

Improving dysphagia screening for acute stroke

Rachel Levine^{1,2,3}, Paul Blee², Aylissa Canning^{2,4} & Andrew Wong^{2,5,6}

¹Speech Pathology & Audiology Department, Surgical Treatment and Rehabilitation Service (STARS), Metro North Health; ²Queensland Stroke Clinical Network, Healthcare Improvement Unit, Clinical Excellence Queensland, Department of Health; ³School of Health and Rehabilitation Sciences, Faculty of Health, Medicine and Behavioural Sciences, The University of Queensland; ⁴System Planning Branch, Statewide Services and Planning, Department of Health; ⁵Neurology Department, Royal Brisbane & Women's Hospital, Metro North Health; ⁶The Frazer Institute, The University of Queensland

INTRODUCTION

Approximately **42%** of patients with stroke experience a swallowing disorder (dysphagia)¹. Dysphagia is associated with malnutrition, pneumonia, increased length of stay and poorer patient outcomes^{1,2}. Early screening/assessment of swallowing function facilitates access to required stroke care at the right time and can reduce the risk of complications such as pneumonia³.

For many Queensland patients with stroke, **a screener/assessment of swallowing is not performed before being given oral medications, food or fluids**, potentially increasing their risk of complications³.

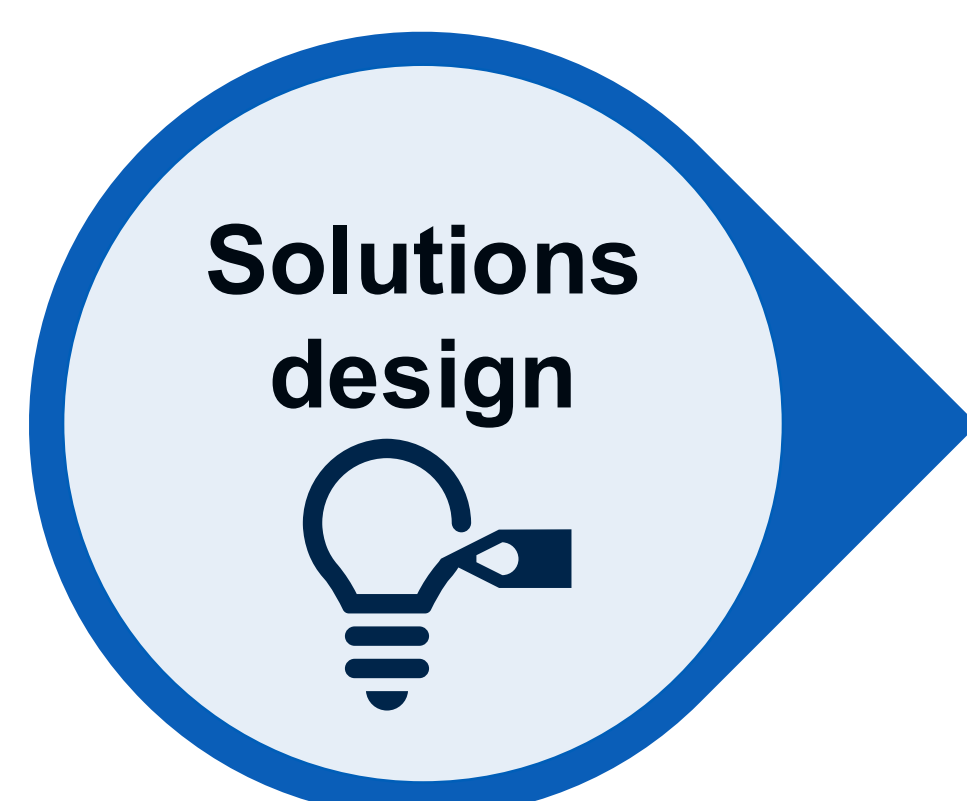
OBJECTIVES

To develop an online change management toolkit to improve completion of dysphagia screening for patients with acute stroke in Queensland Health hospitals: **1) Before oral intake of food, fluids, medications and 2) Within 4hrs of arrival to hospital.**

METHODS



Stakeholder engagement, benchmarking & process mapping. Identified barriers & enablers, mapped to the COM-B⁴ model.



