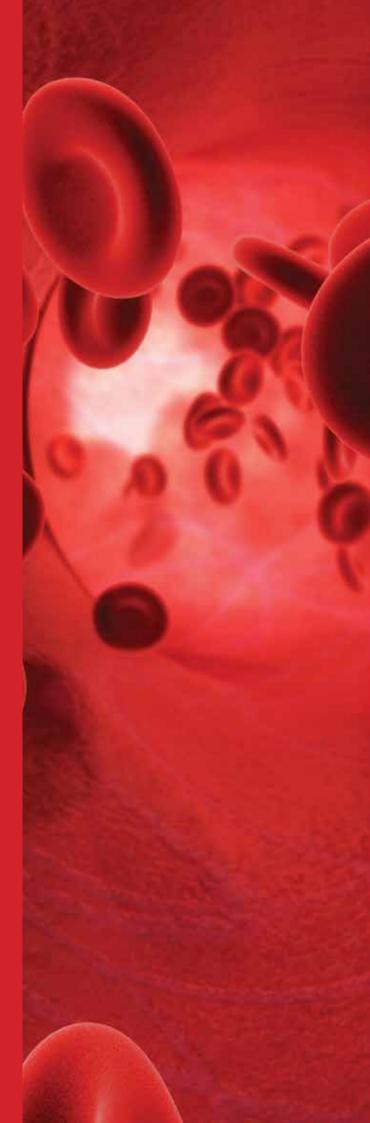


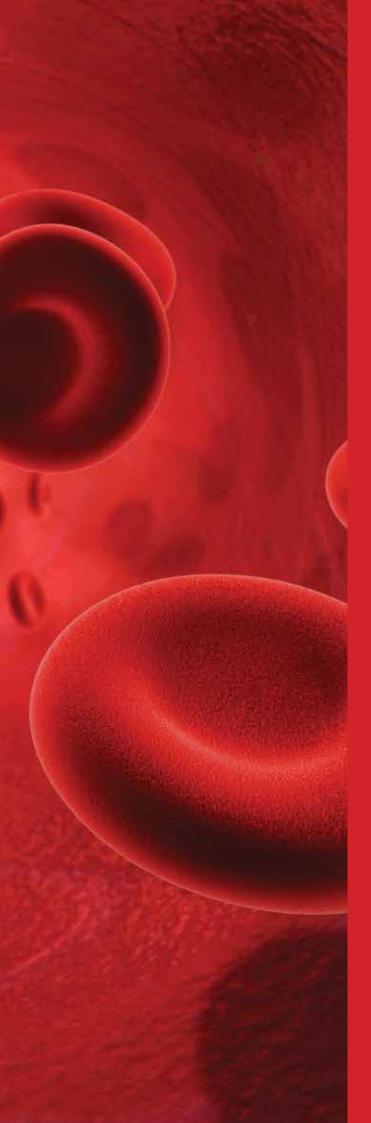




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ABOUT VTE

Venous thromboembolism (VTE) is a condition in which a thrombus — a blood clot — forms in a vein. Usually, this occurs in the deep veins of the legs and pelvis and is known as deep vein thrombosis (DVT). The thrombus or its part can break off, travel in the blood system and eventually block an artery in the lung. This is known as a pulmonary embolism (PE). VTE is a collective term for both DVT and PE.

With an estimated incidence rate of I-2 per I,000 of the population,VTE is a significant cause of mortality and disability in England with thousands of deaths directly attributed to it each year. One in twenty people will have VTE during their lifetime and more than half of those events are associated with prior hospitalisation. At least two thirds of cases of hospital-associated thrombosis are preventable through VTE risk assessment and the administration of appropriate thromboprophylaxis.

CHAIR'S FOREWORD

Dear Colleague,

As the Chair of the All-Party Parliamentary Thrombosis Group (APPTG), I am delighted to launch our Annual Review.



Since its inception ten years ago, the APPTG has produced annual reports to support the implementation of best practice in VTE prevention in the NHS. Drawing on the evidence gathered by our Annual Surveys of Acute Trusts and CCGs, our reports provide a comprehensive overview of progress in implementing best practice; identify areas for future improvement; and offer recommendations on what more can be done to ensure that NHS services are underpinned by high quality VTE prevention and management.

