Health and Social Care Committee
One-day inquiry into venous thrombo-embolism prevention
VTE 6 – Bayer Healthcare

Welsh Assembly Health and Social Care Committee one-day inquiry:
Venous thromboembolism prevention in hospitalised patients in Wales

A response from Bayer HealthCare

Bayer would like to thank the Welsh Assembly's Health and Social Care Committee for the opportunity to submit written evidence to its one-day enquiry on venous thromboembolism (VTE) prevention in hospitalised patients in Wales. We welcome the Committee's decision to hold an inquiry into prevention of this serious condition. As we set out below, hospital-acquired VTE has a devastating cost in both human and financial terms, and this is all the more serious given that many cases could be prevented through simple, low-cost measures such as a robust, evidence-based risk assessment for every patient admitted to hospital.

Bayer is one of the world's leading pharmaceutical companies, with a product portfolio that includes anticoagulation treatments. Bayer is committed to working with all interested stakeholders to support and spread effective policy and good clinical practice in preventing and managing all forms of cardiovascular disease.

Contact details for further information can be found at the end of this response.

Impact of VTE

As the Committee will be aware, venous thromboembolism (VTE) is the umbrella term for deep vein thrombosis (DVT) and pulmonary embolism (PE). A DVT is a thrombus, or blood clot, in a vein, usually a leg vein. If the clot lodges in the lung a potentially serious and sometimes fatal condition, PE, occurs.

The impact of hospital-acquired VTE on patients and the NHS in Wales is substantial; between 1,500 and 2,000 patients die every year in Wales from hospital-acquired VTE[1]. However, for those patients that survive, VTE can have a devastating impact on an individual's quality of life. A DVT can lead to long-term complications such as recurrent episodes of VTE and post-thrombotic syndrome (PTS), a chronic and debilitating disorder which can manifest itself in the form of milder symptoms such as pain and swelling or more serious symptoms such as varicose ulcers. Approximately 25-30% of patients who have in the past suffered from DVT go on to suffer severe PTS[2].

Aside from the physical impact of VTE, there are significant costs associated with VTE both for the NHS, the economy and the individual patient. PTS can have a significant impact on a patient's quality of life after a DVT, and can leave them unable to work. In 2005, the House of Commons Health Select Committee estimated that the total cost of the management of VTE to the NHS in the UK was £640 million[3]. Applying a population estimate of 3,006,400 for Wales[4], we therefore estimate that the cost of VTE to the NHS in Wales in 2005 was £31 million. We have no reason to assume that the costs to the NHS in Wales in 2012 are any lower. In addition, the total annual cost of the treating venous leg ulcers in Wales was almost £20 million[5]. Neither of these figures, however, takes into account the lost productivity from these patients. NICE has concluded that, although no information is available for the likely costs of implementing a VTE risk assessment, such an assessment may be absorbed as part of routine admission procedures, and any costs that do arise would likely be offset by savings made in reducing incidence of hospital-acquired VTE and, therefore, in the cost of its complications[6]. Prevention and effective treatment are therefore vital.

The experience of prioritising the prevention and treatment of hospital-acquired VTE in England

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It is crucial that every patient admitted to a hospital is given a thorough risk assessment for VTE, using a tool that is robust and evidence-based. The investment necessary to produce supporting guidance and up-skill staff to undertake risk assessments is minimal, particularly when compared to the savings that could be made in both financial and human terms from preventing hospital-acquired VTE. Bayer is clear, therefore, that it is vital that every hospital should be undertaking risk assessments.

Towards determining specific recommendations for policy improvements in Wales, it is worth considering the impact of similar measures introduced by the NHS in England, and their efficacy.

In recent years, VTE has gained recognition as major patient safety concern for the NHS in England. Following a report by the Health Select Committee in 2005, which highlighted the scale of preventable deaths from hospital-acquired VTE, and campaigning from patient groups, VTE prevention has become a priority for the NHS. This has been achieved through the implementation of a national financial incentive for trusts that can demonstrate they have undertaken a risk assessment of 90% of patients on admission for VTE[7]. In 2010/11 a VTE Commissioning for Quality and Innovation (CQUIN) payment framework indicator was introduced which provided NHS trusts with an additional 1.5% payment of their contract if they could demonstrate that they had undertaken a risk assessment[8]. From 2012/13, the CQUIN scheme's value will increase to 2.5% of the provider contract, and so it is likely that the value of the VTE risk assessment indicator will also increase[9]. Further, it will be supplemented by an additional CQUIN payment for those trusts that can demonstrate that they submit data generated from use of the NHS Safety Thermometer, an improvement tool that allows NHS organisations to measure harm in four key areas, including VTE[10].