Co-design of the toolkit & resources to target Capability, Opportunity & Motivational barriers⁴. Development of a strategic communications plan.



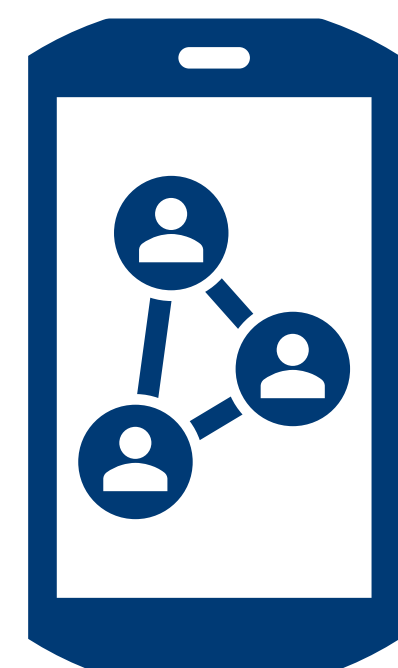
Piloted the toolkit for refinement & evaluation prior to statewide roll-out. Evaluation was guided by the RE-AIM framework⁵.



Statewide dissemination via Stroke Care Connect & QHEPS. Collaboration with strategic partners for roll-out & sustainment.

OUTCOMES

Reach



Engagement with **10 groups/networks** across Queensland Health.
30 unique users on SharePoint during the pilot.
10 additional clinicians expressing interest in accessing the toolkit once released.

