



End-of-Life Essentials

FINAL REPORT

March 2015 to June 2017

End-of-Life Essentials was funded by the Commonwealth of Australia (Agreement ID: 4-V7YBD5)

Executive Summary

Activity Objectives

The objective of the End-of-Life Essentials is to address service provider skill development through the development of education modules and an associated toolkit on health care at the end of life in acute hospitals with cooperation and support of industry stakeholders including Australian Commission on Safety and Quality in Health care (ACQSHC).

Background

More than half of Australian who die each year do so in acute hospitals. However, the publication '*Safety and Quality of End-of-life Care in Acute Hospitals: A Background Paper*' by the Australian Commission on Safety and Quality in Health Care (ACSQHC) outlines that care of these dying Australians is variable.¹ Limited capacity of staff to recognise dying, poor communication, invasive clinical investigations and a systems level default to continue lifesaving treatments means that living well toward the end of life in acute hospitals is a challenge. Individual clinicians, including senior medical staff, who work in hospitals, may not clinically identify 'dying' or those patients at end-of-life, hence lies the challenge to deliver high quality health care. The education modules were built around areas of knowledge gap already identified in the ACQSHC's *National Consensus Statement: essential elements for safe and high-quality end-of-life care*.²

Achievements Against Activity Performance Indicators

The funding agreement (Agreement ID: 4-V7YBD5) identified eight activity performance indicators. Items 1 to 6 relate to the education modules and 7 to 8 relate to the implementation toolkit. Table 1 summarises activity performance against the eight activity performance indicators.

¹ Australian Commission on Safety and Quality in Health Care. (2013) Safety and Quality of End-of-life Care in Acute Hospitals: A

² Australian Commission on Safety and Quality in Health Care. (2015) National Consensus Statement: essential elements for safe and high-quality end-of-life care. Sydney: ACSQHC.

Table 1: Summary of Overall Activity Performance Against Goals

Activity Performance Indicators	Target	Actual
Activity Performance Indicator 1. Minimum number of online education modules developed	Five (5) Modules. Target Completion Date: All five tested and completed by October 2016.	All six modules tested, completed and operational online. Three in 24 June 2016 and three on 13 October 2016: <i>1) Dying, a normal part of life;</i> <i>2) Patient-centred communication and shared decision-making;</i> <i>3) Recognising the end-of-life;</i> <i>4) Planning end-of-life care;</i> <i>5) Teams and continuity for the patient;</i> <i>6) Responding to concerns</i>
Activity Performance Indicator 2. Minimum number of participants from relevant target audience (including doctors, nurses, allied health practitioners) to pilot online education modules	Ten participants (including doctors, nurses, allied health practitioners) per module. Target Completion Date: Sequentially developed and piloted.	A total of 35 doctors, nurses and allied health professionals piloted the modules.
Activity Performance Indicator 3. Minimum number of enrolments for online education modules	Two thousand five hundred (2,500) enrolments. Target Completion Date: June	4,403 health care professionals registered to the education modules (see Table 5: Distribution of Module Registrations by Profession)

	2017.	
Activity Performance Indicator 4. Minimum number of enrolled participants who complete modules	One thousand two hundred and fifty (1,250) participants. Target Completion Date: June 2017.	There were a total of 5,172 module completions (see Table 10: Distribution of Module Completions by Profession)
Activity Performance Indicator 5. Minimum percentage of registered participants per module that identify an improvement in knowledge immediately after completion of the module	Seventy five percent (75%). Target Completion Date: December 2016.	Knowledge Improvement Per Module³ (Table 15: Post-evaluation Respondent Ratings) 90% of learners said their knowledge improved about important elements of end-of-life care skills immediately after completion of the <i>Module 1</i> 93.3% of learners said their knowledge and skills about end-of-life communication improved immediately after completion of the <i>Module 2</i> 91.8% of learners said their knowledge about how to increase skills in recognising patients approaching the end of life improved immediately after completion of the <i>Module 3</i> 93.9% of learners said their knowledge about negotiating goals of care improved immediately after completion of the <i>Module 4</i> 90.6% of learners said their knowledge about effective teams in end-of-life care

³ Responses of 4 (agree) and 5 (strongly agree) were combined to create an agreement score. The number of agreement respondent ratings were converted to percentages of the total number of responses received for each post-evaluation question.

