to a 50% reduction in the 3-month National Institutes of Health stroke scale (NIHSS) compared to the baseline scores. Clinical Trial Registration-URL: http://www.irct.ir; Unique identifier: IRCT201203192150N2.

Results: The mean age of patients was 66.39. Of 144 eligible patients, 15 patients died (4 in citalopram and 11 in placebo groups) and 21 patients did not complete the study follow up period (10 in citalopram and 11 in placebo groups). The primary outcome of the study was achieved in 57 patients (79%) of citalopram and 39 patients (54%) of placebo groups ($p < 0.000$) with the risk ratio and number needed to treat of 1.9 (CI: 1.2–3) and 3.6 (CI: 2.5–8.6), respectively. No major adverse events were found in either group.

Conclusion: Citalopram is a safe and tolerable medication in patients with acute IS and could improve the outcome in these patients.

Referencess:

1 Engelter ST: Safety in pharmacological enhancement of stroke rehabilitation. Eur J Phys Rehabil Med 2013;49:261–267.
2 Chollet F: Pharmacologic approaches to cerebral aging and neuroplasticity: insights from the stroke model. Dialogues Clin Neurosci 2013;15: 67–76.
3 Gaillard R, Mir O: Fluoxetine and motor recovery after ischaemic stroke. Lancet Neurol 2011;10:499; author reply 500–501.
4 Mead GE, Hsieh CF, Lee R, et al: Selective serotonin reuptake inhibitors (SSRIs) for stroke recovery. Cochrane Database Syst Rev 2012;11: CD009286.
5 Zittel S, Weiller C, Liepert J: Citalopram improves dexterity in chronic stroke patients. Neurorehabil Neural Repair 2008;22:311–314.
6 Mikami K, Jorge RE, Adams HP Jr, et al: Effect of antidepressants on the course of disability following stroke. Am J Geriatr Psychiatry 2011;19:1007–1015.
7. Selim MH, Molina CA: Post-stroke treatment with selective serotonin reuptake inhibitors: a journey from sadness to motor recovery. Stroke 2012;43:3154–3155.
8 Marshall RS: Should every patient with stroke be on selective serotonin reuptake inhibitors? No. Stroke 2012;43:3152–3153.
9 Adams HP Jr, Bendixen BH, Kappelle LJ, et al: Classification of subtype of acute ischemic stroke. Definitions for use in a multicenter clinical trial. TOAST. Trial of Org 10172 in Acute Stroke Treatment. Stroke 1993;24:35–41.
10 Ofek K, Schoknecht K, Melamed-Book N, Heinemann U, Friedman A, Soreq H: Fluoxetine induces vasodilatation of cerebral arterioles by co-modulating NO/muscarinic signalling. J Cell Mol Med 2012;16:2736–2744.
11 Espinera AR, Ogle ME, Gu X, Wei L: Citalopram enhances neurovascular regeneration and sensorimotor functional recovery after ischemic stroke in mice. Neuroscience 2013;247:1–11.
12 Sas K, Csete K, Vezekényi Z, Sztriha L, Vécseil L, Papp JG: Effects of citalopram and fluoxetine on the corticocerebral blood flow in conscious rabbits. Acta Physiol Hung 2007;94:167–177.
13. Sonde L, Lokk J: Effects of amphetamine and/or L-dopa and physiotherapy after stroke: a blinded randomized study. Acta Neurol Scand 2007;115:55–59.
14 Treig T, Werner C, Sachse M, Hesse S: No benefit from D-amphetamine when added to physiotherapy after stroke: a randomized, placebo-controlled study. Clin Rehabil 2003;17:590–599.
15 Gladstone DJ, Danells CJ, Armesto A, et al; Subacute Therapy with Amphetamine and Rehabilitation for Stroke Study Investigators: Physiotherapy coupled with dextroamphetamine for rehabilitation after hemiparetic stroke: a randomized, double-blind, placebo-controlled trial. Stroke 2006;37:179–185.
16 Walker-Batson D, Smith P, Curtis S, Unwin H, Greenlee R: Amphetamine paired with physical therapy accelerates motor recovery after stroke. Further evidence. Stroke 1995;26:2254–2259.
17 Engelter ST, Urscheler N, Baronti F, et al: Frequency and determinants of using pharmacological enhancement in the clinical practice of in-hospital stroke rehabilitation. Eur Neurol 2012;68:28–33.
18 Dam M, Tonin P, De Boni A, et al: Effects of fluoxetine and maprotiline on functional recovery in poststroke hemiplegic patients undergoing rehabilitation therapy. Stroke 1996;27:1211–1214.
19. Pariente J, Loubinoux I, Carel C, et al: Fluoxetine modulates motor performance and cerebral activation of patients recovering from stroke. Ann Neurol 2001;50:718–729.
20 Loubinoux I, Pariente J, Boulanouar K, et al: A single dose of the serotonin neurotransmission agonist paroxetine enhances motor output: double-blind, placebo-controlled, fMRI study in healthy subjects. Neuroimage 2002;15:26–36.
21 Acler M1, Robol E, Fiaschi A, Manganotti P: A double blind placebo RCT to investigate the effects of serotonergic modulation on brain excitability and motor recovery in stroke patients. J Neurol 2009;256:1152–1158.

