

April 2<sup>nd</sup> 2018

### For the attention of:

Shona Robison, The Cabinet Secretary for Health and Sport, Dr Catherine Calderwood, Chief Medical Officer, Joanne Matthews, NHS Scotland Healthcare Improvement and Roberta James, SIGN Programme Lead

Re: SIGN Guidance 122, Prevention and management of venous thromboembolism (VTE)

We are writing with concern that SIGN guidance 122, published 2010 and reviewed 2014, is being considered for withdraw in 2020.

We understand that SIGN guidance is withdrawn when protocols and practice set out in the guidance have been routinely and effectively embedded in clinical practice. SIGN guidance 122 focuses on the prevention and management of VTE. There is clear evidence that VTE prevention across health providers is not embedded into routine practice and as a result, preventable VTE events are occurring.

We are extremely concerned that patient safety will be jeopardised further than we note it is at the moment. As documented below there is evidence that the number of VTE events recorded has increased across all NHS Scotland Health Boards.

#### Cost to NHS Scotland:

Inequitable and sub optimal prevention and management of VTE shows costs to **treat VTE** between 2014 – 2016 exceeded **£97,011,902**.

Costs are rising significantly year on year, with the most current figures available showing NHS Scotland spent more than £36m in 2016 to treat VTE.

The table below examples cost data for 2014 - 2016, sourced from a FOI request 2017

Health Board Area	Calendar Year	Total Cost
NHS AYRSHIRE & ARRAN	2014	1,550,218.51
NHS AYRSHIRE & ARRAN	2015	1,933,885.31
NHS AYRSHIRE & ARRAN	2016	2,590,925.62
NHS BORDERS	2014	620,276.43
NHS BORDERS	2015	818,978.81
NHS BORDERS	2016	1,039,550.72
NHS DUMFRIES & GALLOWAY	2014	637,803.17
NHS DUMFRIES & GALLOWAY	2015	833,322.34
NHS DUMFRIES & GALLOWAY	2016	953,748.47
NHS FIFE	2014	1,415,380.33
NHS FIFE	2015	1,705,073.69
NHS FIFE	2016	1,961,430.24