The Trust specific data gathered to inform this report's findings will be used to update VTEscorecard.com, the APPTG's e-scorecard atlas. This online tool allows Trusts to benchmark their performance against others in England, by searching for data corresponding to a series of key VTE prevention indicators. We hope that the e-scorecard atlas will help Trusts to recognise their successes and identify areas that require further improvement in the future.

In addition to our regular questions which monitor adherence to VTE best practice standards, our 2016 survey sought greater detail on the pathways in which hospital associated thrombosis most commonly occurs and the circumstances surrounding occurrences of hospital associated thrombosis. Separate research conducted by the APPTG this year has highlighted the increased risk of clots faced by patients undergoing treatment for cancer. We found that 4,224 cancer deaths in England and Wales last year may have been caused by preventable blood clots. Despite this, we found that only a third of Hospital Trusts have a dedicated policy or pathway for the risk assessment and management of suspected blood clots in patients receiving chemotherapy.

By identifying the pathways in which hospital associated thrombosis most commonly occurs, we hope to highlight where more tailored attention may be needed. While most hospitals now have a Trust-wide VTE prevention and management policy, supplementary policies may be necessary for particular treatment pathways – including cancer treatment.

This year's survey also sought information on admissions for VTE occurring in the community, and the proportion of these admissions that were for patients who had a previous hospital stay up to 90 days earlier. The majority of cases of hospital associated thrombosis occur after a patient is discharged. As such, it is vital that those responsible for a patient's care within the community, as well as the patients themselves, are fully informed of their VTE risk and the steps that should be taken if a clot is suspected. Separate research undertaken by the APPTG this year indicates that this communication is a key area for improvement across the country.

Looking ahead, the APPTG is keen to ensure that clear standards are maintained for VTE prevention and management in an increasingly integrated health and social care system. As the health service explores new models of care and seeks to move more care out of the hospital setting, many of the traditional boundaries between secondary, primary and social care are dissolving. Each part of the system therefore needs to have a clear understanding of its role and responsibilities in VTE prevention and management so that a joined-up approach can be taken. The APPTG conducted research this year on current standards in VTE prevention and management within the care home setting, highlighting some areas of good practice worth emulating. Going forward, we will continue to highlight examples of best practice and identify areas for improvement to support a joined-up approach to VTE prevention and management within an integrated health and social care system.

I hope you find our Annual Review informative and that it inspires you to continue your work in helping to spread awareness of best practice in VTE prevention and management, whatever your role in the health system.

Andrew Gwynne MP Chair, All-Party Parliamentary Thrombosis Group

therew Jung

SUMMARY OF FINDINGS

92%	of Trusts stated they have in place a written policy for preventing and also managing the risks of VTE for adult hospital admissions in line with NICE Quality Standard 3.
4th	Of Trusts able to provide this information, cancer was the 4th most common pathway in which hospital associated thrombosis occurred.
Only 40%	of Trusts performed Root Cause Analysis for all confirmed cases of hospital associated thrombosis in every quarter of the period lasting from 1 April 2015 to 31 March 2016.
Only 7%	of CCGs indicated that they request hospital associated thrombosis Root Cause Analysis reports from providers on a monthly basis.
92%	of CCGs have clearly mandated in their providers' service contracts that failure to comply with best practice in VTE prevention will result in sanctions.
Only 7%	of Trusts indicated that their commissioners had imposed a sanction on them for failing to deliver the national VTE risk assessment threshold.
Only 7%	of CCGs have established a locally agreed CQUIN goal for Root Cause Analysis of hospital associated thrombosis.
About I/3	of admissions for VTE occurring in the community were for patients with a previous hospital stay up to 90 days prior.
77%	of Trusts have developed and distribute their own patient information leaflets on VTE prevention.

The results are presented in five sections, examining VTE prevention policies; hospital associated thrombosis; mandating VTE best practice; occurrences of VTE in the community setting; and, patient information. With a response rate of 89 Trusts and 74 CCGs, we are confident that our survey results represent an accurate picture of activity across England.

