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Thrombus

INNOVATION AWARDS 2011

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Foreword

DAVID LAKE

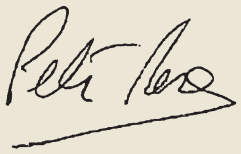
Peter Rose, *Thrombus* Editor, welcomes guests to the awards

The *Thrombus* Innovation Awards Ceremony was held on 22 November 2011 at the Royal Society of Medicine in London. This is now the third Innovation Awards ceremony and the level of interest and high standard of applications has made it a very competitive process. Five teams were invited to the awards ceremony, two of which were highly commended, with three teams receiving cash prizes of £1,000, £2,000 and £5,000. Yet again, there was very little to choose from between many of the applications and there was only the smallest margin between all the prize winners. The Queen Elizabeth Hospital, Birmingham, the previous winners of the very first Innovation Award, came third, with the thrombosis team from Guy's and St Thomas' Hospital, London, coming in second place, for the second year in a row. The winning entry came from University Hospital Southampton NHS Foundation Trust. Abstracts of all of the shortlisted innovations are presented within this supplement.

I am very grateful to all who contributed to the successful day, in particular Dr Patrick Kesteven, who was this year's guest lecturer, with a highly topical presentation on 'Venous thrombosis in celebrities'. Finally, I would like to offer thanks to all the members of the *Thrombus* Editorial Board who formed the judging panel, and to Boehringer Ingelheim, who provide an educational grant to Hayward Medical Communications to support this publication.

The award ceremony was an enormous emount of fun and I am sure all guests, and those involved in the organisation of it, thoroughly enjoyed the day. The occasion provided the opportunity for the teams to be acknowledged for their hard work.

I am pleased to announce that there will be a further Innovation Awards ceremony next year so I would encourage all readers to consider putting in an application.



Peter Rose, Editor

The winners and highly commended entries were as follows:

4 Winner
Introducing a new approach to providing patient information relating to oral anticoagulant therapy
University Hospital Southampton NHS Foundation Trust

5 Second place
An iPhone app for thrombosis and anticoagulation guidelines
Guy's and St Thomas' NHS Foundation Trust

7 Third place
West Midlands Venous Thromboembolism Quality Observatory
Queen Elizabeth Hospital Birmingham

8 Highly commended
End of initial venous thrombembolism treatment
Addenbrooke's Hospital, Cambridge

8 Highly commended
Transformation to a nurse-led anticoagulation service
Whaddon Medical Centre, Milton Keynes

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1. The team from Addenbrooke' s Hospital, Cambridge receive their certificate for their highly commended project

2. Guests settle down for their meal before the Thrombus *Awards ceremony*

3. Patrick Kesteven delivers his guest lecture

4. The team from Whaddon Medical Centre, Milton Keynes receive their certificate for their highly commended project

ALL PHOTOGRAPHS: ROBIN BECKHAM


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Winner

Introducing a new approach to providing patient information relating to oral anticoagulant therapy

University Hospital Southampton
NHS Foundation Trust

Project lead: Tracy Graham
Team members: Judith Effeny, Adriana Falcinelli, Angela Hempel, Rashid Kazmi, Lizete Pearson, Tobias Truckle-Jones and Geoff Wharam

ROBIN BECKHAM

The aim of this project was to improve patient information about warfarin by developing an innovative method to deliver counselling information. The Trust achieved this by:

- Setting up a multidisciplinary working party to implement the recommendations from the National Patient Safety Agency (NPSA) Alert 18 *Actions that can make anticoagulant therapy safer.* This involved ensuring that patients receive adequate information about treatment with anticoagulants
- Identifying a suitable alternative method to provide counselling information. The team reviewed literature on the delivery of patient information and surveyed primary and secondary care, as well as patient groups, to establish which formats would be most suitable. It was decided to develop a DVD.
- Developing new content. The team used the counselling information that the Trust would expect to be provided to patients, current information about anticoagulants, the in-house warfarin checklist and its knowledge of the anticoagulant team to decide what to include in the video. A group of patients were invited to participate in the developing and filming of the DVD.

Background

Patients consistently report that they have unmet needs for information about their treatment.[1] This is due to the disparity between the information that healthcare professionals perceive patients as wanting, and the types of information that patients actually want.[2] This includes the lack of agreement between healthcare professionals and patients as to what information is important to provide in a consultation.[3] Patient satisfaction, or the patient experience, has been identified as one of three cornerstones for the NHS's definition of high-quality care.[4]

Anticoagulants are often identified as causing preventable harm and hospital admissions. Among the recommendations in the NPSA Alert 18 was to ensure that patients prescribed anticoagulation receive adequate information.[5]

From experience, and individual patient feedback, we know that patients do not always retain all information provided to them in the healthcare setting, and that written information is not always the most suitable medium. We surveyed primary and secondary care, as well as patient groups, to establish which other formats would be most suitable.