NHS FORTH VALLEY         2015         1,946,962.98           NHS FORTH VALLEY         2016         2,199,209.84           NHS GRAMPIAN         2014         2,217,337.93           NHS GRAMPIAN         2015         2,943,461.16           NHS GRAMPIAN         2016         3,516,322.79           NHS GREATER GLASGOW & CLYDE         2014         5,918,580.27           NHS GREATER GLASGOW & CLYDE         2015         8,338,681.35           NHS GREATER GLASGOW & CLYDE         2016         10,467,795.12           NHS HIGHLAND         2014         1,738,323.44           NHS HIGHLAND         2014         1,738,323.44           NHS HIGHLAND         2015         2,366,847.08           NHS HIGHLAND         2016         2,346,6847.08           NHS LANARKSHIRE         2014         2,319,137.81           NHS LANARKSHIRE         2014         2,319,137.81           NHS LANARKSHIRE         2015         3,268,739.14           NHS LOTHIAN         2014         3,806,757.10           NHS LOTHIAN         2014         3,806,757.10           NHS LOTHIAN         2015         4,982,027.57           NHS LOTHIAN         2016         6,405,057.94           NHS ORKNEY         2014	NHS FORTH VALLEY	2014	1,478,584.39
NHS GRAMPIAN         2014         2,217,337.93           NHS GRAMPIAN         2015         2,943,461.16           NHS GRAMPIAN         2016         3,516,322.79           NHS GREATER GLASGOW & CLYDE         2014         5,918,580.27           NHS GREATER GLASGOW & CLYDE         2015         8,338,681.35           NHS GREATER GLASGOW & CLYDE         2016         10,467,795.12           NHS HIGHLAND         2014         1,738,323.44           NHS HIGHLAND         2015         2,366,847.08           NHS HIGHLAND         2016         2,374,661.41           NHS LANARKSHIRE         2014         2,319,137.81           NHS LANARKSHIRE         2014         2,319,137.81           NHS LANARKSHIRE         2015         2,777,372.21           NHS LANARKSHIRE         2016         3,268,739.14           NHS LOTHIAN         2014         3,806,757.10           NHS LOTHIAN         2014         3,806,757.10           NHS LOTHIAN         2015         4,982,027.57           NHS LOTHIAN         2016         6,405,057.94           NHS ORKNEY         2014         87,846.77           NHS ORKNEY         2014         71,039.44           NHS SHETLAND         2014         71,039.4	NHS FORTH VALLEY	2015	1,946,962.98
NHS GRAMPIAN         2015         2,943,461.16           NHS GRAMPIAN         2016         3,516,322.79           NHS GREATER GLASGOW & CLYDE         2014         5,918,580.27           NHS GREATER GLASGOW & CLYDE         2015         8,338,681.35           NHS GREATER GLASGOW & CLYDE         2016         10,467,795.12           NHS HIGHLAND         2014         1,738,323.44           NHS HIGHLAND         2015         2,366,847.08           NHS HIGHLAND         2016         2,734,661.41           NHS LIGHLAND         2016         2,777,387.21           NHS LANARKSHIRE         2014         2,319,137.81           NHS LANARKSHIRE         2015         2,777,372.21           NHS LANARKSHIRE         2016         3,268,739.14           NHS LOTHIAN         2014         3,806,757.10           NHS LOTHIAN         2014         3,806,757.10           NHS ORKNEY         2014         87,846.77           NHS ORKNEY         2014         87,846.77           NHS ORKNEY         2015         133,815.11           NHS ORKNEY         2016         165,161.29           NHS SHETLAND         2014         71,039.44           NHS SHETLAND         2015         104,368.42	NHS FORTH VALLEY	2016	2,199,209.84
NHS GRAMPIAN         2016         3,516,322.79           NHS GREATER GLASGOW & CLYDE         2014         5,918,580.27           NHS GREATER GLASGOW & CLYDE         2015         8,338,681.35           NHS GREATER GLASGOW & CLYDE         2016         10,467,795.12           NHS HIGHLAND         2014         1,738,323.44           NHS HIGHLAND         2015         2,366,847.08           NHS HIGHLAND         2016         2,734,661.41           NHS HIGHLAND         2016         2,734,661.41           NHS LANARKSHIRE         2014         2,319,137.81           NHS LANARKSHIRE         2015         2,777,372.21           NHS LANARKSHIRE         2016         3,268,739.14           NHS LOTHIAN         2014         3,806,757.10           NHS LOTHIAN         2015         4,982,027.57           NHS LOTHIAN         2015         4,982,027.57           NHS ORKNEY         2014         87,846.77           NHS ORKNEY         2014         87,846.77           NHS ORKNEY         2015         133,815.11           NHS ORKNEY         2016         165,161.29           NHS SHETLAND         2015         104,368.42           NHS SHETLAND         2016         124,006.15	NHS GRAMPIAN	2014	2,217,337.93
