

# Stroke

## Current Awareness Bulletin

July 2021

This Current Awareness Bulletin is produced by the Yeovil Academy Library to provide staff with a range of stroke-related resources to support practice. It includes recently published guidelines and research articles, as well as news and policy items.

## Systematic Reviews



### [Interventions for reducing sedentary behaviour in people with stroke](#)

David H Saunders, Gillian E Mead, Claire Fitzsimons, Paul Kelly, Frederike van Wijck, Olaf Verschuren, Karianne Backx, Coralie English

Intervention

Review

29 June 2021

Stroke survivors are often physically inactive as well as sedentary, and may sit for long periods of time each day. This increases cardiometabolic risk and has impacts on physical and other functions.

### [Endovascular thrombectomy and intra-arterial interventions for acute ischaemic stroke](#)

Melinda B Roaldsen, Mirza Jusufovic, Eivind Berge, Haakon Lindekleiv

Intervention

Review

14 June 2021

Most disabling strokes are due to a blockage of a large artery in the brain by a blood clot. Prompt removal of the clot with intra-arterial thrombolytic drugs or mechanical devices, or both, can restore blood flow before major brain damage has occurred, leading to improved recovery.

### [Non-pharmacological interventions for spatial neglect or inattention following stroke and other non-progressive brain injury](#)

Verity Longley, Christine Hazelton, Calvin Heal, Alex Pollock, Kate Woodward-Nutt, Claire Mitchell, Gorana Pobric, Andy Vail, Audrey Bowen

Intervention

Review

1 July 2021

- New search

People with spatial neglect after stroke or other brain injury have difficulty attending to one side of space. Various rehabilitation interventions have been used, but evidence of their benefit is unclear.



### [Implantable cardiac monitors to detect atrial fibrillation after cryptogenic stroke](#)

To help to detect atrial fibrillation after cryptogenic stroke, including transient ischaemic attacks (TIA), only if: non-invasive electrocardiogram (ECG) monitoring has been done and • a cardiac arrhythmic cause of stroke is still suspected. 1.2 Clinicians should consider if disabled people may need support from a carer to help set up the MyCareLink Patient Monitor, to ensure data from Reveal LINQ are transmitted for review.

2020 [National Institute for Health and Clinical Excellence - Diagnostics Guidance](#)

### [Continual Long-Term Physiotherapy After Stroke](#)

We excluded people who were admitted to hospital for transient ischemic attack, as it is characterized as a minor and non-disabling type of stroke, 16 and focused on people who were admitted for either ischemic or (intracerebral or subarachnoid) hemorrhagic stroke. Budget Impact Analysis March 2020 Ontario Health Technology Assessment Series; Vol. 20 (...) and long-term medical attention.

2020 [Health Quality Ontario](#)

### [Automated CT Perfusion Imaging to Aid in the Selection of Patients With Acute Ischemic Stroke for Mechanical Thrombectomy](#)

Automated CT Perfusion Imaging to Aid in the Selection of Patients With Acute Ischemic Stroke for Mechanical Thrombectomy Automated CT Perfusion Imaging to Aid in the Selection of Patients With Acute Ischemic Stroke for Mechanical Thrombectomy - Health Quality Ontario (HQO) Let's make our health system healthier.

2020 [Health Quality Ontario](#)

### [Prevalence of dysphagia and economic burden of aspiration pneumonia in patients with stroke or head and neck cancer](#)

Prevalence of dysphagia and economic burden of aspiration pneumonia in patients with stroke or head and neck cancer application/octet-stream

2020 [Institute of Health Economics](#)

### [Patent foramen ovale \(PFO\) closure in patients with cryptogenic ischaemic stroke](#)

Advice | 10 In a large population-based cohort study in Oxfordshire (OXVASC), consecutive patients with a first transient ischaemic attack (TIA) or ischaemic stroke were followed up for a period of 10 years 14 .

2020 [SHTG Advice Statements](#)

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## [Initial assessment and management of acute stroke](#)

Literature review current through: Jun 2021. | This topic last updated: Mar 05, 2021.