		<p>improved immediately after completion of the <i>Module 5</i></p> <p>84.6% of learners said their knowledge about managing disagreements improved immediately after completion of the <i>Module 6</i></p>
<p>Activity Performance Indicator 6. Percentage of participants who identify an improvement in knowledge to recognise and address the needs of dying patients 3-6 months after completion of a module</p>	<p>Seventy five percent (75%).</p> <p>Target Completion Date: June 2017</p>	<p>88.9% of learners' said their confidence in recognising end-of-life was maintained 3-6 months after completion of <i>Module 3</i> (Table 17: Rating in Confidence After 3-6 Months)</p> <p>88.9% of learners' said they had increased skills 3-6 months after completion of <i>Module 3</i> (Table 18: Rating in Skills After 3-6 Months)</p>
<p>Activity Performance Indicator 7. Minimum number of toolkits downloaded per month following release</p>	<p>Twenty (20) downloads per month.</p> <p>Target Completion Date: January – June 2017.</p>	<p>Hard Copies of My Toolkit:</p> <p>545 toolkits distributed over 2.54 months⁴ = 214.57 toolkits per month</p> <p><u>plus</u></p> <p>865 page visits to the associated online resources, with an average of 2.42 page views per visit.</p> <p>Online Copies of My Toolkit:⁵</p> <p>179 downloads in 0.52 months = equivalent of 344.23 Toolkits per month</p>
<p>Activity Performance Indicator 8. Percentage of participants who report a change in practice within their work areas following the implementation of the toolkit</p>	<p>Sixty percent (60%).</p>	<p>59.3%*</p> <p>*within 4 weeks of receiving <i>My Toolkit</i></p>

⁴ Time between first distribution of *My Toolkit* and finalisation of this report was 11 weeks, which is 2.54 months.

⁵ *My Toolkit* has been available online since 13th June 2017. This figure includes web statistics to 28th June 2017.

Timescales

The timescale for the activity was March 2015 – June 2017.

Conclusion

The End-of-Life Essentials activity has successfully achieved or surpassed all performance indicators on time and within budget. Working with key stakeholders and industry across Australia, peer-reviewed, evidence-based resources have been crafted to educate the workforce and improve the end-of-life care capacity and capabilities of Australian health care professionals. The evaluation data demonstrates that the suite of modules, materials and resources have increased user knowledge and confidence in addressing end-of-life issues with patients and their families. Whilst the education was intended as a resource for individual use in acute hospital settings, the education had broader appeal both in terms of its applicability in other settings and for other user groups.

Given the level of continued interest in the education modules and requests for *My Toolkit*, an ongoing demand for, and continued uptake of the resources is anticipated. With an ageing population and increasing rates of chronic disease, interest and need for the activity resources is expected to increase. Ensuring quality end-of-life care is provided by a highly skilled acute hospital workforce is paramount. Continuing to connect with, and increase the skills of health care professionals employed in Australian public hospitals is crucial to improve the end of life care for Australians.

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Introduction

This is the Final Report of the National Palliative Care Project - *Education Modules on End-of-Life Care in Acute Hospitals 2015-2017* (known as End-of-Life Essentials). This report provides an overview of the activity, followed by the methodology and review of the evaluations of the education modules (Phase 1) and the implementation toolkit (Phase 2).

Background

The End-of-Life Essentials activity is positioned in the Government's Public Health Chronic Disease and Palliative Care Program. A range of national palliative care projects were supported by the Government to improve the provision of high quality palliative care in Australia by supporting projects primarily focusing on education, training, quality improvement and advance care planning. The Australian Government, under the National Palliative Care Projects initiative, has funded the End-of-Life Essentials activity (Agreement ID: 4-V7YBD5) to enhance the quality of palliative care service delivery and increase support for people who are dying, their families and carers.

The overall goal of the End-of Life Essentials activity was to provide education and an implementation toolkit on end-of-life care to doctors, nurses and allied health professionals who work in acute hospitals across Australia. The intent was to educate health care professionals and provide them with tools and resources to apply the learnings from the modules to their workplace.

Project Management and Governance

A joint Advisory Group with representatives from the ACSQHC was established. The Advisory Group provided critical comment and expertise to the activity as well as maintained oversight of the activity as a whole. Members of the Advisory Group included the activity co-leads, ACSQHC delegates and key stakeholders representing health professionals (See acknowledgements, page 55)

Marketing and Communications

Marketing and communications have played a major role to create awareness of the End-of-Life Essentials activity amongst doctors, nurses and allied health professionals. To create a framework for communicating and promoting the education, a concerted and planned marketing and communications strategy was developed and implemented. This outlined a range of communication tools, messages and principles that could be applied to the brand from pre-launch awareness activity through to future promotion of the education to a range of target audience segments.

The communication and marketing strategy had three principle objectives:

1. Create awareness for the education modules amongst health professionals, clinicians and allied health professionals in the acute hospital setting. The aim of the strategy was to inform the target market and encourage enrolment and completion of the education.
2. Communicate the benefits for greater education about end-of-life care across the health sector. Encourage dialogue and improved understanding and service delivery beyond acute care settings.
3. Elicit action and create conversations about death, dying and end-of-life issues with all target segments and the wider community. Social media, inbound marketing and traditional media including those linked to national health events and community initiatives were used to achieve a holistic communication strategy.