VTE PREVENTION POLICY

Best practice in VTE prevention has been summarised in NICE Quality Standard 3 (Venous Thromboembolism Prevention Quality Standard), which was issued in June 2010. The Quality Standard provides seven specific, concise quality statements to provide patients, clinicians and healthcare commissioners with a definition of high quality care in VTE prevention.

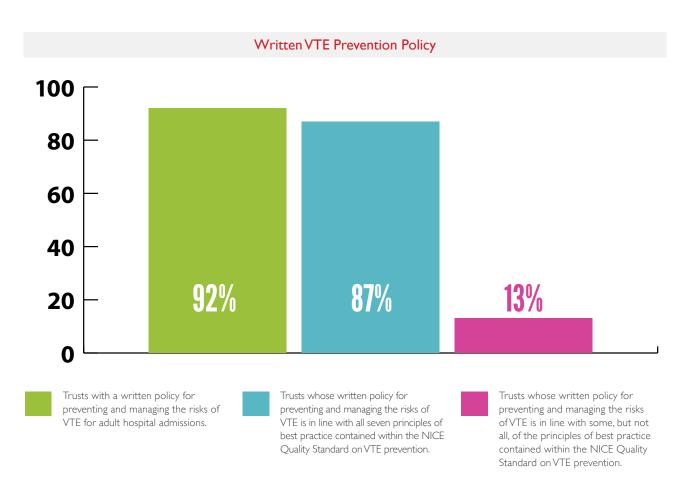
NICE QUALITY STANDARD 3:VTE PREVENTION		
Statement I	All patients, on admission, receive an assessment of VTE and bleeding risk using the clinical risk assessment criteria described in the national tool.	
Statement 2	Patients/carers are offered verbal and written information on VTE prevention as part of the admission process.	
Statement 3	Patients provided with anti-embolism stockings have them fitted and monitored in accordance with NICE guidance.	
Statement 4	Patients are re-assessed within 24 hours of admission for risk of VTE and bleeding.	
Statement 5	Patients assessed to be at risk of VTE are offered VTE prophylaxis in accordance with NICE guidance.	
Statement 6	Patients/carers are offered verbal and written information on VTE prevention as part of the discharge process.	
Statement 7	Patients are offered extended (post hospital) VTE prophylaxis in accordance with NICE guidance.	

The APPTG has always recommended that all seven statements of the NICE Quality Standard should be incorporated into Trusts' written policies on VTE prevention.

Of the Trusts that responded to this year's survey, 92% stated that they have a written policy in place for the prevention and management of the risk of VTE in adult hospital admissions which is in line with NICE Quality Standard 3. All responding Trusts also provided a copy of their policy to illustrate this.

Of these Trusts, 87% indicated that their policy includes all seven principles of best practice set out in the NICE Quality Standard. The most commonly omitted statement was Statement 4, which stipulates that patients should be reassessed within 24 hours of admission for risk of VTE and bleeding. It is important that patients are re-assessed within 24 hours as their condition may have changed during this time.

The proportion of Trusts that have a VTE prevention and management policy in line with national best practice guidance has remained relatively constant with last year's findings, with a difference of only 2%. This year's results do show a 15% rise from 2015 in the number of Trusts whose policies incorporate all of NICE Quality Standard 3's seven statements of best practice. This is encouraging to see, and the APPTG continues to recommend that all Trusts incorporate the full set of NICE Quality Standard 3's best practice statements in their written policies for VTE prevention and management.



HOSPITAL ASSOCIATED THROMBOSIS

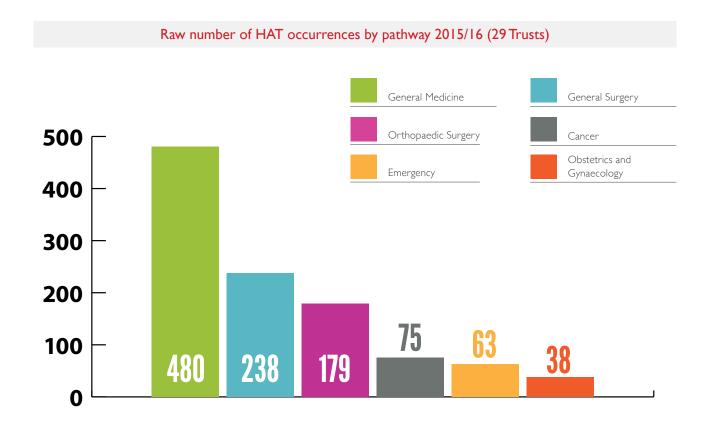
a) Occurrence of hospital associated thrombosis

NHS England's Medical Director, Sir Bruce Keogh, has labelled the prevention of hospital associated thrombosis (HAT) as a top clinical priority. While significant progress has been made over the past decade in the prevention of HAT via the work of the National VTE Prevention Programme, hospital associated blood clots remain a key patient safety concern.