The main goals in the initial phase of acute stroke management are to ensure medical stability, to quickly reverse conditions that are contributing to the patient's problem, to determine if patients with acute ischemic stroke are candidates for thrombolytic therapy, and to begin to uncover the pathophysiologic basis of the neurologic symptoms.

## [Overview of the evaluation of stroke](#)

Literature review current through: Jun 2021. | This topic last updated: Apr 27, 2021.

Cerebrovascular disease is caused by one of several pathophysiologic processes involving the blood vessels of the brain.

## [Clinical diagnosis of stroke subtypes](#)

Literature review current through: Jun 2021. | This topic last updated: Jun 04, 2021.

Stroke is classified into three main subtypes: intracerebral hemorrhage (ICH), subarachnoid hemorrhage (SAH), and ischemic stroke. The classification of stroke is discussed in detail separately. Patient demographic variables, the presence of stroke risk factors, and findings from the history and physical examination may suggest certain stroke subtypes. This presumptive clinical diagnosis requires confirmation by brain and vascular imaging.

Please click on the blue link (where available) to access the full text. You may need an OpenAthens username and password. To register for an OpenAthens account [click here](#).

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## NICE Healthcare Databases

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### **1. Time spent outdoors and risk of myocardial infarction and stroke in middle and old aged adults: Results from the UK Biobank prospective cohort.**

**Author(s):** Miguet, Maud; Venetis, Sotirios; Rukh, Gull; Lind, Lars; Schiöth, Helgi B

**Source:** Environmental research; Aug 2021; vol. 199 ; p. 111350

**Publication Date:** Aug 2021

**Publication Type(s):** Research Support, Non-u.s. Gov't Journal Article

**PubMedID:** 34019889

Available at [Environmental research](#) - from Unpaywall

Findings from the present study indicate that spending more than 3.5 h/day outdoors is a risk factor for myocardial infarction and stroke. Future research is needed to further understand the relation between time spent outdoors and cardiovascular disease.

**Database:** Medline

### **2. Genetic Risk, Muscle Strength, and Incident Stroke: Findings From the UK Biobank Study.**

**Author(s):** Kim, Youngwon; Hwang, Semi; Sharp, Stephen J; Luo, Shan; Au Yeung, Shiu Lun; Teerlink, Craig C

**Source:** Mayo Clinic proceedings; Jul 2021; vol. 96 (no. 7); p. 1746-1757

**Publication Date:** Jul 2021

**Publication Type(s):** Research Support, Non-u.s. Gov't Journal Article

**PubMedID:** 34218855

Available at [Mayo Clinic proceedings](#) - from Unpaywall

Higher muscle strength was associated with lower stroke incidence in all individuals, including those with high genetic susceptibility. The increased genetic risk of overall and ischemic stroke was partly attenuated through increased muscle strength.

**Database:** Medline

### **3. Developing automated methods for disease subtyping in UK Biobank: an exemplar study on stroke.**

**Author(s):** Rannikmäe ; Wu, Honghan; Tominey, Steven; Whiteley, William; Allen, Naomi; Sudlow, Cathie

**Source:** BMC Medical Informatics & Decision Making; Jun 2021; vol. 21 (no. 1); p. 1-9

**Publication Date:** Jun 2021

**Publication Type(s):** Academic Journal

**PubMedID:** NLM34130677

Available at [BMC medical informatics and decision making](#) - from BioMed Central

Available at [BMC medical informatics and decision making](#) - from Europe PubMed Central - Open Access

Available at [BMC medical informatics and decision making](#) - from ProQuest (Health Research Premium) - NHS Version

Available at [BMC medical informatics and decision making](#) - from Unpaywall

Our automated method applied to radiology reports provides a feasible, scalable and accurate solution to improve disease subtyping when used in conjunction with administrative coded health data. Future research should validate these findings in a different population setting.

**Database:** CINAHL

### **4. Stroke Care in the United Kingdom During the COVID-19 Pandemic.**

**Author(s):** Douiri ; Muruet, Walter; Bhalla, Ajay; James, Martin; Paley, Lizz; Stanley, Kaili; Rudd, Anthony G.; Wolfe, Charles D.A.; Bray, Benjamin D.