Implementation/Adoption



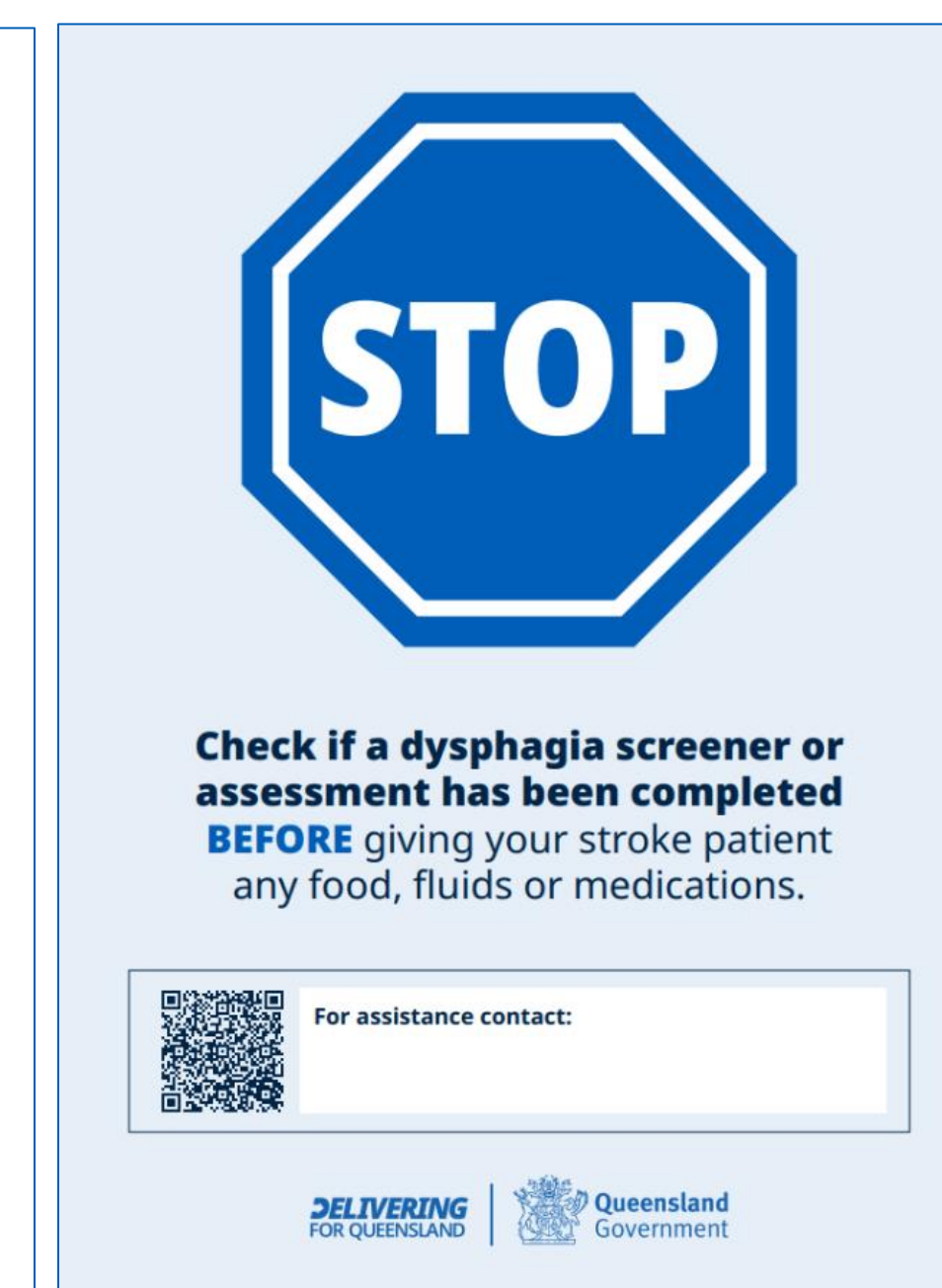
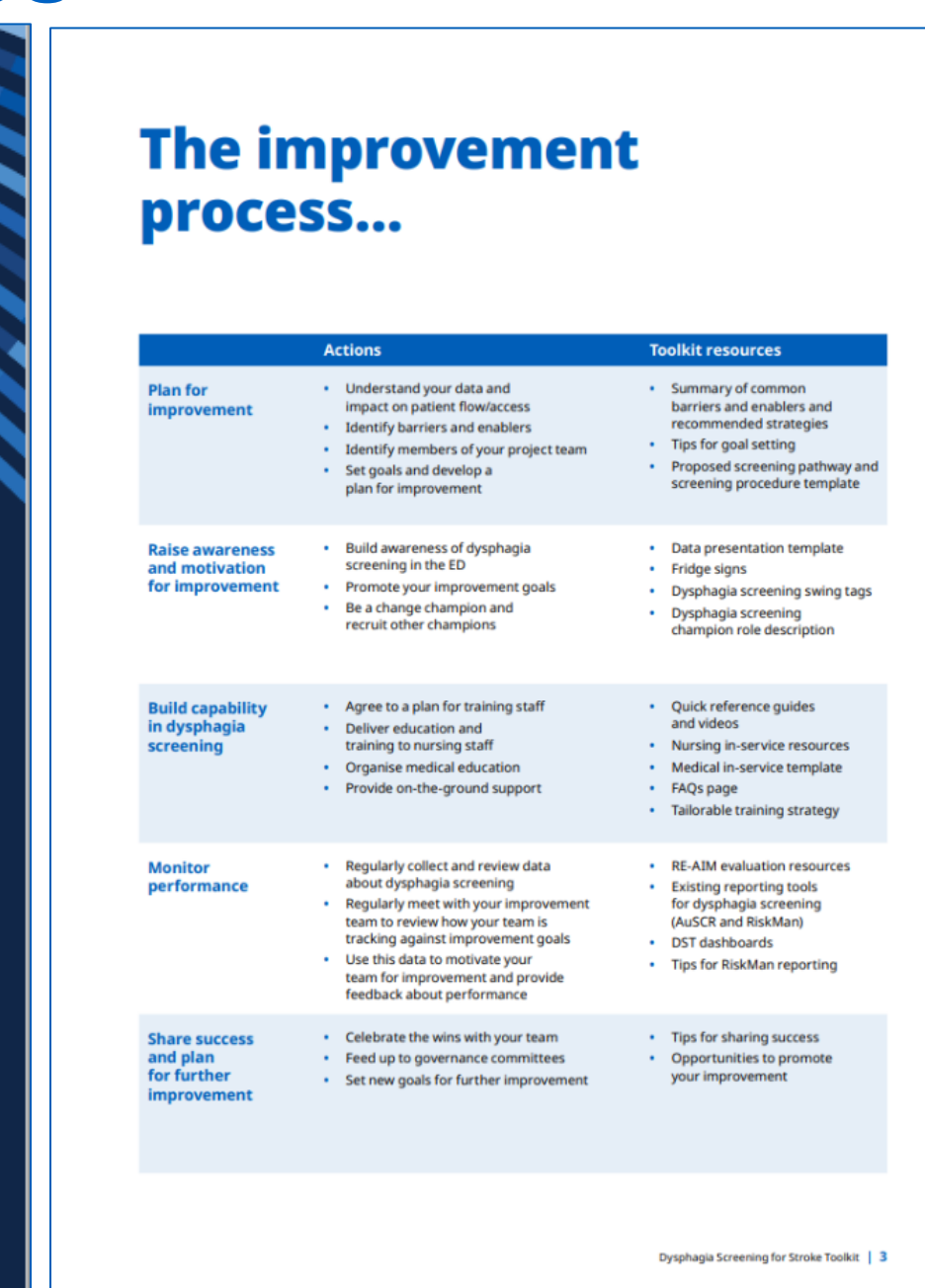
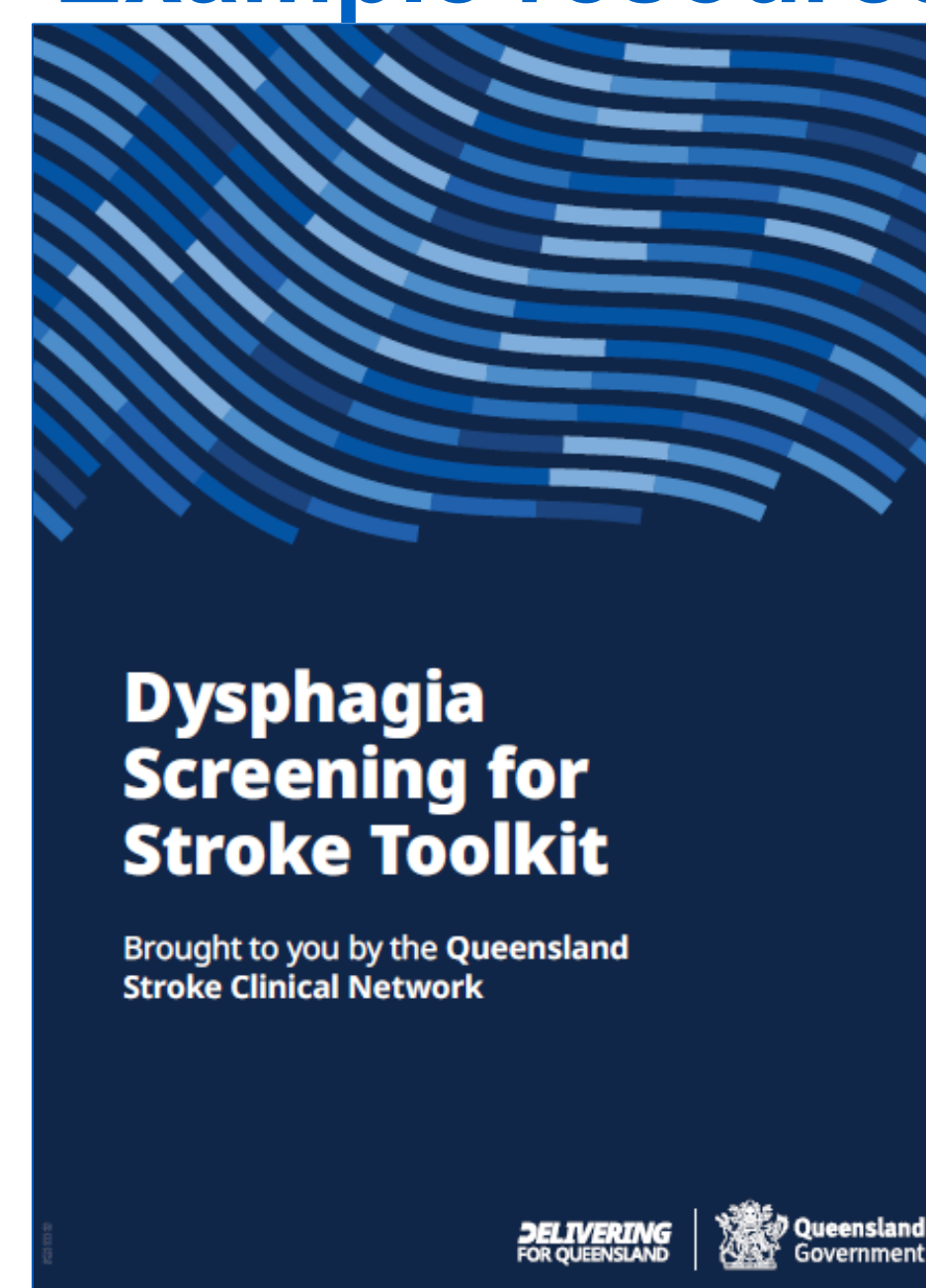
Change leaders report:
The toolkit is **easy to access** & content is relevant.
Resources will **boost staff awareness** of screening.
Training recommendations are **feasible**.
Resources **can be tailored** to local settings.