In order to gain a clearer picture of the current burden of HAT in hospitals in England, the APPTG asked Trusts to list their number of confirmed HAT for all four quarters of the period between 1 April 2015 and 31 March 2016. Of the Trusts that were able to provide

this data, the average number of occurrences of HAT per Trust in 2015/16 was 72. This ranged from as little as 0 occurrences in one Trust to as many as 348 in another. There is therefore considerable variation in occurrences across the country.

This year's survey asked Trusts to list the pathways in which HAT occurred. Only 29 Trusts were able to provide this level of information, though not for every quarter of 2015/16. Their combined results provide a snapshot indication of the pathways in which HAT most frequently occurs. This is illustrated in the following table:



It is notable that cancer was the fourth most common pathway in which HAT occurred. The APPTG's 2016 research into VTE in cancer patients identified that only one in three Trusts (35%) have a dedicated policy or pathway for the risk assessment and management of suspected blood clots in patients receiving chemotherapy, and less than half of Trusts (44%) are providing patients with both written and verbal information about the risk of developing a blood clot during cancer treatment, symptoms to look out for and action to take if they suspect a clot. The evidence from this year's Annual

Survey highlights the need for strengthened VTE prevention practices for cancer patients.

This year's survey also sought further information from Trusts' Root Cause Analysis (RCA) reports on the circumstances surrounding occurrences of HAT. While not all Trusts were able to provide this level of detail, the results received give an indication of what the common trends may be in HAT occurrences. The following table details the total number of HAT occurrences reported for each of the following circumstances:



These findings corroborate the answers given on patient pathways which indicated that HAT occurs more commonly in general medicine than in surgical patients. The true numbers of HAT occurring after discharge are likely to be much higher, as it is understood that most cases of HAT occur once the patient is out of the hospital. It is therefore most likely that most of these post discharge occurrences were not subject to a Root Cause Analysis.

It is concerning that so many occurrences of HAT were reported in patients who had not received thromboprophylaxis prior to HAT. The purpose of conducting VTE risk assessment is to identify those patients who should be receiving thromboprophylaxis and then to administer the appropriate thromboprophylaxis for their condition.

b) Root Cause Analysis

RCA enables Trusts to conduct a structured analysis of the reasons behind each case of HAT, and allows them the opportunity to feed their learnings back into their quality management frameworks. Drawing lessons from former shortcomings in this way and adapting local practice accordingly is a major driver of service improvement and instrumental to instilling a sense of accountability amongst Trusts and local commissioners. RCA has an important role in helping Trusts conduct their responsibilities in line with the statutory duty of candour.

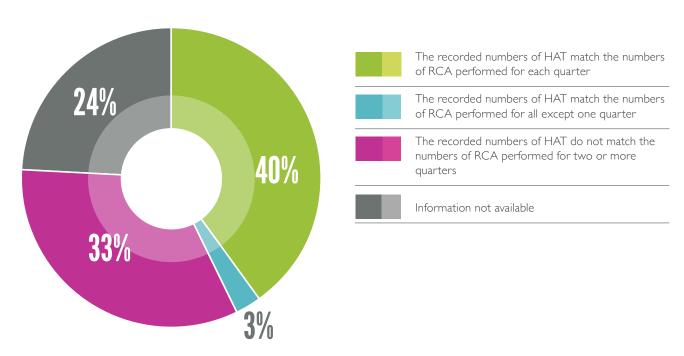
Service Condition 22 of the NHS Standard Contract 2015/16 outlines that providers must:

"Perform Root Cause Analysis of all confirmed cases of pulmonary embolism and deep vein thrombosis acquired by Service Users while in hospital (both arising during a current hospital stay and where there is a history of hospital admission within the last 3 months, but not in respect of Service Users admitted to hospital with a confirmed venous thromboembolism but no history of an admission to hospital within the previous 3 months)..."