The impact of the CQUIN scheme, national guidance and regular data collection has been profound; a recent report found that trusts that were able to perform well against the indicator requiring implementation of the National Institute for Health and Clinical Excellence (NICE)'s VTE risk assessment tool during 2010/11 risk assessed a higher proportion of patients for VTE in the first quarter of 2011/12[11]. Furthermore, by September 2011, 90% of patients received a VTE risk assessment in NHS acute trusts on admission, which is an increase in risk assessment of 41% since data were first collected in July 2010[12].

In addition, the NHS Standard Contract for acute services requires monthly reporting of appropriate prophylaxis, and, completion of root cause analysis on all confirmed inpatient cases of PE or DVT[13]. Failure to report in accordance with the contract can lead to commissioners withholding up to 1% of the monthly contract value until the reports are provided[14]. This helps to ensure that not only are patients being risk-assessed but also that those at risk are receiving appropriate and effective treatment.

A number of other measures have also been introduced in England to strengthen VTE prevention and to ensure that it remains a priority for NHS commissioners, providers and clinicians. These include the development of indicators within the NHS Outcomes Framework and Commissioning Outcomes Framework to ensure that reducing the incidence of hospital-related VTE is a priority for national and local commissioners[15],[16], as well as the development of a quality standard for VTE prevention which defines high quality clinical care. The Committee should refer to these documents and consider how these indicators and standards can be adapted for NHS Wales. Whilst risk-assessment for VTE is key, it is important that patients receive appropriate treatment

The prevention and treatment of hospital-acquired VTE in Wales

Whilst Bayer recognises that many of the tools used in England will not be appropriate for the Welsh healthcare system, there are learnings that Wales can take and adapt from from the principles of prioritising VTE prevention in England, including the importance of:

- National guidance, standards and political prioritisation
- Data collection and measurement of outcomes for commissioners, providers and patients
- Financial incentives for providers

To build on the work undertaken by the 1,000 Lives Campaign, set out below are some recommendations on how the Welsh Assembly Government may want to apply these principles to strengthen the prevention of hospital-acquired VTE in Wales and improve the effectiveness of treatment.

National guidance, standards and political prioritisation
The 1,000 Lives Plus risk assessment tool is a robust resource for carrying out a VTE risk assessment, and the guidance for delivering on England's CQUIN goal of risk assessing hospital inpatients for VTE (developed by Lifeblood, the King's Thrombosis Centre, VTE Exemplar Centres and sponsored by the 1,000 Lives campaign) is a thorough and helpful guide for hospital staff seeking to implement one. Bayer recommends that the Welsh Assembly Government adapt these resources and publish guidance for LHBs to implement a mandatory VTE risk assessment for all new hospital inpatients.

Alongside this, VTE prevention and treatment should be made a key priority for NHS Wales within the NHS Wales Annual Quality Framework, and indicators should be included to benchmark national and local performance; for example:

- Adult patients who have had a VTE risk assessment on admission to hospital, using the clinical criteria of the national tool
- Hospital-acquired VTE mortality
- Incidence of hospital-acquired VTE
- Emergency readmissions with a diagnosis of VTE

This should be supplemented by a letter from the Minister and Chief Medical Officer for Wales to all local health boards (LHBs) asking them to prioritise the prevention and treatment of hospital-acquired VTE. LHBs should be required to work with their NHS trusts to agree and implement national guidance on hospital-acquired VTE prevention.

Data collection and measurement of outcomes for commissioners, providers and patients
The patient must be put at the centre of this process, which should therefore be as open and transparent as possible. Given this, hospitals should submit data quarterly on these indicators to NHS Wales on VTE risk assessment and treatment. These data should be published by NHS Wales quarterly so that patients and commissioners can see how diligent local hospitals are in risk assessing inpatients for VTE, and NHS Wales can benchmark both national and local performance. The Welsh Assembly Government should maintain oversight of this process.