**Source:** Stroke (00392499); Jun 2021; vol. 52 (no. 6); p. 2125-2133

**Publication Date:** Jun 2021

**Publication Type(s):** Academic Journal

**PubMedID:** NLM33896223

Available at [Stroke](#) - from Unpaywall

Assuming that the true incidence of acute stroke did not change markedly during the pandemic, hospital avoidance may have created a cohort of untreated stroke patients at risk of poorer outcomes or recurrent events. Unanticipated improvements in stroke care quality should be used as an opportunity for quality improvement and to learn about how to develop resilient health care systems.

**Database:** CINAHL

## **5. The role of stroke nurses in thrombolysis administration in Australia and the United Kingdom: A cross-sectional survey of current practice.**

**Author(s):** Hamilton, Helen; Dale, Simeon; McElduff, Benjamin; Craig, Louise E; Fasugba, Oyebola; McInnes, Elizabeth; Alexandrov, Anne W; Cadilhac, Dominique A; Lightbody, Elizabeth; Watkins, Dame Caroline; Middleton, Sandy

**Source:** Journal of clinical nursing; Jun 2021

**Publication Date:** Jun 2021

**Publication Type(s):** Journal Article

**PubMedID:** 34075640

Available at [Journal of clinical nursing](#) - from Wiley Online Library Medicine and Nursing Collection 2020  
Stroke nurses' active role in rt-PA administration can improve rt-PA treatment rates. Models of care that broaden stroke nurses' scope of practice to maximise rt-PA treatment rates for ischaemic stroke patients are needed. RELEVANCE TO CLINICAL PRACTICE This study demonstrates that UK and Australian nurses play an important role in thrombolysis practices; however, they are underused. Formalising and extending the role of stroke nurses in rt-PA administration could potentially increase thrombolysis rates with clinical benefits for patients.

**Database:** Medline

## **6. Evaluating the use of gradient echo imaging for the detection of cerebral microbleeds in acute stroke cases: A retrospective data analysis in a UK stroke unit.**

**Author(s):** Walsh ; Meagher, T.; Malamateniou, C.

**Source:** Radiography; May 2021; vol. 27 (no. 2); p. 561-567

**Publication Date:** May 2021

**Publication Type(s):** Academic Journal

Missing CMB diagnoses in stroke patients may result in suboptimal treatment pathways, compromising the patients' standard of care. When SWI is not available, it is imperative to always include a true T2\*GRE sequence to detect microbleeds in suspected acute stroke cases.

**Database:** CINAHL

## **7. Concordance in the recording of stroke across UK primary and secondary care datasets: a population-based cohort study.**

**Author(s):** Morgan ; Sinnott, Sarah-Jo; Smeeth, Liam; Minassian, Caroline; Quint, Jennifer

**Source:** BJGP Open; Apr 2021; vol. 5 (no. 2); p. 1-11

**Publication Date:** Apr 2021

**Publication Type(s):** Academic Journal

Available at [BJGP open](#) - from Unpaywall

The completeness and accuracy of stroke recording is improved by the use of linked hospital and primary care records. For studies that have a time-sensitive research question, the use of linked, as opposed to stand-alone, CPRD data is strongly recommended.

**Database:** CINAHL

## **8. Effectiveness of intravenous r-tPA versus UK for acute ischaemic stroke: a nationwide prospective Chinese registry study.**

**Author(s):** Wang, Xinhong; Li, Xiaoqiu; Xu, Yuming; Li, Runhui; Yang, Qingcheng; Zhao, Yong; Wang, Fengyun; Sheng, Baoying; Wang, Runqing; Chen, Shaoyuan; Wang, Lihua; Shen, Liying; Hou, Xiaowen; Cui, Yu; Wang, Duolao; Peng, Bin; Anderson, Craig S; Chen, Huisheng; INTRECIS Investigators

**Source:** Stroke and vascular neurology; Apr 2021

**Publication Date:** Apr 2021

**Publication Type(s):** Journal Article

**PubMedID:** 33903179

Available at [Stroke and vascular neurology](#) - from Unpaywall

UK may be as effective and carry a similar safety profile as r-tPA in treating mild to moderate AIS within guidelines in China. REGISTRATION: <http://www.clinicaltrials.gov>. unique identifier: NCT02854592.