The provider is required to report the results of these RCAs to the coordinating commissioner on a monthly basis. To be compliant with Service Condition 22, therefore, the recorded numbers of HAT and RCA should be identical for each quarter. Previous years' surveys have indicated that most Trusts struggle to meet this target. The 2016 survey results suggest that improvements are still needed on RCA reporting. Only 40% of Trusts that responded to our survey indicated that the number of HAT matched the number of RCA performed for each quarter of 2015/16. The chart below illustrates the full breakdown of results:

Root Cause Analysis for all confirmed cases of hospital associated thrombosis

Recorded number of HAT and number of RCA performed (1 April 2015 – 31 March 2016)



c) Ensuring Root Cause Analysis reporting

RCA reporting improves understanding of the proportion of adverse events that could be prevented; enables lessons to be learned from individual episodes; identifies common themes and promotes solutions for cases of inadequate VTE prevention. For these reasons, RCA reports are a vital source of information for commissioners, helping to direct improvements in service. The APPTG had campaigned for the NHS Standard Contract to specify that RCA reports for HAT should be submitted to commissioners on a monthly basis, given their importance in informing quality improvement.

However, previous years' surveys have indicated that most CCGs request this information on a quarterly basis. The 2016 survey found the same result, with 42% of responding CCGs indicating that RCA reports are requested quarterly. Only 7% of responding CCGs indicated that they request RCA reports on a monthly basis.



MANDATING VTE BEST PRACTICE

a) Risk assessment and Root Cause Analysis sanctions

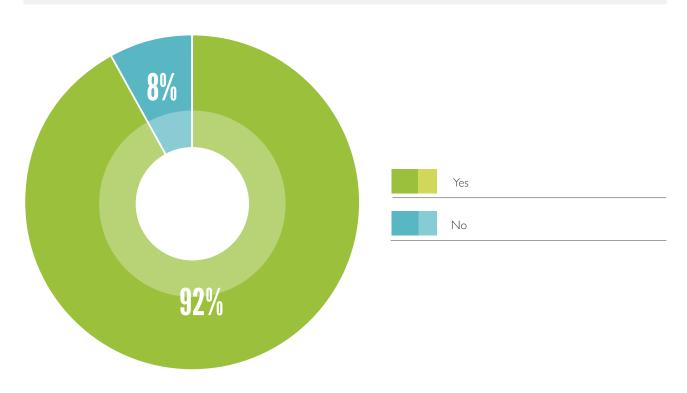
Before it was discontinued in April 2014, the National VTE Prevention CQUIN Goal placed a requirement on Trusts to ensure that 95% of all adult inpatients received a VTE risk assessment on admission to hospital. The use of this financial incentive helped to embed VTE risk assessment as standard NHS practice, and on average, 96% of adult inpatients are risk assessed for VTE on admission to hospital.

While the risk assessment CQUIN was discontinued in 2014, commissioners have alternative means of financially incentivising providers to maintain high VTE risk assessment rates. The NHS Standard Contract 2015/16 included a National Quality Requirement for 95% of inpatients to be risk assessed for VTE. If providers failed to hit this minimum threshold,

they would be subject to sanctions imposed by their local CCG amounting to £200 for every breach above the 95% risk assessment threshold.

This year's Annual Survey found that 92% of responding CCGs have clearly mandated in their providers' service contracts that failure to comply with best practice in VTE prevention will result in sanctions being imposed. The APPTG is encouraged by this indication that CCGs are making use of the sanctions regime set out in the NHS Standard Contract. Financial incentives have proven to be successful in driving best practice in VTE prevention, so it is important that CCGs make clear to their providers that failure to comply with best practice standards will result in a financial penalty.

Has your CCG clearly mandated in its provider's service contracts that failure to comply with best practice in VTE prevention will result in sanctions imposed by your CCG?