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NHS LANARKSHIRE       2016       3,268,739.14         NHS LOTHIAN       2014       3,806,757.10         NHS LOTHIAN       2015       4,982,027.57         NHS LOTHIAN       2016       6,405,057.94         NHS ORKNEY       2014       87,846.77         NHS ORKNEY       2015       133,815.11         NHS ORKNEY       2016       165,161.29         NHS SHETLAND       2014       71,039.44         NHS SHETLAND       2015       104,368.42         NHS SHETLAND       2016       124,006.15         NHS TAYSIDE       2014       2,583,768.61         NHS TAYSIDE       2015       3,252,345.04         NHS TAYSIDE       2016       3,738,637.32         NHS WESTERN ISLES       2014       144,402.73         NHS WESTERN ISLES       2015       198,352.95         NHS WESTERN ISLES       2015       198,352.95         NHS WESTERN ISLES       2016       238,926.80         NON REGIONAL HEALTH BOARDS       2014       222,121.87         NON REGIONAL HEALTH BOARDS       2015       236,641.45	NHS LANARKSHIRE	2014	2,319,137.81
NHS LOTHIAN         2014         3,806,757.10           NHS LOTHIAN         2015         4,982,027.57           NHS LOTHIAN         2016         6,405,057.94           NHS ORKNEY         2014         87,846.77           NHS ORKNEY         2015         133,815.11           NHS ORKNEY         2016         165,161.29           NHS SHETLAND         2014         71,039.44           NHS SHETLAND         2015         104,368.42           NHS SHETLAND         2016         124,006.15           NHS TAYSIDE         2014         2,583,768.61           NHS TAYSIDE         2015         3,252,345.04           NHS TAYSIDE         2016         3,738,637.32           NHS WESTERN ISLES         2014         144,402.73           NHS WESTERN ISLES         2015         198,352.95           NHS WESTERN ISLES         2016         238,926.80           NON REGIONAL HEALTH BOARDS         2014         222,121.87           NON REGIONAL HEALTH BOARDS         2015         236,641.45	NHS LANARKSHIRE	2015	2,777,372.21
NHS LOTHIAN       2015       4,982,027.57         NHS LOTHIAN       2016       6,405,057.94         NHS ORKNEY       2014       87,846.77         NHS ORKNEY       2015       133,815.11         NHS ORKNEY       2016       165,161.29         NHS SHETLAND       2014       71,039.44         NHS SHETLAND       2015       104,368.42         NHS SHETLAND       2016       124,006.15         NHS TAYSIDE       2014       2,583,768.61         NHS TAYSIDE       2015       3,252,345.04         NHS TAYSIDE       2016       3,738,637.32         NHS WESTERN ISLES       2014       144,402.73         NHS WESTERN ISLES       2015       198,352.95         NHS WESTERN ISLES       2016       238,926.80         NON REGIONAL HEALTH BOARDS       2014       222,121.87         NON REGIONAL HEALTH BOARDS       2015       236,641.45	NHS LANARKSHIRE	2016	3,268,739.14
NHS LOTHIAN       2016       6,405,057.94         NHS ORKNEY       2014       87,846.77         NHS ORKNEY       2015       133,815.11         NHS ORKNEY       2016       165,161.29         NHS SHETLAND       2014       71,039.44         NHS SHETLAND       2015       104,368.42         NHS SHETLAND       2016       124,006.15         NHS TAYSIDE       2014       2,583,768.61         NHS TAYSIDE       2015       3,252,345.04         NHS TAYSIDE       2016       3,738,637.32         NHS WESTERN ISLES       2014       144,402.73         NHS WESTERN ISLES       2015       198,352.95         NHS WESTERN ISLES       2016       238,926.80         NON REGIONAL HEALTH BOARDS       2014       222,121.87         NON REGIONAL HEALTH BOARDS       2015       236,641.45	NHS LOTHIAN	2014	3,806,757.10