Maintenance



Change leaders report that the toolkit could be used **across Queensland Health**. Local champions are perceived as important for future improvement.
Partnerships with statewide support programs identified. A **communications plan** was developed for statewide reach across clinical groups & networks.

Example resources



CONCLUSIONS

By partnering with clinicians and clinical support services, we developed an online toolkit to improve dysphagia screening in acute stroke. Building clinical teams' capability in change management is a central component of the toolkit to enable broad reach and achieve sustained improvement. Working with strategic partners will ensure dissemination and use beyond the project phase.

REFERENCES

¹Banda KJ, Chu H, Kang XL, Liu D, Pien L-C, Jen H-J, et al. Prevalence of dysphagia and risk of pneumonia and mortality in acute stroke patients: a meta-analysis. BMC geriatrics. 2022;22(1):420-10; ²Dziewas R, Michou E, Trapl-Grundschober M, Lal A, Arsava EM, Bath PM, et al. European Stroke Organisation and European Society for Swallowing Disorders guideline for the diagnosis and treatment of post-stroke dysphagia. Eur Stroke J. 2021;6(3); ³Bray BD, Smith CJ, Cloud GC, Enderby P, James M, Paley L, et al. The association between delays in screening for and assessing dysphagia after acute stroke, and the risk of stroke-associated pneumonia. Journal of Neurology, Neurosurgery & Psychiatry. 2017;88(1):25; ⁴Michie S, van Stralen MM, West R. The behaviour change wheel: a new method for characterising and designing behaviour change interventions. Implement Sci. 2011;6:42; ⁵Glasgow RE, Vogt TM, Boles SM. Evaluating the public health impact of health promotion interventions: the RE-AIM framework. American journal of public health (1971). 1999;89(9):1322-7.

ACKNOWLEDGEMENTS

We acknowledge the contributions of the following partners: Samantha Daly, our project working group, Queensland Stroke Clinical Network, Queensland Emergency Department Strategic Advisory Panel and working groups, Queensland Health Speech Pathology Advisory Committee, RBWH Speech Pathology Department, Queensland Telestroke Service & all clinicians & teams who trialed or reviewed resources.