The use of video modelling for the delivery of patient information has proven benefits for clinical practice in facilitating knowledge acquisition. Review of the literature, and evaluation of evidence relating to clinical information given, has shown that patients who have viewed footage regarding treatment options develop greater understanding of the risk/benefits involved, and are more likely to be active participants in care.[6]

It was recognised that this ambitious project would require sufficient time to liaise with all stakeholders, and a 12-month time scale was agreed for completion.

Results

The video has been available since April 2011. It has been made available to watch via the Trust intranet and internet pages, and is also available on a DVD . This enables it to be watched by inpatients, as well as at home with family and carers.

This solution enables patients to revisit the information when needed, even if a healthcare professional isn't present at the time. Information is

Winner

accessible in a different format, in addition to the information already provided in the NPSA information packs.

The video provides information about how warfarin works and how it may be affected by other medication, diet and lifestyle changes. Advice is given on the importance of concordance with medication, regular international normalised ratio monitoring, and how patients can keep themselves safe. We have received excellent feedback from patients and staff.

Assessing the benefits to the wider health economy is difficult to measure. There is a drive for innovative, accurate and effective patient information to empower patients to be more involved in their care and participate in decision-making. This, in turn, leads to a reduction in adverse events and improved patient safety and satisfaction.

Sustainability

Utilising an electronic format for the provision of patient information makes this into an easily scalable and sustainable project. The total production cost for the video was £1,000. Due to interest from other primary and secondary care providers, including the private sector, the video is now also available to purchase as a DVD, and to download from the King's Thrombosis Centre website free of charge.
Due to the positive feedback, and the amount of interest the video has generated, the Trust is considering utilising this approach for other aspects of patient information, particularly in relation to thrombosis medicine.

The future

The Trust is currently involved in a service evaluation of patient satisfaction with anticoagulant information. The results from this work will provide us with a baseline with which to compare future service evaluations in this area. We hope to show an improvement in patient satisfaction with the use of this video ■

References
1. Dolovich L. Ensuring that patients' drug information needs are met. *Can J Hosp Pharm* 2003; **56:** 133–135.
2. Nair K, Dolovich L, Cassels A *et al.* What patients want to know about their medications. Focus group study of patient and clinician perspectives. *Can Fam Physician* 2002; **48:** 104–110.
3. Tarn DM, Paterniti DA, Williams BR, Cipri CS, Wegner NS. Which providers should communicate which critical information about a new medication? Patient, pharmacist, and physician perspectives. *J Am Geriatr Soc* 2009; **57:** 462–469.
4. www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/documents/digitalasset/dh_085828.pdf (last accessed 23 November 2011)
5. Baglin TP, Cousins D, Keeling DM, Perry DJ, Watson HG. Recommendations from the British Committee for Standards in Haematology and National Patient Safety Agency. *Br J Haematol* 2007; **136:** 26–29.
6. Krouse HJ. Video modelling to educate patients. *J Adv Nurs* 2001; **33:** 748–757.

Second place

An iPhone app for thrombosis and anticoagulation guidelines

Guy's and St Thomas' NHS Foundation Trust

Project lead: Beverley Hunt
Team members: Becky Chanda, Christopher Floyd, Terry Parlett and Steven Williams

The aim of this project was to develop a downloadable iPhone application allowing all junior doctors within the Trust and other hospitals worldwide to have access to all the unique Guy's and St Thomas' NHS Foundation Trust guidelines on the prevention and management of thrombosis and anticoagulation. The team worked with guidelines that had been produced by the multidisciplinary Centre for Haemostasis and Thrombosis committee.

The benefits of having all aspects of thrombosis care summarised in elegant algorithms, immediately available for healthcare professionals to access on their iPhone, were an exciting prospect. Accessing our current guidelines is possible on our Trust intranet but takes time, effort and a suitable PC. We hope that having an iPhone app will reduce the error rate in the management and prescribing for patients, due to the ease of access to the guidelines. We also hope that the presence of an iPhone app will make the field of thrombosis more attractive to health professionals as it is perceived as a difficult and complex area by many.

Background

Over the last few years the multidisciplinary Centre for Haemostasis and Thrombosis at Guy's and St Thomas' NHS Foundation Trust has developed a unique and expansive range of guidelines for the prevention and management of venous thromboembolism, and also for the management of anticoagulation in adult hospital inpatients.