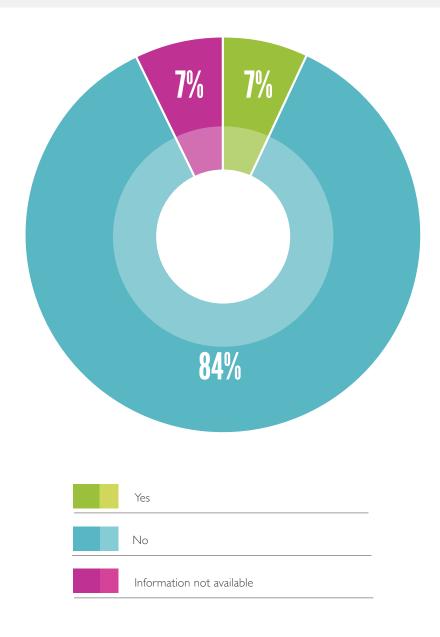


Additionally, this year's survey found that 100% of responding CCGs demand that their secondary care providers demonstrate that their patients are being risk assessed for VTE upon admission. The APPTG is encouraged by this response and continues to urge CCGs to use their powers to enforce these requirements.

Furthermore, the APPTG's Annual Survey asked Trusts if their local commissioning bodies have imposed a sanction on them for failing to deliver the 95% risk assessment threshold. Only 7% indicated that their commissioners have imposed a sanction for this reason, with the value of the sanction imposed ranging from £200 to £370,000.

The low percentage of Trusts that have faced a sanction relating to VTE risk assessment – a slight reduction from last year – demonstrates the extent to which risk assessment is fully standard practice. NHS England's latest national data on VTE risk assessment, which covers the first quarter of 2016, found that the percentage of admitted patients who are risk assessed remains at 96% nationally.

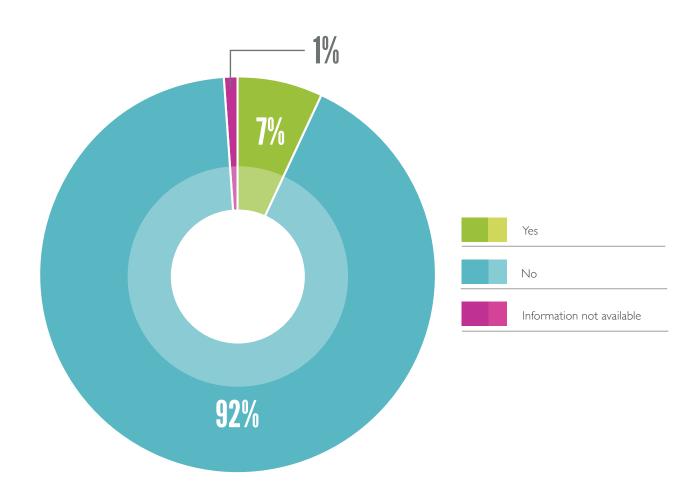
Has your local commissioning body imposed a sanction on your Trust for failing to deliver the minimal VTE risk assessment threshold?



b) Local CQUINs

Before it was withdrawn, the National CQUIN Goal for VTE prevention called for a "locally agreed goal for the number of VTE admissions that are reviewed through Root Cause Analysis." With this requirement no longer in place, the APPTG encourages commissioners to maximise the opportunities provided by local VTE CQUIN goals. Our survey found that only 7% of responding CCGs have established a locally agreed CQUIN goal for RCA of HAT. This is only a 2% change on last year's finding, and suggests that the opportunities presented by local CQUIN goals are still not being maximized.

Has your CCG set a locally agreed CQUIN goal for providers to perform Root Cause Analyses of all confirmed cases of HAT?



Our survey also asked Trusts whether their local commissioning body had imposed sanctions, verbal or written warnings for failure to comply with the national obligation to perform RCA for all confirmed cases of HAT. Only one Trust responded it had. When considered in the context of the APPTG's finding that only 40% of Trusts performed RCA for all cases of HAT in each quarter of 2015/16, it is evident that RCA is not being prioritised.

OCCURRENCE OF VTE IN THE COMMUNITY

The majority of VTE incidents, including HAT, occur outside of the hospital setting. While high standards have been set for the prevention and management of VTE within hospitals, the APPTG has long called for similarly high standards to be established and maintained in the community setting.