**Database:** Medline

## **9. Real-world effects of medications for stroke prevention in atrial fibrillation: protocol for a UK population-based non-interventional cohort study with validation against randomised trial results.**

**Author(s):** Powell, Emma Maud; Douglas, Ian J; Gungabissoon, Usha; Smeeth, Liam; Wing, Kevin

**Source:** BMJ open; Apr 2021; vol. 11 (no. 4); p. e042947

**Publication Date:** Apr 2021

**Publication Type(s):** Research Support, Non-u.s. Gov't Clinical Trial Protocol Journal Article

**PubMedID:** 33858866

Available at [BMJ open](#) - from Europe PubMed Central - Open Access

Available at [BMJ open](#) - from HighWire - Free Full Text

Available at [BMJ open](#) - from Unpaywall

Patients with atrial fibrillation experience an irregular heart rate and have an increased risk of stroke; prophylactic treatment with anticoagulation medication reduces this risk. Direct-acting oral anticoagulants (DOACs) have been approved providing an alternative to vitamin K antagonists such as warfarin. There is interest from regulatory bodies on the effectiveness of medications in routine clinical practice; however, uncertainty remains regarding the suitability of non-interventional data for answering questions on drug effectiveness and on the most suitable methods to be used.

**Database:** Medline

## **10. Social isolation and risk of heart disease and stroke: analysis of two large UK prospective studies.**

**Author(s):** Smith, Robert W; Barnes, Isobel; Green, Jane; Reeves, Gillian K; Beral, Valerie; Floud, Sarah

**Source:** The Lancet. Public health; Apr 2021; vol. 6 (no. 4); p. e232

**Publication Date:** Apr 2021

**Publication Type(s):** Journal Article

**PubMedID:** 33662329

Available at [The Lancet. Public health](#) - from Unpaywall

Social isolation seems to have little direct effect on the risk of developing a first coronary heart disease or stroke. By contrast, social isolation substantially increases the risk that the first such event is fatal before reaching hospital, particularly among people who live alone, perhaps because of the absence of immediate help in responding to an acute heart attack or stroke. FUNDING UK Medical Research Council, Cancer Research UK.

**Database:** Medline

### **11. Variation of stroke-associated pneumonia in stroke units across England and Wales: A registry-based cohort study.**

**Author(s):** Chaves, Ma Lobo; Gittins, Matthew; Bray, Benjamin; Vail, Andy; Smith, Craig J

**Source:** International journal of stroke : official journal of the International Stroke Society; Apr 2021 ; p. 17474930211006297

**Publication Date:** Apr 2021

**Publication Type(s):** Journal Article

**PubMedID:** 33724106

Available at [International journal of stroke : official journal of the International Stroke Society](#) - from Unpaywall

Patient-level clinical characteristics contributed minimally to the observed variation of stroke-associated pneumonia between stroke units. Additional explanations for the observed variation in stroke-associated pneumonia need to be explored which could reduce variation in antibiotic use for stroke patients.

**Database:** Medline

### **12. Mobile stroke unit in the UK healthcare system: avoidance of unnecessary accident and emergency admissions.**

**Author(s):** Phillips ; Grunwald, Iris Q.; Walter, Silke; Faßbender, Klaus

**Source:** British Paramedic Journal; Mar 2021; vol. 5 (no. 4); p. 64-64

**Publication Date:** Mar 2021

**Publication Type(s):** Academic Journal

Available at [British Paramedic Journal](#) - from Unpaywall

This first deployment of an MSU in the UK NHS demonstrated improved triage decision-making for or against hospital admission and admission to the appropriate target ward, thereby reducing pressure on strained A&E departments.

