnosis and management. Clinical Guideline 150 (November 2015): <https://www.nice.org.uk/guidance/cg150>

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