The three main profession groups identified in the strategy included health care professionals from the primary audience including:

- Doctors;
 - Specialists, Consultants and Senior/well established doctors
 - Early Career, resident & registrars
 - MET's and Intensive Care specialists
- Nurses;

- Senior Nurses, Unit Managers
- Junior nurses and nursing staff
- Allied Health Professionals;
 - Occupational Therapists, Physiotherapists, Speech Pathologist, Social Worker, New Graduates etc

Despite being targeted at the Australian acute care system, many health care professionals who care for deteriorating patients in other settings registered and completed the education. The secondary target audience of health providers and services also included:

- Hospitals & Medical Schools;
 - Management and Administrators
 - Peak Bodies and Associations
 - Other Hospitals, Government and Health Groups
- Aged and Palliative Care;
 - Specialist Aged care and palliative care providers
- General Practitioners;
- General Public;
 - Patients & Families
 - Wider Community
 - Community Advocates

PHASE 1: EDUCATION MODULES AND WEBSITE RESOURCES

In Phase 1 of this activity, six online education modules were developed conceptually from the ACSQHC'S *National Consensus Statement: essential elements for safe and high -quality end-of-life care*⁶ for doctors, nurses and allied health professionals. The aim of the education was to improve the quality of end-of-life care for patients by building the knowledge and skills of those providing their care. The modules were designed for all levels of health care professionals regardless of their experience in end-of-life care.

Development of the Modules

Expert / peer-review and quality

From the inception of End-of-Life Essentials, quality, consultation and industry partnership have been paramount. The Advisory Group provided a range of advice, comments and feedback on the learning objectives and outline of the modules. They also helped select the most appropriate evidence and supporting materials, identified gaps, and revised the content as needed. Stakeholders, expert advisors and appropriate peer reviewers were sought to review the modules.

A peer-review process was devised to ensure the quality and relevance of the educational material. Eighteen health care professionals from around Australia provided comments on the quality of the material; whether the language and tone was engaging, whether the content was aligned to the learning outcomes, and if any omitted but relevant evidence or resources needed to be included. Based on the feedback and recommendations from the peer-reviewers, six education modules were developed. The modules included an introductory module, and five modules reflecting the first five essentials elements from the ACSQHC'S Consensus Statement on end-of-life care in acute hospitals.

Usability testing

The quality of user experience was an important focus in the development of the modules. To ensure the modules addressed the needs of the intended audience, a number of doctors,

⁶ Australian Commission on Safety and Quality in Health Care. (2015) National Consensus Statement: essential elements for safe and high-quality end-of-life care. Sydney: ACSQHC.

nurses and allied health professionals were invited to participate in usability testing of the six modules. The aim was to gather feedback from the end users on various aspects of the modules, including relevance of material, navigation of the module, appropriateness of the content and improvement suggestions. Because the modules were designed to be responsive for use on multiple devices, feedback was gathered from users accessing the modules from different devices (including computers, tablets, and smartphones) and different browsers (including Internet Explorer, Google Chrome, Mozilla Firefox). The usability testers included health care professionals who were nominated by the Advisory Group or had responded to an invitation. Thirty-five health care professionals provided feedback the logging in process, overall structure, navigation, content and user-friendliness of the modules, providing significant input into the development of the final modules.

Video production and metacognitive design

The principle of metacognitive design encouraging learners to critically reflect on their practice by planning, monitoring and revising underlined the conceptual development of the End-of-Life Essentials education. Examples of metacognitive design are embedded in the module videos. Built into the modules were a number of short videos of actors playing vignettes of common end-of-life care scenarios. These scenarios were pedagogically created to encourage learners to critically reflect on similar scenarios in their professional practice and to consider other approaches that could be adopted to improve their practice.

The concepts of 'novice' and 'able' responses for common end-of-life care scenarios were created, thus allowing learners to imagine their own capabilities while also providing a model to improve or aspire towards. Either concurrently or retrospectively, learners were given the opportunity to record their own thoughts and reflect on their own capabilities in relation to responding to common end-of-life care communication situations.

Launching the modules

Preparations for the launch of the modules included a significant amount of work to create systems to facilitate the projects activities. These systems include the development of a website, establishing a registration process, developing a process to assign the modules to learners, and preparing instructions to guide learners from registration and help them navigate through the Learning Management System.

