## **Supplementary Material**

## Development of the 'AusPROM' recommendations for elective surgery patients

Natasha K. Brusco<sup>A,B,C</sup> (BPhysio, MPhysio, PhD, Adjunct Professor), Paul S. Myles<sup>D</sup> (MBBS, DipRACOG, MPH, MD, FRCA, FAHMS, DSc, Professor and Director), Victoria Atkinson<sup>A,E</sup> (MBBS, FRACS,MHM, AFRACMA, GAICD, EDAC, National Chief Medical Officer), Jeffrey Woods<sup>A,E</sup> (RN, MCritCareN, Chief Nursing Officer), Anita Hodge<sup>A,E</sup> (RN, GCCritCareN, National Quality Manager), Cathy Jones<sup>A,F</sup> (BSpeechPath, MBA, Principal Consultant), Damien Lloyd<sup>A,E</sup> (RN, National Director – Clinical Governance), Vincent Rovtar<sup>E</sup> (AssDipBus, Consumer Consultant), Amanda M. Clifford<sup>G</sup> (BSc, PhD, Professor of Allied Health), Tom Wood<sup>E</sup> (BTHM, Quality Data Manager) and Meg E. Morris<sup>A,H,\*</sup> (BPhysio, PhD, Professor of Implementation Sciences)

<sup>&</sup>lt;sup>A</sup>Academic and Research Collaborative in Health (ARCH), La Trobe University, Bundoora, Vic., Australia

<sup>&</sup>lt;sup>B</sup>Alpha Crucis Group, Melbourne, Vic., Australia

<sup>&</sup>lt;sup>C</sup>Rehabilitation, Ageing and Independent Living (RAIL) Research Centre, Monash University, Melbourne, Vic., Australia

<sup>&</sup>lt;sup>D</sup>Department of Anaesthesiology and Perioperative Medicine, Alfred Hospital and Monash University Central Clinical School, Melbourne, Vic., Australia

<sup>&</sup>lt;sup>E</sup>Healthscope Limited, Melbourne, Vic., Australia

<sup>&</sup>lt;sup>F</sup>Cathy Jones Consulting, Melbourne, Vic., Australia

<sup>&</sup>lt;sup>G</sup>School of Allied Health, Health Research Institute, Ageing Research Centre, University of Limerick, Limerick, Ireland

<sup>&</sup>lt;sup>H</sup>Victorian Rehabilitation Centre, Healthscope Limited, Glen Waverley, Melbourne, Vic., Australia

