Prevention for specific types of inpatient surgery

Type of surgery	Patient has no risk factors	Patient has ≥ 1 risk factors
Hip replacement	Mechanical prophylaxis plus LMWH or fondaparinux	Mechanical prophylaxis plus LMWH or fondaparinux (continue for four weeks)
Hip fracture	Mechanical prophylaxis plus LMWH or fondaparinux (continue for four weeks)	Mechanical prophylaxis plus LMWH or fondaparinux (continue for four weeks)
Other orthopaedic	Mechanical prophylaxis plus LMWH or fondaparinux	Mechanical prophylaxis plus LMWH or fondaparinux
Cardiac	Mechanical prophylaxis	Mechanical prophylaxis plus LMWH (if no other anticoagulants used)
General	Mechanical prophylaxis	Mechanical prophylaxis plus LMWH or fondaparinux
Gynaecological (excluding caesarean)	Mechanical prophylaxis	Mechanical prophylaxis plus LMWH
Neurosurgery (including spinal surgery)	Mechanical prophylaxis	Mechanical prophylaxis plus LMWH (except patients with ruptured cranial or spinal vascular malformations if the lesion has not been secured)
Thoracic	Mechanical prophylaxis	Mechanical prophylaxis plus LMWH
Urological	Mechanical prophylaxis	Mechanical prophylaxis plus LMWH
Vascular	Mechanical prophylaxis	Mechanical prophylaxis plus LMWH

LMWH=low molecular weight heparin.

Advice to patients

- Warn patients that the immobility associated with continuous travel of more than three hours in the four weeks before or after surgery may increase the risk of venous thromboembolism.*
- Advise patients to consider stopping combined oral contraception four weeks before elective surgery.
- Give patients (as part of their discharge plan) oral and written information on the signs and symptoms of deep vein thrombosis and pulmonary embolism, the correct use of prophylaxis at home, and the implications of not using the prophylaxis correctly.*

Specific strategies

For recommended prevention strategies for specific types of inpatient surgery, see the table.

Overcoming barriers

Some clinicians hold strong views about the overall benefits of reducing the risk of deep vein thrombosis or pulmonary embolism with drugs that increase the risk of bleeding. The balance of risks cannot be quantified from clinical experience, and moreover, a recent

adverse experience tends to affect objective consideration.⁴ The highly valued concept of clinical judgment conflicts with recognition that adherence to an evidence based guideline may be safer for doctors as well as for patients.

NICE has developed tools to help organisations implement the guidance (see www.nice.org.uk/page.aspx?o=tools). Further information about the guidance is available on bmj.com.

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Commentary: NICE—setting clinical standards

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The clinical guidelines programme of the National Institute for Health and Clinical Excellence (NICE) is arguably the largest in the world and is unique in considering both cost effectiveness as well as clinical effectiveness. This article by Hill and Treasure is the first in a series to be published in the *BMJ*: each article will give a short account of key features of newly published NICE guidelines. The articles will particularly focus on areas where changes in current practice are recommended.

NICE guidelines are produced by an independent guideline development group. Its members include

relevant clinicians, experts in areas such as systematic reviews and health economics, as well as at least two patients or carers. The development process is based on an internationally agreed methodology (box),^{1 2} and NICE has now published almost 50 clinical guidelines. In a recent survey, NICE's guideline on schizophrenia achieved a higher total score (and by a wide margin) on all internationally agreed elements of guideline development¹ than any of the 26 other international guidelines on the same topic.³

There is no point, though, in developing clinical

Key stages in developing a NICE guideline²

- Scoping—Defining the parameters of the guideline after consultation with relevant stakeholder groups
- Setting clinical questions—Framed to cover the most important aspects of the scope
- Reviewing—A systematic review of the relevant evidence is done; included studies range from randomised controlled trials to case series
- Assessing cost effectiveness—Either by reviewing published analyses or, for selected questions, by undertaking new economic analyses
- Developing recommendations—The evidence is evaluated by an independent development group specially constituted for each guideline
- Consultation—Draft recommendations are subject to consultation with relevant stakeholder groups and external experts
- Publication—NICE guidelines are available in various forms: a quick reference guide; a lay version for patients and carers; a version known as the “NICE guideline” that summarises the recommendations; and a full guideline containing the methodology and evidence reviews

guidelines if they have no significant impact on patient care. Passive dissemination has only a limited effect, and barriers to implementation exist at several levels.⁴ Difficulties include a perceived lack of resources, clinicians’ concerns about the undermining of their autonomy, ingrained practices, and general disagreement with the content.

NICE’s implementation support programme aims to erode these concerns in three broad ways. Firstly, it provides practical help for organisations and individuals to overcome some of the initial barriers. These include templates to facilitate calculation of the likely costs and savings of putting a guideline into practice, interactive guides for commissioners based on guideline recommendations, a database of examples of effective implementation, as well as a small team of consultants to provide hands-on advice and support (www.nice.org.uk/usingGuidance).

Secondly, the programme seeks to generate “leverage” to encourage implementation by working with

other organisations. These include the Healthcare Commission (an independent regulatory body that assesses organisations in England against the standards set in NICE guidelines) and organisations responsible for undergraduate and postgraduate education. The use of financial incentives is encouraged through the quality and outcomes framework, a mechanism for payment in primary care against a set of measurable indicators.

Thirdly, NICE believes it is particularly important to monitor progress and to identify and tackle the problem of barriers to change. It does this by referring to data on drug use, national audits, and published surveys and through feedback from the NICE implementation consultants. A recent example from a national audit showed that 85% of patients with lung cancer are now being seen by a multidisciplinary team, as recommended in the NICE guideline.⁵ All these findings are available on the NICE website (www.nice.org.uk/page.aspx?o=ernie).

As research evidence and medical knowledge continue to expand, the use of guidelines will increasingly become essential to inform day to day practice. Organisations such as NICE will therefore have a key responsibility for ensuring that their guidelines are up to date, in an accessible format, and available from a variety of sources.

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Competing interests: None declared.

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Making a difference: now it's your turn

Sitting beside your patient in a consultation, how can you make the greatest difference? How can you minimise morbidity, reduce mortality and, improve quality of life? And, if your patients wish to do all they can for their own personal health gain, where do they get most benefit?

Earlier this year, we sought your views on the greatest medical breakthroughs since 1840. Your vote concluded that the major advances were mostly in public health and at population level. But most health care occurs when doctors and patients meet one to one. We would now like to focus on the doctor-patient interface and ask you to vote on the areas you feel can make the greatest difference to personal health.

In fewer than 100 words, tell us what interventions you think offer the greatest potential benefit. We don't want to anticipate your suggestions, but possible examples could be home based palliative care, improving cardiovascular risk factors in type 2 diabetes, reducing falls in elderly people, preventing hospital infection, avoiding prescription errors. Armed with your nominations—and the priority lists published by major national and international healthcare organisations, research bodies, and charities—we will draw up a short list. Later this year we will ask

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The *BMJ* is more than a journal, and the BMJ Group is much more than a publisher. We want to be an active partner for doctors and patients. This is your opportunity to tell us what you would like. Make your nominations as a rapid response to this article online at bmj.com Domhnall MacAuley primary care editor, BMJdmacauley@bmj.com