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**DRAFT**

**Alert [nr] [date]**

**Medication Alert**

Metoprolol

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| For the attention of: | Chief Executive Officers |
| For action by: | Chief Medical Officers |
| **Purpose of this alert** |
| To highlight the risk of inadvertent overdose associated with administration of metoprolol succinate in hospital when the dose prescribed is 11.875mg and is misread as 118.75mg |
| **Background to this alert** |
| 1. Three serious and sentinel events have occurred in New Zealand hospitals.
2. Two of these events had **fatal outcomes**.
3. All three events were related to a prescribed dose of metoprolol 11.875mg (half a 23.75mg tablet). In all three cases, the dose administered was 118.75mg (a 95mg plus a 23.75mg tablet).
4. In all cases, the nurse read the dose as 118.75mg because of confirmation bias as 118.75mg is seen more commonly than 11.875mg in hospital.
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**REQUIRED ACTION**

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|  Organisational1. Doses of metoprolol lower than 23.75mg (ie, metoprolol 11.875mg) should not be prescribed in the District Health Board (DHB). Steps required to achieve this include:
	1. Consult with cardiologists in the hospital to agree that metoprolol 11.875mg shoud not be prescribed throughout the DHB.
	2. Agree with cardiologists whether patients admitted on 11.875mg should have their dose increased to 23.75mg or should their metoprolol be discontinued.
	3. Communicate the DHB’s recommendation on metoprolol 11.875mg prescribing to general practitioners (proforma attached) and hospital clinicians (prescribers, pharmacists and nurses).
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| **Clinical information** |
| There is no evidence to support the use of the 11.875mg metoprolol controlled release:* 11.875mg of metoprolol controlled release has not been shown to provide any cardioprotective benefit in heart failure and the dose is too small to be of value in other conditions
* The current heart failure guidelines recommend starting metoprolol controlled release at a dose of 23.75mg.
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| **Further** **background to this alert** |
| 1. The funded metoprolol controlled release product is metoprolol succinate and this is available as 23.75mg, 47.5mg and 95mg tablets. When half a 23.75mg tablet is prescribed, the dose becomes 11.875mg.
2. The Medication Safety Expert Advisory Group issued a ‘safety signal’ in 2012 following the first two events involving 118.75mg administration when 11.875mg was prescribed.
3. All DHBs have patients taking 11.875mg and 118.75mg doses of metoprolol (source: PHARMAC prescribing data).
4. Internationally, most countries use metoprolol tartrate slow release which comes in whole number tablet strengths. The only metoprolol tartrate funded in New Zealand is the immediate release preparation (50mg and 100mg).
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| Further actions |
| * The Medication Safety Expert Advisory Group will work with Medsafe, PHARMAC and the manufacturer of the currently funded metoprolol succinate product to remove reference to an 11.875mg dose in the product datasheet.
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| **For an electronic version of this alert, download from:** [**www.hqsc.govt.nz**](http://www.hqsc.govt.nz) **or contact Beth Loe:** **beth.loe@hqsc.govt.nz** |

**If you require any further information or wish to provide feedback on this alert,
please go to www.hqsc.govt.nz**

These recommendations are based on a review of currently available information in order to assist practitioners. Recommendations are general guidelines only and are not intended to be a substitute for individual clinical decision-making in specific cases.

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