<sup>\*</sup>Correspondence to: Email: M.Morris@latrobe.edu.au

## 1 Appendix 1: Final set of AusPROM Recommendations

	AusPROM	Details
	Recommendations	
1	Response rate for new	The recommendation domain: Implementation process
	PROM surveys needs to	The actor: Data manager / quality manager
	be monitored alongside	The action: Monitor PROM and all other existing patient survey response
	the response rate of	rates
	other patient surveys	Action target: Establish a target response rate and report against this target
	already in place (e.g.	Temporality: Ongoing     Dean Savard time generals
	patient experience	Dose: Several time per year    Several time per year   Several time   Severa
	surveys)	<ul> <li>Implementation outcome affected: Sustainability (of PROM and other surveys)</li> </ul>
		<ul> <li>Justification: Ensure the introduction of a new patient survey does not</li> </ul>
		negatively impact the response rate of previously established patient
		surveys
2	Patients need to have	The recommendation domain: Patient characteristics
-	an easy way to opt out	The actor: The patient
	of the surveys without	The action: Easy tick box to opt out of patient surveys
	concern of	Action target: The patient
	repercussions	Temporality: Pre-admission
		Dose: Once
		• Implementation outcome affected: Adoption (and non-adoption by choice)
		Justification: Ensure the patient has choice and control
3	In lieu of a pre-surgery	The recommendation domain: PROM characteristics
	PROM survey, patients	The actor: The patient
	are asked to recall pre-	The action: Recall of pre-surgery state in the week following surgery
	surgery state via a single	Action target: The patient
	recall question, when	Temporality: In the week following surgery
	they completed the 1-	Dose: Once
	week post-surgery	Implementation outcome affected: Sustainability (reduce patient burden)
	survey, as a valid	Justification: To reduce patient and health administration burden prior to
4	baseline measure Continue with electronic	Surgery The recommendation demains implementation process
4	survey distribution,	<ul> <li>The recommendation domain: Implementation process</li> <li>The actor: Data manager / quality manager</li> </ul>
	however monitor the	The action: Data manager / quality manager     The action: Monitor response rate across the different age groups
	PROM survey response	Action target: Ensure older patients are proportionately represented
	rate across the different	Temporality: Ongoing
	age groups to ensure	Dose: Several times per year
	appropriate age group	<ul> <li>Implementation outcome affected: Adoption (across all age groups)</li> </ul>
	representation	Justification: Resources needed for paper based surveys can be prohibitive
5	Each health service	The recommendation domain: Staff characteristics
	should build awareness	The actor: Quality manager
	of PROMs across all	The action: Develop and disseminate multiple communication strategies
	hospital staff from the	<ul> <li>Action target: All staff have awareness of PROM survey</li> </ul>
	ground up, using	Temporality: Ongoing
	multiple means of	<ul> <li>Dose: On initiation and twice per year ongoing</li> </ul>
	communication	<ul> <li>Implementation outcome affected: Penetration (staff knowledge</li> </ul>
		penetration)
	<del>-</del> 1	Justification: Organisational support for the PROM survey
6	The patient can decide if	The recommendation domain: Patient characteristic  The recommendation domain d
	the individual survey	The action: The patient  The action Tisking having any action to the action and the basis and the basis and the basis are action.  The action Tisking having any action and the action and the basis are action.
	results go back to the	The action: Ticking box in survey to opt in to the survey results being sent to
	doctor/surgeon (and	the surgeon
	themselves) once the survey is complete	<ul><li>Action target: No target (patient preference)</li><li>Temporality: Ongoing</li></ul>
	survey is complete	
		Dose: With each survey

	AusPROM	Details
	Recommendations	
		<ul> <li>Implementation outcome affected: Penetration (survey results penetrating through to the individual surgeons)</li> <li>Justification: To enhance patient – doctor communication</li> </ul>
7	Identify versions of the PROM tool which have been validated in other languages and offer these choices to the patients completing the PROM survey	<ul> <li>The recommendation domain: PROM characteristics</li> <li>The actor: Quality manager</li> <li>The action: Identify versions of the PROM tool which have been validated in other languages</li> <li>Action target: Increase response rate by 10% (or as appropriate)</li> <li>Temporality: Ongoing</li> <li>Dose: With each survey distributed</li> <li>Implementation outcome affected: Acceptability (patient perspective)</li> <li>Justification: Inclusive survey distribution</li> </ul>
8	Doctors and pre- admission nurses introduce the PROM pre-operatively during pre-operative visits, as well as develop a single page fact sheet on PROMs and include this in the pre-admission documentation.	<ul> <li>The recommendation domain: Staff characteristics and healthcare organisation characteristics</li> <li>The actor: Doctors and pre-admission nurses</li> <li>The action: Noting the PROM survey during the consultation</li> <li>Action target: All patients are made aware of the PROM survey prior to admission</li> <li>Temporality: Ongoing</li> <li>Dose: Once per admission</li> <li>Implementation outcome affected: Adoption</li> <li>Justification: More likely to complete a survey noted as important by the doctor</li> </ul>
9	Ensure that the email / SMS inviting PROM survey participation: (A) Provides a link to the health service website explaining PROMs (B) Notes that the survey takes 5 minutes to complete	<ul> <li>The recommendation domain: PROM characteristics</li> <li>The actor: Data manager / quality manager (survey design)</li> <li>The action: Provide information when the survey invitation is sent out</li> <li>Action target: All patients</li> <li>Temporality: Ongoing</li> <li>Dose: Each survey</li> <li>Implementation outcome affected: Acceptability (patients fully informed)</li> <li>Justification: Ensure patients are informed of the rational for the PROM survey</li> </ul>
10	When a PROM tool had a reversal of scale (0-10 to 10-0), use a colour gradient, to ensure patients see the reversal of the scale	<ul> <li>The recommendation domain: PROM characteristic</li> <li>The actor: Data manager / quality manager</li> <li>The action: When a PROM tool had a reversal of scale (0-10 to 10-0), use a colour gradient, to ensure patients see the reversal of the scale</li> <li>Action target: All surveys</li> <li>Temporality: Ongoing</li> <li>Dose: All surveys</li> <li>Implementation outcome affected: Fidelity (PROM filled out correctly)</li> <li>Justification: Improve clarity of PROM questions</li> </ul>
11	Develop a set of PROM related targets which focus on increased clinician and patient collaboration, as well as improving clinical care and patient reported outcomes. Develop a PROM dashboard, and model the PROM dashboard after other dashboards currently in use (e.g. patient experience dashboard).	<ul> <li>The recommendation domain: Healthcare organisation characteristics</li> <li>The actor: Data manager / quality manager</li> <li>The action: Develop PROM KPIs and PROM dashboard</li> <li>Action target: Target response rate, target response scores</li> <li>Temporality: Ongoing</li> <li>Dose: Reviewed once per month (or as appropriate)</li> <li>Implementation outcome affected: Penetration (of results to all staff)</li> <li>Justification: Easy access to results will improve engagement</li> </ul>