NHS ORKNEY       2014       87,846.77         NHS ORKNEY       2015       133,815.11         NHS ORKNEY       2016       165,161.29         NHS SHETLAND       2014       71,039.44         NHS SHETLAND       2015       104,368.42         NHS SHETLAND       2016       124,006.15         NHS TAYSIDE       2014       2,583,768.61         NHS TAYSIDE       2015       3,252,345.04         NHS WESTERN ISLES       2016       3,738,637.32         NHS WESTERN ISLES       2014       144,402.73         NHS WESTERN ISLES       2015       198,352.95         NHS WESTERN ISLES       2016       238,926.80         NON REGIONAL HEALTH BOARDS       2014       222,121.87         NON REGIONAL HEALTH BOARDS       2015       236,641.45	NHS LOTHIAN	2015	4,982,027.57
NHS ORKNEY       2015       133,815.11         NHS ORKNEY       2016       165,161.29         NHS SHETLAND       2014       71,039.44         NHS SHETLAND       2015       104,368.42         NHS SHETLAND       2016       124,006.15         NHS TAYSIDE       2014       2,583,768.61         NHS TAYSIDE       2015       3,252,345.04         NHS WESTERN ISLES       2016       3,738,637.32         NHS WESTERN ISLES       2014       144,402.73         NHS WESTERN ISLES       2015       198,352.95         NHS WESTERN ISLES       2016       238,926.80         NON REGIONAL HEALTH BOARDS       2014       222,121.87         NON REGIONAL HEALTH BOARDS       2015       236,641.45	NHS LOTHIAN	2016	6,405,057.94
NHS ORKNEY       2016       165,161.29         NHS SHETLAND       2014       71,039.44         NHS SHETLAND       2015       104,368.42         NHS SHETLAND       2016       124,006.15         NHS TAYSIDE       2014       2,583,768.61         NHS TAYSIDE       2015       3,252,345.04         NHS WESTERN ISLES       2016       3,738,637.32         NHS WESTERN ISLES       2014       144,402.73         NHS WESTERN ISLES       2015       198,352.95         NHS WESTERN ISLES       2016       238,926.80         NON REGIONAL HEALTH BOARDS       2014       222,121.87         NON REGIONAL HEALTH BOARDS       2015       236,641.45	NHS ORKNEY	2014	87,846.77
NHS SHETLAND       2014       71,039.44         NHS SHETLAND       2015       104,368.42         NHS SHETLAND       2016       124,006.15         NHS TAYSIDE       2014       2,583,768.61         NHS TAYSIDE       2015       3,252,345.04         NHS TAYSIDE       2016       3,738,637.32         NHS WESTERN ISLES       2014       144,402.73         NHS WESTERN ISLES       2015       198,352.95         NHS WESTERN ISLES       2016       238,926.80         NON REGIONAL HEALTH BOARDS       2014       222,121.87         NON REGIONAL HEALTH BOARDS       2015       236,641.45	NHS ORKNEY	2015	133,815.11
NHS SHETLAND       2015       104,368.42         NHS SHETLAND       2016       124,006.15         NHS TAYSIDE       2014       2,583,768.61         NHS TAYSIDE       2015       3,252,345.04         NHS TAYSIDE       2016       3,738,637.32         NHS WESTERN ISLES       2014       144,402.73         NHS WESTERN ISLES       2015       198,352.95         NHS WESTERN ISLES       2016       238,926.80         NON REGIONAL HEALTH BOARDS       2014       222,121.87         NON REGIONAL HEALTH BOARDS       2015       236,641.45	NHS ORKNEY	2016	165,161.29
NHS SHETLAND       2016       124,006.15         NHS TAYSIDE       2014       2,583,768.61         NHS TAYSIDE       2015       3,252,345.04         NHS TAYSIDE       2016       3,738,637.32         NHS WESTERN ISLES       2014       144,402.73         NHS WESTERN ISLES       2015       198,352.95         NHS WESTERN ISLES       2016       238,926.80         NON REGIONAL HEALTH BOARDS       2014       222,121.87         NON REGIONAL HEALTH BOARDS       2015       236,641.45	NHS SHETLAND	2014	71,039.44
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NHS TAYSIDE       2015       3,252,345.04         NHS TAYSIDE       2016       3,738,637.32         NHS WESTERN ISLES       2014       144,402.73         NHS WESTERN ISLES       2015       198,352.95         NHS WESTERN ISLES       2016       238,926.80         NON REGIONAL HEALTH BOARDS       2014       222,121.87         NON REGIONAL HEALTH BOARDS       2015       236,641.45	NHS SHETLAND	2016	124,006.15
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	NON REGIONAL HEALTH BOARDS	2016	224,015.19