The guidelines are presented in a simple and attractive format, using easy-to-read graphical algorithms. The guidelines are in full agreement with the National Institute for Health and Clinical Excellence's Clinical Guideline 92 on *Venous thromboembolism: reducing the risk of venous thromboembolism in patients admitted to hospital.*

The Guy's and St Thomas' guidelines include:

- Venous thromboprophylaxis in acutely ill medical patients (including stroke)
- Venous thromboprophylaxis in adult surgical patients
- Venous thromboprophylaxis for general orthopaedic patients
- Venous thromboprophylaxis for orthopaedic patients undergoing hip or knee replacement
- The acute management of deep vein thrombosis
- Initiation of warfarin therapy
- Perioperative bridging of warfarin in adult patients undergoing elective surgery
- Management of over-anticoagulation in adult patients
- Adult guidelines for unfractionated heparin infusions for systemic anticoagulation.

These guidelines won the second prize in the *Thrombus* Awards last year. The prize money was used to develop an iPhone app, in conjunction with two of our specialist registrars who have expertise in building iPhone apps for medical education.

We decided to pursue this route of development after consultation with junior doctors in our Trust. In considering Trust guidelines in general we identified that most junior doctors at our Trust (80–90%) find the guidelines useful or very useful, yet only half carry paper copies daily, and the majority (95%) felt an app would be beneficial. This was in line with our assessment that iPhone apps allow junior doctors to have an easily accessible aide-mémoire to their practice. We considered the iPhone to be an appropriate initial platform, since our survey identified that 60–70% of junior doctors use one.

We set a timescale of six months to build the app, sort out intellectual property rights, ensure we had suitably worded disclaimers and develop our logos. We felt that this app needed to be freely available to all medical staff, and set out on a small publicity campaign to ensure that key opinion leaders knew of its existence, and that its uptake would spread by academic lecturing and word-of-mouth.

Results

The iPhone app was released in the third week of July 2011. Within a week the app was listed in the 'New and Noteworthy' section of iTunes and it has been included in the 'What's Hot' section. Total international downloads exceeded 1,200 within the first five weeks of release, and the app has featured in the medical iTunes 'Top 100' downloads in 13 countries.

The app was showcased at the launch of the Department of Health's competition to find new ideas for medical smartphone apps.

Sustainability

The app is sustainable long-term as we are able to introduce sequential changes in the future, and release live updates to roll out these changes to our user base.

We will review the content every six months and upload all new guidelines developed since the app's release. For example, we now have guidelines on the management of pulmonary embolism and heparin-induced thrombocytopenia that are near completion. The app will remain free and will continue to be advertised at international conferences in the future.

We plan to develop further apps covering other areas of thrombosis; for example, information for patients and medical student education. Importantly, the next stage is to develop this app for Android phones so that all health professionals can access this information and treat patients accurately and swiftly. This is the first publicly available smartphone app giving detailed information about thrombosis ■

Third place

West Midlands VTE Quality Observatory

Queen Elizabeth Hospital Birmingham

Project lead: Will Lester
Team members: Fiona Alexander, Harpreet Bassi, James Bentley, Jamie Coleman, Simon Edwards, Liz Hughes, Sajon Khosla, Patrick Moore, Domenico Pageno, Daniel Ray and Sarah Thomas

ROBIN BECKHAM

This project was a multidisciplinary initiative to develop innovative tools to both measure and improve the quality of care in prevention and treatment of venous thromboembolism (VTE). We achieved this by developing three tools.

Monitoring

First, a tool was developed to monitor readmissions and deaths from VTE within 90 days of discharge from all NHS hospitals in England. The objective is to inform each individual hospital and each strategic health authority (SHA) of their performance over time in comparison with other hospitals and SHAs. It can be used to monitor the impact of interventions to reduce VTE death and readmission, and can be used for root cause analysis. The data are available electronically through health evaluation data (HED) and have been provided for the chairs of thrombosis committees in the West Midlands at the regional Thrombosis Forum.

Patient information

A free multimedia tool was developed to provide public, patient and carer information/education on hospital-acquired VTE. High-quality patient information is expensive and is rarelymade publicly available free of charge. A video was produced by the team at University Hospitals Birmingham NHS Foundation Trust for public, patient and carer education.

E-learning

A tool was developed to improve education of medical staff in treatment and prevention of VTE. Education of medical staff is also key to providing high-quality care in the prevention and treatment of VTE. SCRIPT is a project that aims to develop a set of e-learning packages for junior doctors on the subject of prescribing and therapeutics. It is compulsory for all foundation 1/2 doctors in the West Midlands to complete, is based on up-to-date guidelines and includes an assessment of learning.