	AusPROM	Details
12	Recommendations  Ensure reminders about	The recommendation domain: Staff and patient characteristics
12	PROM surveys are	The actor: Staff
	included on staff and	The action: Remind patents about the PROM survey on discharge
	patient discharge	Action target: All staff and all elective surgery patients
	checklists.	Temporality: Ongoing
		Dose: On discharge from hospital
		Implementation outcome affected: Adoption
		Justification: Reminders to the patient may positively influence PROM
12	Farmer adaminata	adoption
13	Ensure adequate systems and processes	<ul> <li>The recommendation domain: Healthcare organisation characteristics</li> <li>The actor: Data manager / quality manager</li> </ul>
	are in place to automate	<ul> <li>The actor: Data manager / quality manager</li> <li>The action: Ensure adequate systems and processes are in place to automate</li> </ul>
	the PROM survey	the PROM survey distribution and data collection
	distribution and data	Action target: 100% automated process
	collection.	Temporality: Prior to implementation
		Dose: Once, then review as needed
		Implementation outcome affected: Feasibility
		Justification: Large scale hospital survey distribution is more feasible when
		automated
14	Clinical staff are not	The recommendation domain: Healthcare organisation characteristics
	required to administer	The actor: Data manager
	the PROMs at point of	The action: Data manager oversees administration of the PROM survey
	care, instead this can be	Action target: 0% of clinical staff administer the PROM survey  The parallil of the PROM surve
	delegated to non-clinical	Temporality: Ongoing     Description
	staff providing a central point of electronic	<ul><li>Dose: All surveys</li><li>Implementation outcome affected: Feasibility</li></ul>
	survey administration,	<ul> <li>Justification: Clinical staff do not have the capacity for ongoing PROM survey</li> </ul>
	such as a data manager.	distribution
15	Develop a health service	The recommendation domain: Healthcare organisation characteristics
	PROM survey policy	The actor: Quality manager
	where participant	The action: Develop a health service PROM survey policy
	exclusion and inclusion	Action target: Once off action
	criteria are defined, in	Temporality: Prior to survey implementation
	addition to other	Dose: Once off, review as required
	procedural aspects	Implementation outcome affected: Feasibility
		Justification: More feasible to implement and sustain a PROM survey when     releasing and responsibilities are defined.
16	Each hospital will	roles and responsibilities are defined  The recommendation domain: Staff characteristics
10	nominate a key contact	The recommendation domain. Stan characteristics     The actor: Quality manager
	person to champion	The action: Each hospital will nominate a key contact person to champion
	PROMs. In addition to	PROMs
	championing PROMs,	Action target: Minimum of one champion per hospital
	this person will collate	Temporality: Ongoing
	patient responses and	Dose: Once, then as required
	determine how to best	Implementation outcome affected: Sustainability
	utilise responses to	Justification: Prom survey most likely to be sustained when an individual is
	improve clinical care	empowered to advocate the importance of PROMs on an ongoing basis
17	PROM survey	The recommendation domain: External influences
	distribution is built into	The action: A continuous plan developed and in put in place during outcome!
	routine processes to minimise the impact of	<ul> <li>The action: A contingency plan developed and is put in place during external emergencies to minimise staff resources required in the PROM process</li> </ul>
	external emergencies	Action target: Once off action
	(e.g. COVID-19	Temporality: Once, then reviewed as required
	pandemic). A	Dose: Only as required
	contingency plan	Implementation outcome affected: Feasibility
	developed and is put in	Justification: At times of external emergencies PROM survey distribution
	place during external	may be minimised

