AUT NATIONAL INSTITUTE FOR
STROKE AND APPLIED NEUROSCIENCES

RIBURST Study (Reducing the International BURden of Stroke using mobile Technology

Newsletter 15, February 2022

Welcome to the 15th issue of the RIBURST newsletter

We hope all of you are staying safe and well during the COVID-19 pandemic.

Updated app released

An updated version of the Stroke Riskometer app has been released, and is available in 19 languages: Bengali, Bulgarian, Croatian, Czech, English, French, German, Greek (Cyprus), Hindi, Italian, Malay, Mandarin (Chinese), Nepali, Portuguese (Brazil), Portuguese (Portugal), Russian, Spanish, Swedish, Thai.

You can download the updated app free of charge from the App Store. https://apps.apple.com/nz/app/stroke-riskometer/id1514083245, or via the QR code:

The Android version can be downloaded from Google play:

The new features of the app include:
• Updated interface.
• Updated graphs.
• Updated goal reminders.
• Addition of new graph legends and text lables.
• Some bugs in various language locales and the 'Manage' section have been fixed.

The app currently fulfils the criteria of the General Data Protection Regulation (GDPR) – the EU law on data protection and privacy in the European Union and the European Economic Area.

New studies
• Our colleagues from St. Anne's University Hospital in the Czech Republic are leading a new 6-month study in 2022 called: Health message appeal and Facebook audience engagement: Evidence from the Stroke Riskometer application.

• The Stroke Riskometer app is being tested in a large international randomised controlled trial: PERsonalised Knowledge to reduce the risk of Stroke (PERKS-International) in Australia and New Zealand. The project is funded by NHMRC and led by Dr Seana Gall, University of Tasmania, Australia.

• The Stroke Riskometer app and PreventS-MD webapp for clinicians are being tested

in a large randomised controlled trial (PROMOTE Study) in Brazil funded by the Brazilian Ministry of Health. The project is led by Prof. Sheila Martins.

Researcher profile

This month, we are profiling The Public Health Group, which is part of the International Clinical Research Center at St. Anne's University Hospital (FNUSA-ICRC) in Brno, Czech Republic.

The Public Health Group has been exploring new ways of increasing the usage of the Stroke Riskometer app via social media advertisement. Their study "Health message appeal and Facebook audience engagement: Evidence from Stroke Riskometer application" is seeking the most cost-effective way of promoting the Riskometer app by using social media.

We plan to conduct an advertising campaign on Facebook to promote the Stroke Riskometer app using 3 different message appeals containing negative emotions, positive emotions and appealing to rational facts. The main aim is to identify which of these appeals are the most effective leading to the highest number of downloads of the app. "The results of this experimental study could be utilised in the future for the further promotion of the Stroke Riskometer and other stroke related issues on social media", explains Ekaterina Volevach, the lead researcher of this study.

Ekaterina Volevach is a 24-year-old Public Health researcher and a Ph.D. student of

neuroscience at the Masaryk University in Brno. Under the supervision of Professor Robert Mikulík (the Head of the Stroke Research Program in FNUSA-ICRC), Ekaterina is involved in the design, implementation and evaluation of the intervention programmes concerning stroke for the systematic education of the population.

With regards to the Riskometer study, Ekaterina also collaborates with Veronika Svobodová (the Stroke Research Programme and ESO-ESO Manager) and Hana Maršálková (the Head of the Public Health Group and the Manager of the Riskometer implementation in the Czech Republic).

The overall goal of the FNUSA-ICRC Public Health Group is to increase stroke awareness in the general public by means of the development and implementation of stroke awareness programmes and health promotion events. The Public Health Group has also been the guarantor of the Stroke Riskometer implementation in the Czech Republic.

Important publications

Feigin, V.L., Owolabi, M., Hankey, G.J., Pandian, J.D., & Martins, S.C. (2022). Digital health in primordial and primary stroke prevention: a systematic review. *Stroke*. https://doi.org/10.1161/STROKEAHA.121.036400

Owolabi, M.O., Thrift, A.G., Mahal, A., Ishida, M., Martins, S., Johnson, W.D., …… Feigin, V.L. and the Stroke Experts Collaboration Group. (2021). Primary stroke prevention worldwide: Translating evidence into action. *The Lancet Public Health*, https://doi.org/10.1016/S2468-2667(21)00230-9

Mat Said, Z., Musa, K. I., Tengku Ismail, T. A., Abdul Hamid, A., Sahathevan, R., Abdul Aziz, Z., & Feigin, V. (2021). The effectiveness of Stroke Riskometer™ in improving stroke risk awareness in Malaysia: A study protocol of a

cluster-randomized controlled trial. *Neuroepidemiology, 55,* 436-446.

Feigin, V. L., Brainin, M., Norrving, B., Martins, S., Sacco, R. L., Hacke, W., . . . Lindsay, P. (2022). World Stroke Organization (WSO): Global Stroke Fact Sheet 2022. *International Journal of Stroke, 17*(1), 18-29.

Medvedev, O., Truong, Q., Merkin, A., Borotkanics, R., Krishnamurthi, R., & Feigin, V. (2021). Cross-cultural validation of the Stroke Riskometer using generalizability theory. *Scientific Reports, 11*(1), 19064.

Martins. S., Brainin, M., Bath, P.M., Sacco, R.L., Hankey, G.J., Anderson, C., Sposato, L.A., Renato, L., Berwanger, O., Falavigna, M. et al. (2021). Polypill and Riskometer to prevent stroke and cognitive impairment in primary health care - PROMOTE Study. *International Journal of Stroke,* 16(S2). Abstract 142; DOI: 110.1177/17474930211041949

New resources

We have created a new webpage related to clinical trials using the Stroke Riskometer: https://nisan.aut.ac.nz/Stroke-Riskometer/clinical-trials. Here you can request permission to use the Stroke Riskometer in your trial, register your trial and find details of other trials that have been/are being conducted using the Stroke Riskometer app.

Update on PreventS-MD
A new risk assessment and clinical management support system

PreventS-MD is based on the same algorithm as the Stroke Riskometer app. It has been developed and its usability is currently being tested by 72 experts (health professionals) from 27 countries (55% from high-income countries and 45% from low- to middle-income countries) in the PRIME-International Study, led by Prof. Valery Feigin.

This webapp and the desktop version are designed to be used by healthcare professionals in conjunction with existing electronic patient management systems of outpatient clinics and hospitals. By communicating with the electronic patient management system of the health provider, PreventS allows semi-automatic collection of information on stroke risk factors and calculates an absolute and relative 5- and 10-year risk of stroke and 10-year risk of coronary disease, as well as generating patient-tailored recommendations for primary and secondary stroke prevention for the individual patient embedded into the patient's medical summary. This reduces the workload on medical professionals and promotes health and well-being of patients.

Success stories

We invite RIBURST members to submit details of their 'success stories' of the use/implementation of the app to bvangils@aut.ac.nz, for inclusion in future editions of the newsletter and sharing with the entire group.

Contact information
RIBURST project manager:
T: +64 9 921 9999 ext. 7809
E: riskometer@aut.ac.nz

NISAN (National Institute for Stroke and Applied Neuroscience)
Secretariat: Brigitte van Gils
T: +64 9 921 9174
E: bvangils@aut.ac.nz
W: https://nisan.aut.ac.nz