This year's survey asked Trusts to provide the number of patient admissions for VTE that occurred outside of a secondary care setting between I April 2015 and 31 March 2016. Only 57% of responding Trusts were able to provide this data. Of these, the average number of admissions per Trust was 342 and the levels ranged from 0 to 1,275.

Additionally, our survey asked Trusts to indicate how many of these patients had a previous inpatient stay at the Trust up to 90 days prior to their admission for VTE. The APPTG found that on average, 34% of these patients had a previous inpatient stay within this time frame. This indicates that their clots may have been hospital associated.

Separate research conducted by the APPTG in 2016 for a report on standards for prevention and management of VTE in care homes indicated that only about a quarter (27%) of Trusts clearly display a patient's VTE risk status in their discharge summary. The Annual Survey's finding that approximately one third of VTE admissions could potentially be hospital related highlights the importance of clear communication on VTE risk when patients are discharged into the community. Potentially avoidable hospital admissions may be occurring due to lack of awareness of patients' VTE risk by those responsible for managing their care in the community.

¹ Goldhaber, Samuel. Risk Factors for Venous Thromboembolism. J Am Coll Cardiol. 2010;56(1):1-7. doi:10.1016/j.jacc.2010.01.057

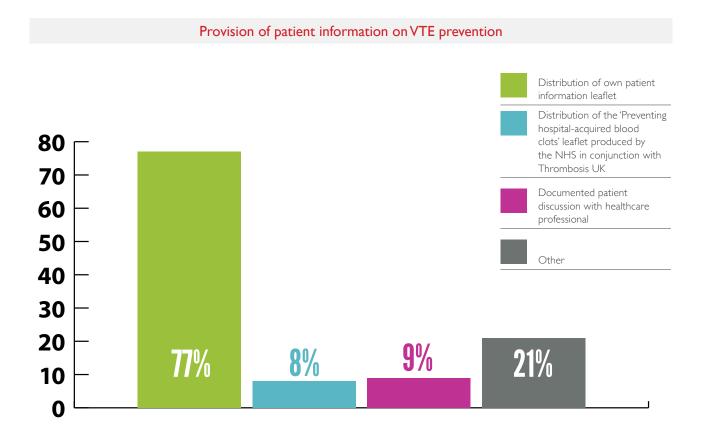
PATIENT INFORMATION

It is equally vital that hospital patients are aware of their own risk of VTE and the steps that they should take if a clot is suspected, both while in hospital and post discharge. Empowered patients are the first line of defence against potentially avoidable blood clots, and their vigilance could possibly lead to the prevention of a later hospital admission for VTE.

The APPTG has consistently encouraged Trusts to follow the instructions in the NICE Quality Standard on VTE Prevention and NICE Clinical Guideline 92 regarding provision of both written and verbal patient information. 77% of Trusts that responded to this year's survey produce and disseminate their own patient information leaflets on VTE prevention. However, only 9% indicated that a documented discussion occurs between healthcare professionals

and patients. These figures are relatively consistent with the previous year's findings.

Although the APPTG welcomes the fact that most Trusts have developed and distribute their own patient information leaflets on VTE prevention, it continues to urge Trusts to ensure that verbal discussions on VTE risk are taking place between healthcare professionals and patients. Verbal discussions provide an opportunity to answer any questions the patient may have about their risk or clarify items that may be unclear on the written leaflet. The leaflet itself is then able to serve as a reminder of the discussion held with the healthcare professional.



CONCLUSION

The APPTG's survey findings show many positive signs that key areas of best practice in VTE prevention are now standard practice. We have consistently seen over the last few years that the majority of Trusts have a written VTE prevention policy in line with NICE Quality Standard 3. We have also seen that VTE risk assessment is treated as a top priority by hospitals and that CCGs are using their power to enforce national standards. It is also firmly standard practice for Trusts to develop and distribute their own patient information leaflets on VTE.

However, other key areas of best practice continue to receive less priority. Namely, these are Root Cause Analysis of hospital associated thrombosis and verbal discussions with patients on VTE risk. Root Cause Analysis is vital, as it can not only help Trusts learn from previous shortcomings, but also help direct attention towards pathways where HAT is commonly occurring.

