

# Different strategies for pharmacological thromboprophylaxis for lower-limb immobilisation after injury: systematic review and economic evaluation

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**Declared competing interests of authors:** Steve Goodacre is chairperson of the National Institute for Health Research (NIHR) Health Technology Assessment (HTA) programme Clinical Evaluation and Trials Board and a member of the HTA Funding Boards Policy Group. Tim Nokes received personal fees from Bayer Pharmaceuticals (Bayer AG, Leverkusen, Germany), personal fees from the Bristol-Myers Squibb Company (New York City, NY, USA)–Pfizer Inc. (New York City, NY, USA) Alliance and personal fees from Daiichi Sankyo Company Ltd (Tokyo, Japan) outside the submitted work. Kerstin de Wit reports grants from Bayer Pharmaceuticals outside the submitted work.

Published December 2019

DOI: 10.3310/hta23630

## Plain English summary

### Pharmacological thromboprophylaxis for lower-limb immobilisation

Health Technology Assessment 2019; Vol. 23: No. 63

DOI: 10.3310/hta23630

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## Plain English summary

People who have their leg immobilised in a plaster cast or brace following an injury are at risk of developing a blood clot. Sometimes the clot can break up and lodge in the lungs, which can make the person seriously ill. Drugs that thin the blood (anticoagulants) can reduce the risk of blood clots, but they carry a small risk of serious bleeding. This study analysed all published trials of anticoagulants for people with leg immobilisation and found that, without treatment, there was a 1–2% risk of a serious blood clot. This risk was roughly halved by using anticoagulant treatment. These estimates were used in a simulation model of patient treatment and it was found that the benefit of anticoagulants in reducing blood clots (in terms of length and quality of life) outweighed the risks of bleeding.

Next, all published studies of risk assessment tools were analysed. Risk assessment tools can be used to predict who is most likely to get a blood clot. There were only a few studies and they had significant weaknesses. The risk assessment tools in the simulation model were evaluated and it was found that the most cost-effective approach was to use a risk assessment tool to select approximately half of the patients for treatment (those at higher risk), while not treating those at lower risk. Treating only the higher-risk patients would be a cost-effective use of NHS resources, compared with treating nobody. Treating everybody, compared with just treating higher-risk patients, would improve outcomes for some patients but would not be a cost-effective use of NHS resources.

This study suggests that anticoagulant drugs are an effective and potentially cost-effective way of preventing blood clots in people with leg immobilisation due to injury. Research is needed to determine whether or not risk assessment tools can accurately predict who needs anticoagulant drugs and who does not.

ISSN 1366-5278 (Print)

ISSN 2046-4924 (Online)

Impact factor: 3.819

*Health Technology Assessment* is indexed in MEDLINE, CINAHL, EMBASE, The Cochrane Library and the Clarivate Analytics Science Citation Index.

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## This report

The research reported in this issue of the journal was funded by the HTA programme as project number 15/187/06. The contractual start date was in April 2017. The draft report began editorial review in April 2018 and was accepted for publication in August 2018. The authors have been wholly responsible for all data collection, analysis and interpretation, and for writing up their work. The HTA editors and publisher have tried to ensure the accuracy of the authors' report and would like to thank the reviewers for their constructive comments on the draft document. However, they do not accept liability for damages or losses arising from material published in this report.

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