**Database:** CINAHL

### **13. Experiences of venue based exercise interventions for people with stroke in the UK: a systematic review and thematic synthesis of qualitative research.**

**Author(s):** Young ; Broom, David; Sage, Karen; Crossland, Kay; Smith, Christine

**Source:** Physiotherapy; Mar 2021; vol. 110 ; p. 5-14

**Publication Date:** Mar 2021

**Publication Type(s):** Academic Journal

Available at [Physiotherapy](#) - from Unpaywall

Perceived improvements in physical function were reported and participants enjoyed stroke specific exercise programmes in de-medicalised venues. The studies only accessed people who had completed the exercise programmes; non-completers were not represented. Venue based exercise programmes have a positive effect on perceived wellbeing following stroke. Further research into the reasons for discontinuation of exercise participation following stroke is required.

**Database:** CINAHL



#### **14. Osteoarthritis and incidence of stroke and transient ischemic attack in 320,136 adults followed in general practices in the United Kingdom.**

**Author(s):** Jacob ; Tanislav, Christian; Kostev, Karel

**Source:** Joint Bone Spine; Mar 2021; vol. 88 (no. 2)

**Publication Date:** Mar 2021

**Publication Type(s):** Academic Journal

**PubMedID:** NLM33166731

These findings suggest that osteoarthritis may be associated with an increase in the incidence of stroke and transient ischemic attack. Further research of longitudinal design is warranted to confirm or reject these results.

**Database:** CINAHL

#### **15. Characteristics and outcomes of COVID-19 associated stroke: a UK multicentre case-control study.**

**Author(s):** Perry, Richard J; Smith, Craig J; Roffe, Christine; Simister, Robert; Narayanamoorthi, Saravanan; Marigold, Richard; Willmot, Mark; Dixit, Anand; Hassan, Ahamad; Quinn, Terence J; Ankolekar, Sandeep; Zhang, Liqun; Banerjee, Soma; Ahmed, Urwah; Padmanabhan, Nishita; Ferdinand, Phillip; McGrane, Frances; Banaras, Azra; Marks, Isobel H; Werring, David J; SETICOS collaborators

**Source:** Journal of neurology, neurosurgery, and psychiatry; Mar 2021; vol. 92 (no. 3); p. 242-248

**Publication Date:** Mar 2021

**Publication Type(s):** Journal Article

**PubMedID:** 33154179

Available at [Journal of neurology, neurosurgery, and psychiatry](#) - from BMJ Journals - NHS

Available at [Journal of neurology, neurosurgery, and psychiatry](#) - from ProQuest (MEDLINE with Full Text) - NHS Version

Our data suggest that COVID-19 may be an important modifier of the onset, characteristics and outcome of acute ischaemic stroke.

**Database:** Medline

#### **16. Rates, risks and routes to reduce vascular dementia (R4vad), a UK-wide multicentre prospective observational cohort study of cognition after stroke: Protocol.**

**Author(s):** Wardlaw, Joanna M; Doubal, Fergus; Brown, Rosalind; Backhouse, Ellen; Woodhouse, Lisa; Bath, Philip; Quinn, Terence J; Robinson, Thompson; Markus, Hugh S; McManus, Richard; O'Brien, John T;

**Source:** European stroke journal; Mar 2021; vol. 6 (no. 1); p. 89-101

**Publication Date:** Mar 2021

**Publication Type(s):** Journal Article

**PubMedID:** 33817339

Available at [European stroke journal](#) - from Unpaywall

Planned outputs: R4VaD will provide reliable data on long-term cognitive function after stroke, stratified by prior cognition, stroke- and patient-related variables and improved risk prediction. It will create a platform enabling sharing of data, imaging and samples. Participants will be consented for re-contact, facilitating future clinical trials and providing a resource for the stroke and dementia research communities.

