

1.3 Percentage of patients prescribed enoxaparin whose dosing schedule is appropriate

Purpose

This indicator assesses effectiveness of processes that encourage safe prescribing practices for high risk medicines such as enoxaparin.

Background and evidence

Choice of dose for enoxaparin is dependent on the indication for therapy. The enoxaparin dose for prevention of venous thromboembolism (VTE) is usually 20 mg or 40 mg daily, dependent on risk. The enoxaparin dose for treatment of VTE is based on weight.¹ The dose may need to be further adjusted if the patient has significant renal dysfunction.²

There is anecdotal evidence that doses for prevention and treatment of VTE are often confused. Patients are at risk of either bleeding or clot progression if inappropriate doses are prescribed. Documentation of both indication and weight are therefore critical to appropriate prescribing and should be recorded on the medication chart.

Key Definitions

Dosing schedule is appropriate means that the prescribed dose and frequency of enoxaparin are appropriate for the indication and patient weight in accordance with the recommendations in the approved product information.² Rounded doses are acceptable.

Data collection for local monitoring

Recommended sample selection: Random sample of patients prescribed enoxaparin over a one month period. Patients may be identified retrospectively or prospectively depending on systems for managing antithrombotic therapy in the institution. Random means each patient has an equal chance of inclusion in the audit.

Recommended sample size: 30 patients prescribed enoxaparin over a one month period (or all patients if less than 30 patients are identified). Collecting a larger sample where possible will increase the sensitivity of the data.

Recommended methodology: Review of medication charts. If either the indication for enoxaparin therapy or the patient's weight is not recorded on the medication chart, the dose is assumed to be not appropriate.

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Data collection for inter-hospital comparison

This indicator may be suitable for inter-hospital comparison. In this case, definitions, sampling methods and guidelines for audit and reporting need to be agreed in advance in consultation with the coordinating agency.

Indicator calculation

$$\frac{\text{Numerator}}{\text{Denominator}} \times 100\%$$

Numerator = Number of patients prescribed enoxaparin whose dosing schedule is appropriate

Denominator = Number of patients prescribed enoxaparin in sample

Limitations and interpretation

Good documentation supports quality patient care³ and is a critical component of management with potentially toxic medicines such as enoxaparin. Poor communication can result in adverse drug events.⁴ Thus it is important for both indication and weight to be clearly documented on the medication chart to help inform dosing decisions. This indicator assumes that actual patient weight is used when calculating doses. In obese patients, dose calculation on the basis of lean body weight may be more appropriate.

This indicator will not assess the appropriateness of enoxaparin dosing in patients with renal dysfunction.

Further information

The *Medication Safety Self Assessment for Antithrombotic Therapy in Australian hospitals*⁵ (MSSA-AT) can help identify potential strategies for improvement with this and other indicators. The MSSA-AT encourages development of robust systems for safe prescribing, dispensing, administration and monitoring of antithrombotic therapy. The MSSA-AT is available at www.cec.health.nsw.gov.au

References

1. Australian Medicines Handbook: Australian Medicines Handbook Pty Ltd, 2007.
2. Product Information: Clexane® and Clexane Forte®: Aventis Pharma Pty Limited, 2006.
3. The Good Clinical Documentation Guide: National Centre for Classification in Health, Commonwealth of Australia, 2003.
4. Safe and Effective: The eight essential elements of an optimal medication-use system. In: MacKinnon N, ed: Canadian Pharmacist's Association, 2007.
5. Medication Safety Self Assessment for Antithrombotic Therapy in Australian Hospitals: Institute for Safe Medication Practices (Adapted for Australian use by the NSW Therapeutic Advisory Group and the Clinical Excellence Commission), 2007.