Results

Most hospital trusts try to identify VTE events occurring during admission. However, most events occur after discharge and may involve another hospital or a community death without feedback to the original treating hospital. The dataset includes:

- VTE risk assessment rates with national comparisons
- Absolute numbers and rate of readmission of patients with VTE within 90 days of discharge. This tracks the event back to the original hospital, even if the readmission is to another NHS hospital within England
- Pulmonary embolism mortality (as primary cause of death) within 90 days of hospital discharge
- Data are presented in comparison with other trusts over a period of several years to assess trends.

A pilot set of data was reviewed by two hospital trusts. Both found the data to be relatively accurate despite using Hospital Episode Statistics data based on hospital coding. The data is now available for all hospitals using HED (most hospitals in the West Midlands) and can be given by request on an 'as and when required' basis to thrombosis committee chairs in hospitals which don't use HED.

The patient video is shown on screens in outpatient waiting areas at the Queen Elizabeth Hospital, and is shown throughout the day on TV screens in 52 GP surgeries. Early feedback has been positive from subjects used to test the SCRIPT anticoagulation module.

The project represents a collection of multidisciplinary projects with a common theme – to offer innovative tools that can be used by any NHS healthcare organisation to both monitor and improve healthcare outcomes in relation to prevention and treatment of VTE ■

Highly commended

End of initial VTE assessment

Addenbrookes Hospital, Cambridge

Project lead: Caroline Baglin
Team members: Antonia Alcaraz, Trevor Baglin, Gill Carr, Joan Clifford, Val Cooke, Angela Davis, Jess Fletcher, Nazia Hussain, Lynn Law, Roger Luddington, Stephen MacDonald, Christina Sleep and Pam Tansey

Addenbrooke's Hospital has introduced an end of initial treatment assessment for patients with venous thromboembolism (VTE). This assessment has been developed to ensure that the right patients remain on long-term treatment. This type of assessment obviates the need for consultant involvement at every stage.

Innovation

When patients begin treatment they are registered with our service. A VTE care pathway is completed by the anticoagulant nurse. This pathway identifies any patient that has had a first episode of unprovoked VTE. These patients are seen in the thrombophilia clinic one month after completing initial anticoagulant treatment for an assessment of their risk of recurrence of VTE.

The assessment includes discussion and documentation of the patient's weight, smoking habits and travel needs. A post-thrombotic syndrome assessment using the Villalta scoring system is performed, then the patient's activity levels are discussed, and leg care advice given. Family history of VTE is also recorded and a patient's sex is taken into consideration. A partial thrombophilia test (or a full one if required) and a D-dimer measurement are offered to patients. The assessment gives the opportunity to identify any new medical, behavioural or social conditions. This leads to a final decision on duration of oral anticoagulant treatment. This programme is now part of the routine care offered by the outpatient anticoagulant service.

Results

This assessment helps streamline the use of anticoagulant services and ensures that they reach the appropriate patient. These principles are transferrable to the new oral anticoagulants and can also be extended to include a cardiovascular risk assessment ■

Highly commended

Transformation to a nurse-led anticoagulation service

Whaddon Medical Centre, Milton Keynes

Project lead: Yee-Mai Amy Wong
Team members: Manjit Basi, Susan O'Farrell, Toni Fisher, Naguib Hilmy and Alison Young

The previous system of managing warfarin patients at Whaddon Medical Centre involved the following.

- Receptionists would phone and inform patients of their new dose and of their next appointment.
- A healthcare assistant (HCA) carried out the near patient testing (NPT) for international normalised ratio on Tuesdays and Thursdays. They then passed the results to the GPs.
- The GPs then read the result cards, made the dose adjustments after the morning clinic and gave the cards to the receptionists.

New approach

It seemed that the above method took up much more time and staffing than was necessary and it was decided to adopt a 'bottom-up approach' to introduce change, involving both staff and patients.

- Clinics are run every Monday and Thursday morning and HCAs have a five-minute appointment to carry out NPT for each patient.
- Nurses follow the protocol to counsel the patients, adjust the warfarin dose as required, and give out the next appointments.
- Nurses only see those patients who attend clinics. House-bound patients continue to have a venous blood sample taken by district nurses and doses are adjusted by the duty GP.
- Self-monitoring patients keep contact with nurses by either telephone or email, for results and new dosage.
- A patient satisfaction survey and staff evaluation will be carried out by the end of the trial study.

Benefits

The new approach has minimised time wastage for GPs, receptionists and patients. Patient satisfaction has increased as they are clearer about how much warfarin to take and when to return, there is no need for them to stay at home or ring the surgery for results, plus they have a single point of contact if there is cause for concern. The new system also increases nurses' job satisfaction and aids their professional development ■