052

Stroke Telemedicine in Australia: Preliminary Findings on Building the Case for Financial Sustainability

Cadilhac D.[1,2], *Sheppard L.*[3], *Talman P.*[4], *Bagot K.*[2,5], *Vu M.*[2], *Kim J.*[1,2], *Bladin C.*[5,6], *Moodie M.*[3]

[1]School of Clinical Sciences, Monash University, Clayton, [2]Stroke, Florey Institute of Neuroscience and Mental Health, Heidelberg, [3]Faculty of Health, Deakin University, [4]University Hospital Geelong, Barwon Health, Geelong, [5]Monash University, [6]School of Clinical Sciences, Florey Institute of Neuroscience and Mental Health, Clayton, Australia

Background and Rationale: With limited specialist physicians available in regional hospitals, telemedicine may help improve access to time critical acute stroke treatments. The Victorian Stroke Telemedicine (VST) project is being established in 16 regional hospitals across Victoria, Australia (Bladin et al., 2015). This program enables access to neurologists at any time for decision support related to reperfusion therapies. We present preliminary data on whether the VST program is cost-effective.

Methods: Patients presenting to a participating hospital with suspected stroke <4.5 hours from symptom onset were eligible using 2011–2012 administrative data for Victoria. A simulated, incremental cost-effectiveness analysis was conducted to assess the potential costs and benefits of the VST program compared with (a) usual care or (b) an alternate 'counterfactual' option of directly employing stroke specialists to service one or more regional hospitals for delivering reperfusion therapy to patients in regional Victorian hospitals. Interim data from the VST program and the literature were sourced to populate the economic model. Assumptions were verified by an expert working group. Incremental costs were compared to incremental benefits measured as 'healthy years (HY)' gained. Scenario modelling and sensitivity analyses were undertaken to account for uncertainty in the point estimates.

Results: Using a willingness-to-pay threshold of AUD50,000/HY gained, the VST program was cost-effective compared to usual care (net cost per HY gained AUD38,000; 95% uncertainty in-

Cerebrovasc Dis 2016;42(suppl 1):1–157
DOI: 10.1159/000447732

terval [UI] AUD22,000, AUD60,000) with ~66 more patients being treated with intravenous thrombolysis. The counterfactual scenario of employing stroke specialists at regional hospitals was not cost-effective (AUD73,000 [95% UI AUD42,000, AUD118,000; 9% iterations <$50,000] per HY gained).

Conclusion: Stroke telemedicine is a feasible model to improve stroke outcomes in rural and regional areas. Our preliminary, economic evaluation of the VST program provides important information to guide the business case for ongoing sustainability and funding of the program.

Reference:

Bladin CF, Molocijz N, Ermel S, Bagot KL, Kilkenny M, Vu M, Cadilhac DA, On Behalf of VST Program Investigators: Victorian Stroke Telemedicine Project: Implementation of a new model of translational stroke care for Australia. Intern Med J 2015;45:951–956.