# Incidence:

Data provided by National Services Scotland, further evidences the increase in incidence rate of VTE diagnosis per 10,000 hospital stays.

The data shared covers the period prior to SIGN 122 being introduced and since.

Table 1: Incidence of venous thromboembolism (VTE)<sup>1</sup> in patients admitted to hospital<sup>2</sup>; Scotland; 2006 to 2016<sup>p</sup>

Year	Number of hospital stays with a VTE diagnosis	Incidence rate of VTE diagnosis per 10,000 hospital stays
2006	6,485	59.0
2007	6,502	58.4
2008	6,636	58.0
2009	6,460	55.6
2010	7,210	62.8
2011	7,361	63.6
2012	7,316	61.4
2013	7,763	65.0
2014	8,279	67.7
2015	8,437	68.8
<b>2016</b> <sup>p</sup>	8,438	69.0

Source: ISD Scotland SMR01 dataset as at 13th April 2017

Ref: 2017-00544

# Clinical experience:

In 2017, NHS Borders published their deep-dive project 'Improving reliable delivery of VTE', and concluded:

"Despite 100% of physicians polled in NHS Borders survey, thinking VTE risk assessment was important....

"It was apparent from the onset of this project that the delivery of care and treatment related to VTE prophylaxis remained a challenge for staff in NHS Borders."



NHS Borders project (2017) made the following recommendations:

- 1. Visible clinical and organisational **leadership** is required to support improvement in VTE prophylaxis. Leadership walk rounds can be a vehicle for this.
- 2. Staff involved in delivery of thromboprophylaxis should be consulted to better understand the barriers to reliability.
- 3. Learning generated from this consultation should inform any redesign of risk assessment tools and processes to improve reliable delivery.
- 4. Data collection should focus on the delivery of risk assessment and correct thromboprophylaxis to improve understanding of levels of under and over dosing.
- 5. Data on reliable delivery of risk assessment and correct thromboprophylaxis should be shared with clinical teams to understand the impact of their changes.
- 6. Structured ward rounds that includes prompts for VTE prophylaxis should be established.
- 7. People being admitted to hospital should have information on risks and benefits of thromboprophylaxis.
- 8. Induction programmes for junior doctors should include a permanent slot for VTE education. The education programme should include the VTE risk assessment documentation, correct prophylaxis prescribing and the ward round prompt.
- 9. Opportunities for VTE education, support and advice should be offered to nursing teams.
- 10. Organisational VTE policies should reflect SIGN 122 and clarify roles and responsibilities in VTE prophylaxis.

# Patient experience:

Thrombosis UK is a registered charity working with patients, healthcare professionals the general public and all interested parties.

Regularly we receive correspondence from families and individuals who have been irrevocably affected by VTE in Scotland. Frequently, high risk individuals have not been identified, and low general awareness has resulted in delayed and missed diagnosis, whilst the patient voice has not been heard. The tragic results are at best long-term disability, but too often, death, that might have been prevented if risk assessment, preventative measures and subsequent appropriate management had been embedded into routine practice.



In the 2015/16 annual report by the Chief Medical Officer of Scotland, Dr Catherine Calderwood, 'Realising Realistic Medicine', Dr Calderwood commented:

"Realistic medicine aims.... to **reduce harm** and waste, **tackling unwarranted variation in care, managing clinical risk** and innovation to improve...."

VTE prevention is not well done in Scotland due to lack of national leadership; this is especially true when compared with Wales and England.

We would strongly urge NHS Scotland to ensure SIGN 122 is:

- 1. Reviewed and updated in light of extended clinical evidence and practice.
- 2. Ensure **risk assessment of VTE** is a **routine clinical requirement** evidenced by clinical practice that is **proven to prevent and protect from VTE**.

NHS Scotland is respected for its focus on health and patient safety. It is time VTE prevention and management was effectively addressed to:

- Save lives
- Prevent and protect from avoidable harm
- Respond to clinical data and evidenced practice
- Answer the patient voices that has suffered so much and want to see others being protected from what they have suffered

Thrombosis UK offers its' assistance to work with NHS Scotland, Scottish clinical leads and patients, to update SIGN Guidance 122 and to secure the implementation of VTE risk assessment and effective prevention and management of VTE in routine clinical practice. Preventing avoidable harm, saving lives, and reducing costs.

Yours sincerely

J M Jerrome

Jo Jerrome and Trustees of Thrombosis UK CEO Thrombosis UK

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