	AusPROM Recommendations	Details
	emergencies to minimise staff resources required in the PROM process.	
18	When planning for PROM implementation, ensure that in the early phases of survey implementation, the hospitals seek patient feedback on survey acceptability.	<ul> <li>The recommendation domain: Patient characteristics</li> <li>The actor: Quality manager</li> <li>The action: Seek patient feedback on PROM survey acceptability</li> <li>Action target:</li> <li>Temporality: Prior to implementation / early implementation</li> <li>Dose: Once</li> <li>Implementation outcome affected: Acceptability</li> <li>Justification: Patient acceptability is key to adoption and sustainability</li> </ul>
19	Collaborate with the individual Surgeons' Practice Managers throughout PROM implementation, as surgeons Practice Managers have been identified as key stakeholders.	<ul> <li>The recommendation domain: Staff characteristics</li> <li>The actor: Quality manager</li> <li>The action: Communicate with individual Surgeons' Practice Managers</li> <li>Action target: Communicate with all Practice managers</li> <li>Temporality: Prior to implementation / early implementation</li> <li>Dose: Once, then as required</li> <li>Implementation outcome affected: Penetration</li> <li>Justification: Practice managers can encourage surgeons to talk about the PROM survey with the patient</li> </ul>
20	At the end of the survey there is a statement noting that if the patient has concerns, they need to contact their doctor.	<ul> <li>The recommendation domain: PROM characteristic</li> <li>The actor: Data manager</li> <li>The action: Build this into the survey</li> <li>Action target: All surveys</li> <li>Temporality: Once</li> <li>Dose: All surveys</li> <li>Implementation outcome affected: Acceptability</li> <li>Justification: Patients feedback that completing a PROM can result in unexpected emotions, therefore a direction for seeking support is recommended</li> </ul>
21	Use SMS as the preferred method of survey distribution	<ul> <li>The recommendation domain: PROM characteristics</li> <li>The actor: Data manager / quality manager</li> <li>The action: Distribute PROM surveys via SMS</li> <li>Action target: All surveys</li> <li>Temporality: Ongoing</li> <li>Dose: All surveys</li> <li>Implementation outcome affected: Adoption</li> <li>Justification: Higher response rate with SMS versus email survey invitation</li> </ul>
22	Consider an additional PROM survey at 8-12 weeks post-surgery to capture the final PROM score.	<ul> <li>The recommendation domain: Patient characteristics</li> <li>The actor: Data manager</li> <li>The action: Repeat PROM survey in the medium term</li> <li>Action target: For overnight surgery patients only, not day surgery patient</li> <li>Temporality: Ongoing</li> <li>Dose: For each overnight surgery patient</li> <li>Implementation outcome affected: Appropriateness (capture end point o recovery)</li> <li>Justification: At four week post-surgery, not all patients would have made full recovery</li> </ul>