053

The Experience of Integrating Remote Acute Stroke Telemedicine Consultations with Local Practice: A Comparison of United Kingdom and Australian Specialist Providers

Bagot K.[1–3], *Cadilhac D.*[1,2], *Bladin C.*[4,5], *Vu M.*[1], *Donnan G.*[6], *Dewey H.*[5], *Emsley H.*[7], *Davies P.*[8], *Day E.*[9], *Ford G.*[10], *Price C.*[11,12], *May C.*[13], *Watkins C.*[14,15], *Lightbody E.*[3,15]

[1]Public Health, The Florey Institute of Neuroscience and Mental Health, Heidelberg, Germany; [2]Department of Medicine, Monash University, Clayton, Australia; [3]School of Nursing, University of Central Lancashire, Preston, United Kingdom; [4]The Florey Institute of Neuroscience and Mental Health, Heidelberg, Germany; [5]Eastern Health, [6]The Florey Institute of Neuroscience and Mental Health, Melbourne, Australia; [7]Lancashire Teaching Hospitals NHS Foundation Trust, Preston, [8]North Cumbria University Hospitals NHS Trust, Carlisle, [9]Lancashire and South Cumbria Strategic Clinical Network, Preston, [10]Oxford Academic Health Sciences Network, Oxford, [11]Northumbria Healthcare NHS Foundation Trust, [12]Newcastle University, Newcastle, United Kingdom; [13]Faculty of Health Sciences, University of Southampton, Southampton, Australia; [14]College of Health and Well-being, University of Central Lancashire, Preston, United Kingdom; [15]Nursing Research Institute, Australian Catholic University, Sydney, Australia

Background and Rationale: By increasing access to stroke specialists, telemedicine can reduce healthcare inequities in rural areas. However, the successful implementation of telemedicine services requires specialists' adapting their usual practice to provide consultations remotely. Yet how specialists' experiences vary between different countries is unknown. The aim of this study was to compare perceptions of United Kingdom (UK) and Australian specialists providing remote acute stroke telemedicine consultations.

Methods: Participants were identified using purposive sampling of remote specialists of these new telestroke networks: Australia's Victorian Stroke Telemedicine Program (n = 6; 2010–2013) and UK's Cumbria and Lancashire telestroke network (n = 5; 2010–2012). Semi-structured interviews were conducted pre- and post-implementation; recordings were subsequently transcribed verbatim and analysed in NVivo.

Deductive analysis was undertaken by two independent coders using the Normalisation Process Theory framework designed for assessing integration of interventions into usual practice. Interrater reliability analyses revealed 78–100% (M = 92%, SD = 8%) agreement, weighted average k = 0.69.

Results: Analysis to date (n = 6 Australia, n = 4 UK) revealed cross-cultural similarities and differences. In both countries, specialists described old and new consulting practices, and the purpose and value of the new telemedicine system. Both UK and Australian specialists reported not knowing rural colleagues' assessment and diagnostic skills as a concern. Australians discussed how remote consultations impacted on their usual role and future improvements, while UK specialists discussed system governance and policy and procedures. Full results will be presented.

Conclusion: Although concerns were identified, specialists from both Australia and the UK were actively involved in aspects of implementation to facilitate telemedicine consultations being available for regional patients with acute stroke. The variation identified may reflect different models of care used in Australia and the UK, requiring further exploration.

054

Lessons from Implementing a Regional Acute Stroke Telemedicine Service and How It Promotes Access to ECR Capable Hospitals

Vu M.[1], *Bagot K.*[1,2], *Bladin C.*[1,2], *Hand P.*[3], *Campbell B.*[4], *Cadilhac D.*[1,2]

[1]Stroke, The Florey Institute of Neuroscience and Mental Health, Heidelberg, [2]School of Clinical Sciences, Monash University, Clayton, [3]Victorian Stroke Clinical Network, Department of Health and Human Services, Melbourne, [4]The Royal Melbourne Hospital, Parkville, Australia

Background and Rationale: While acute telemedicine programs can increase the use of stroke thrombolysis in regional hospitals, it can also support rapid access to new advanced therapies such as endovascular clot retrieval (ECR). This presentation will take a theory-informed approach, outlining barriers and enablers to the implementation of the Victorian Stroke Telemedicine (VST) program and how it has facilitated access to ECR.

Methods: The VST program commenced in one regional hospital in 2011, and is expanding to a further 15 hospitals in a staggered approach from 2013–2017. This virtual system links regional hospitals to a network of metropolitan-based neurologists who provide 24/7 on-call support for patients presenting with acute