Our finding that cancer is the fourth most common pathway in which HAT occurred highlights the importance of having distinct protocols for VTE prevention and management in patients undergoing treatment for cancer.VTE can often be overlooked in cancer patients as many are treated as outpatients, and there is often not

clear clinical ownership for VTE in this setting.

Most Trusts were unable to provide comprehensive details on the pathways and circumstances in which HAT occurred. Many attributed this to not having an electronic patient records system in place. The APPTG therefore encourages greater roll-out of electronic patient record systems and for HAT Root Cause Analysis reports to be readily accessible through these systems.

The APPTG also encourages clearer communication on VTE risk post discharge both to patients and to those responsible for managing their care in the community. Most HAT occurs post discharge, and with a third of VTE admissions possibly being hospital related, it appears that many clots which could have been prevented are occurring in the community setting. Better communication means clear indication of VTE risk on discharge summaries and verbal discussions with patients before their discharge.

In 2017, NICE Clinical Guideline 92 - Reducing the risk of VTE in patients admitted to hospital will be updated. This is a key opportunity to strengthen these areas in need of improvement through clear and up to date guidance.

APPTG RECOMMENDATIONS FOR 2017

Drawing on the evidence gathered through this year's surveys and our interactions with NHS leaders, commissioners and clinicians across the NHS, the APPTG has identified the following recommendations for 2017 and calls on the VTE community to work together to support their delivery:

- I. NICE Clinical Guideline 92 should be updated to include strengthened wording around the importance of verbal discussions on VTE risk with patients and learning from previous hospital associated thrombosis occurrences through Root Cause Analysis reporting.
- 2. CCGs should set local CQUIN goals for Root Cause Analysis reporting which specify that reports should note the pathway in which hospital associated thrombosis occurred and what if any thromboprophylaxis patients were receiving prior to the occurrence of hospital associated thrombosis.
- 3. Hospitals should move to electronic patient record systems which make Root Cause Analysis reports readily accessible.
- 4. Trust Medical Directors should undertake an annual review of Root Cause Analysis reports with their CCGs to determine which pathways hospital associated thrombosis is most commonly occurring in, and develop pathway-specific VTE prevention policies as necessary.

- 5. Chemotherapy and cancer clinical nurse specialists should be upskilled on cancer associated thrombosis in order to take ownership of VTE prevention in patients undergoing cancer treatment.
- 6. Hospital discharge summaries should standardly include a distinct section for VTE risk, indicating a patient's risk level and steps that should be taken within the community to manage this risk.
- 7. CCGs should develop and enforce clear local transfer of care protocols for community management of VTE in patients discharged from hospital.

FURTHER INFORMATION

All-Party I Thrombosis Group: http://www.apptg.org.uk/

APPTG:VTE Scorecard

http://www.vtescorecard.com/

National VTE Prevention Programme:

https://www.england.nhs.uk/patientsafety/venousthromb/

AntiCoagulation Europe

http://www.anticoagulationeurope.org/

Thrombosis UK

http://www.thrombosisuk.org/

NHS England - VTE Risk Assessment Data http://www.england.nhs.uk/statistics/statisticalworkareas/vte/

NHS England – Sign up to Safety Campaign http://www.england.nhs.uk/signuptosafety/

NICE Clinical Guideline 92 - Reducing the risk of VTE in patients admitted to hospital http://guidance.nice.org.uk/CG92

NICE Clinical Guideline 144 – Venous thromboembolic diseases: the management of venous thromboembolic diseases and the role of thrombophilia testing

http://guidance.nice.org.uk/CG144

NICE Quality Standard 3 – VTE Prevention http://guidance.nice.org.uk/QS3

NICE Quality Standard 29 - Diagnosis and management of venous thromboembolic diseases http://guidance.nice.org.uk/QS29

NICE Medical Technologies Guidance 19 - The geko device for reducing the risk of venous thromboembolism

https://www.nice.org.uk/guidance/mtg19

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AntiCoagulation Europe pays Insight Consulting Group to act as the group's secretariat from grants received from the Pfizer-BMS Alliance, Bayer, Leo Pharmaceuticals and FirstKind Ltd.

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ANNUAL REVIEW NOVEMBER 2016

APPTG ANNUAL SURVEY RESULTS