**Database:** Medline

### **17. In-hospital stroke after transcatheter aortic valve implantation: A UK observational cohort analysis.**

**Author(s):** Myat, Aung; Buckner, Luke; Mouy, Florence; Cockburn, James; Baumbach, Andreas; Banning, Adrian P; Blackman, Daniel J; Curzen, Nick; MacCarthy, Philip; Mullen, Michael; de Belder, Mark; Cox, Ian; Kovac, Jan; Brecker, Stephen; Turner, Mark; Khogali, Saib; Malik, Iqbal S; Alsanjari, Osama; Redwood, Simon;

**Source:** Catheterization and cardiovascular interventions : official journal of the Society for Cardiac Angiography & Interventions; Mar 2021; vol. 97 (no. 4); p. E552

**Publication Date:** Mar 2021

**Publication Type(s):** Journal Article

**PubMedID:** 32779877

Available at [Catheterization and cardiovascular interventions : official journal of the Society for Cardiac Angiography & Interventions](#) - from Wiley Online Library Medicine and Nursing Collection 2020

In-hospital stroke after TAVI is associated with substantially increased early and late mortality. Factors independently associated with in-hospital stroke were previous CVD, advanced age, no prior cardiac surgery, and deployment of a predominantly first-generation self-expandable transcatheter heart valve.

**Database:** Medline

### **18. Real-world data on the incidence, mortality, and cost of ischaemic stroke and major bleeding events among non-valvular atrial fibrillation patients in England.**

**Author(s):** Bakhai ; Petri, Hans; Vahidnia, Farnaz; Wolf, Cyrill; Ding, Yingjie; Foskett, Nadia; Sculpher, Mark

**Source:** Journal of Evaluation in Clinical Practice; Feb 2021; vol. 27 (no. 1); p. 119-133

**Publication Date:** Feb 2021

**Publication Type(s):** Academic Journal

Available at [Journal of Evaluation in Clinical Practice](#) - from Wiley Online Library Medicine and Nursing Collection 2020

Available at [Journal of Evaluation in Clinical Practice](#) - from Unpaywall

These data provide temporal insights into AF treatment patterns and outcomes for NVAf patients in England and highlight the need to review higher stroke risk AF patients not receiving antiplatelet/antithrombotic prescriptions.

**Database:** CINAHL

### **19. The use of hypnotherapy as treatment for functional stroke: A case series from a single center in the UK.**

**Author(s):** Sanyal, Ranjan; Raseta, Marko; Natarajan, Indira; Roffe, Christine

**Source:** International journal of stroke : official journal of the International Stroke Society; Feb 2021 ; p. 1747493021995590

**Publication Date:** Feb 2021

**Publication Type(s):** Journal Article

**PubMedID:** 33527884

Available at [International journal of stroke : official journal of the International Stroke Society](#) - from Unpaywall

In this case series, hypnotherapy was associated with rapid and sustained recovery of symptoms. A prospective randomized controlled study is required to confirm the findings and establish generalizability of the results.

**Database:** Medline

### [Updated primary care risk calculator to help prevent CVD in Europe](#)

14 June, 2021

A new version of a tool to help primary care teams more accurately calculate future risk of heart attack and stroke is ready for use across Europe, according to those behind the initiative. The risk calculator for primary prevention of cardiovascular disease has been described as the new "gold standard"...

### [Patients with 'healthy obesity' still at higher risk of diabetes and CVD](#)

11 June, 2021

Weight management should be recommended to all people with obesity, irrespective of their metabolic status, according to UK researchers. They warned that patients who were obese but maintained a normal metabolic profile still faced an increased risk of diabetes, heart diseases, strokes, and respiratory diseases. "People with metabolically healthy obesity..."

## Other news...

### [Long working hours increasing deaths from heart disease and stroke](#)

WHO, ILO

17 May 2021

Long working hours led to 745 000 deaths from stroke and ischemic heart disease in 2016, a 29 per cent increase since 2000, according to the latest estimates by the World Health Organization and the International Labour Organization published in [Environment International](#) today.

### [Relaunch of the Act FAST campaign to improve stroke outcomes](#)

New data suggests that people put off seeking help for stroke during pandemic.

[Public Health England](#)

9 March 2021

### [New research to study whether Covid-19 causes strokes](#)

A new research study will investigate reports that Covid-19 is causing life-threatening strokes.

The study is being funded by the Stroke Association following what they described as "worrying" reports Covid-19 may increase the risk of having a stroke, using health data from patients across the UK.

[Eimear McGovern](#)

February 09 2021 06:00 AM

**Belfast Telegraph**

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