Financial incentives for providers

While creating a financial incentive scheme along the lines of the CQUIN scheme may not be possible or appropriate in Wales, the Welsh Assembly Government should consider developing a financial incentive scheme for providers to encourage the uptake of VTE risk assessment and treatment. This scheme may be useful in clinical areas beyond hospital-acquired VTE.

Improving the outcomes of patients on pharmacological prophylaxis

As stated in NICE Clinical Guideline 92, *Venous thromboembolism: Reducing the risk of venous thromboembolism (deep vein thrombosis and pulmonary embolism) in patients admitted to hospital,* all patients identified as at-risk should be offered VTE prophylaxis[17]. Prophylaxis can come in a number of forms:

- **Mechanica**l VTE prophylaxis such as anti-embolism stockings, foot impulse devices, intermittent pneumatic compression devices (thigh or knee length).
- **Pharmacological** VTE prophylaxis, such as unfractionated heparin (UFH), low-molecular-weight heparin (LMWH), oral agents and non-vitamin K antagonists (non-VKA) (warfarin) [18]

However, they also have different degrees of efficacy; current guidelines recommend that at-risk medical patients should be offered pharmacological prophylaxis unless their risk of bleeding outweighs their risk of VTE[19,20].

For patients at risk who require pharmacological interventions, there are a number of challenges with current treatment options, such as Low Molecular Weight Heparin (LMWH) in combination with warfarin for patients who suffer from VTE. LMWH is administered via injection. As most DVT patients are managed as outpatients, this requires either self-administration, which can be a problem in patients with a needle phobia, elderly patients or patients with poor dexterity, or a daily visit to or from a healthcare professional. The dose of LMWH has to be prescribed based on the weight of the patient and renal function. Safety issues related to inappropriate dosing were the subject of a recent report by the National Patient Safety Agency (NPSA)[21].

The NPSA has issued a safety alert about anticoagulants, including warfarin (which patients are prescribed in conjunction with LMWH) suggesting ways in which preventable harm can be avoided[22]. Warfarin requires regular attendance at an anticoagulation clinic to monitor and adjust treatment dose. This can be problematic for people in full-time employment, who can find it hard to take time off work, and the elderly who might find it difficult to regularly attend clinic. Also, regularly changing the dosage of medication can be confusing. These challenges can reduce the efficacy of treatment for patients at risk of VTE, and, as a result, impact patient outcomes, leading to emergency readmissions for patients following discharge.

It is therefore clear that there is an unmet need in treatment for patients with VTE. However, there are treatments emerging in this area which hold promise to improve the quality of life and outcomes for patients with DVT by simplifying the treatment pathway and bringing care closer to home. It will be critical that these treatment options are adopted by NHS Wales and made available to patients as appropriate to help improve the management and outcomes of hospital inpatients at risk of VTE.

Summary of recommendations

Bayer makes the following recommendations to the Welsh Assembly's Health and Social Care Committee to reduce the incidence of hospital-acquired VTE across the Welsh NHS:

- The Welsh Assembly Government should mandate VTE risk assessment for all hospital inpatients and develop guidance to support this
- The Minister and Chief Medical Officer for Wales should write to all LHBs asking them to prioritise the prevention and treatment of hospital-acquired VTE
- VTE prevention and treatment should be made a key priority for NHS Wales within the NHS Wales Annual Quality Framework, and indicators should be included to benchmark national and local performance, including:
    - Adult patients who have had a VTE risk assessment on admission to hospital, using the clinical criteria of the national tool
    - Hospital-acquired VTE mortality
    - Incidence of hospital-acquired VTE
    - Emergency readmissions with a diagnosis of VTE
- Hospitals should be required to report on how they intend to incorporate the risk assessment into their standard practice; and LHBs should coordinate these responses and report back to the Welsh Assembly Government
- Hospitals should be required to submit quarterly data on their performance against these indicators and these data should be collated and published by NHS Wales
- The Welsh Assembly Government should consider developing a financial incentive scheme for providers to encourage the uptake of VTE risk assessment and treatment
- Recently developed treatments for anticoagulation should be adopted by NHS Wales at the earliest opportunity

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