Education modules were developed and released sequentially with the first three launched on 24 June 2016 with registration facilities and access to the modules available from this date. The second three modules were launched digitally on 13 October 2016. The six modules include:

- 1) **Dying, a normal part of life** outlines the opportunities and challenges in managing end-of-life issues in acute care hospitals. The importance of conversations and recognising the patterns of common illnesses and why this matters in end-of-life care is also included. Participants were prompted to reflect and identify their own skills in end-of-life care and how to improve them.
- 2) **Patient-centred communication and shared decision-making** outlines the essentials on end-of-life conversation. Learn how to increase the effectiveness of your communication across a range of common end-of-life matters. This module and its resources have been designed for individual use or small group work. It includes quizzes, tips and frameworks, extensive evidence-based resources and interactive learning opportunities.
- 3) **Recognising the end-of-life** deals with offering to tell the truth with kindness, understanding uncertainties of prognostication, realising the opportunities for conversations about how much time remains.
- 4) **Planning end-of-life care** describes how to invite and include patients and families into decision-making and planning.
- 5) **Teams and continuity for the patient** describes the steps required to provide a coordinated care approach to ensure end-of-life health care excellence.
- 6) **Responding to concerns** outlines what to do if health care for the patient at end-of-life or their family is not working well.

Website Resources and Marketing Activities

The End-of-Life Essentials website holds evidence-based materials and resources that are freely available. Web-pages were created within the CareSearch website (www.caresearch.com.au/EndofLifeEssentials) to provide access to the modules and toolkit. The web-pages also provide general information, module specific information, links to

previous newsletters, factsheets, and resources and videos from experts in the field discussing the importance of good end-of-life care.

To date there have been over 100,000 visits to the webpages and resources.

Newsletters

Increasing informed commentary and access to evidence-based resources in the sector was an important part of End-of-Life Essentials. A monthly newsletter sent to all learners and subscribers provides an update on project news, relevant resources in the sector, latest evidence and a print out for noticeboard. A total of 4,162 subscribers currently receive our newsletter. Responsive open rates of the newsletter has been around 35% in an industry average of 19% and over 6% click through rates on the links provided.

Social media

Social media has been an important method used to increase brand awareness, encourage engagement and feedback, and provide content useful to drive the target audience to the website, education modules, and toolkit. Examples of the social media marketing activities include:

- Regular posts of latest evidence, sector news and activity updates on Twitter and LinkedIn.
- Use of videos of experts in the field discussing the importance of quality end-of-life care in social media posts.

Table 2 shows End-of-Life Essentials social network engagement and reach on Twitter, LinkedIn, and the *Thunderclap* campaign used to launch the second three modules.

Table 2: Social Media Analytics

	Connections/Followers	Posts	Likes/ Shares	Reach
Twitter	803	701	530	
LinkedIn	1581			
Thunderclap	21	1		63,310

Targeted advertisements to specific health care professions were also posted through the Flinders University Facebook page. Three separate advertisements were posted targeting: 1)

a national audience of healthcare professionals working who work in an acute hospital setting (listing large public hospitals as their place of work); 2) people who indicated nursing as an area of study, nursing as a job title, or various state hospitals / health departments as employers; and 3) people who list a job title of doctor, nurse, physician, surgeon, other healthcare professionals including those working in the emergency department (ED) and intensive care unit (ICU) and also have shown some interest in hospice, palliative care/medicine, nursing home, aged care, at home care, elder care, general practise, oncology etc. The Facebook adverts have had wide reach and engagement (see Table 3). Posts on the End-of-Life Essentials activity from other Facebook accounts are also shown in Table 3.

Table 3: Facebook Posts and Reach

	Date	Likes	Shares	Reach
Australasian Hepatology Association - AHA	11 May 2017	4	1	171
The Nurse Path	8 May 2017	383	228	86,176
Palliative Medicine Teaching	10 April 2017	121	67	8,023
Flinders University Advert -All	28 Jun – 28 Jul 2017	-	-	15,278
Flinders University Advert -Nurses	19 Aug – 29 Sep 2017	93	46	13,268
Flinders University Advert -Doctors	14 Feb – 7 Mar 2017	52	15	10,135
Australian Nurse Diary	20 Dec 2016	34	25	8,229
The Nurse Path	30 Nov 2016	169	102	86,176
Flinders University - Nurses	30 Aug 2016	93	46	2,488

Conferences and workshops

Print media such as promotional flyers, information kits have also distributed at the following conferences, events training activities and speaker engagements providing another method of increasing awareness of the activity.

- 2017 Australian Palliative Care Conference (APCC17), Adelaide, 6-8 September 2017.
- 2017 Australian & New Zealand Association for Health Professional Educators 2017 Conference (ANZAHPE) Adelaide, 11 - 14 July 2017.

- Cancer Nurses Society of Australia 2017 Congress Adelaide, 15-17 June 2017.
- 2016 SARRAH National Conference for Rural and Remote Allied Health Professionals, Port Lincoln, 27-29 October 2016.

Direct engagement emails to registered learners

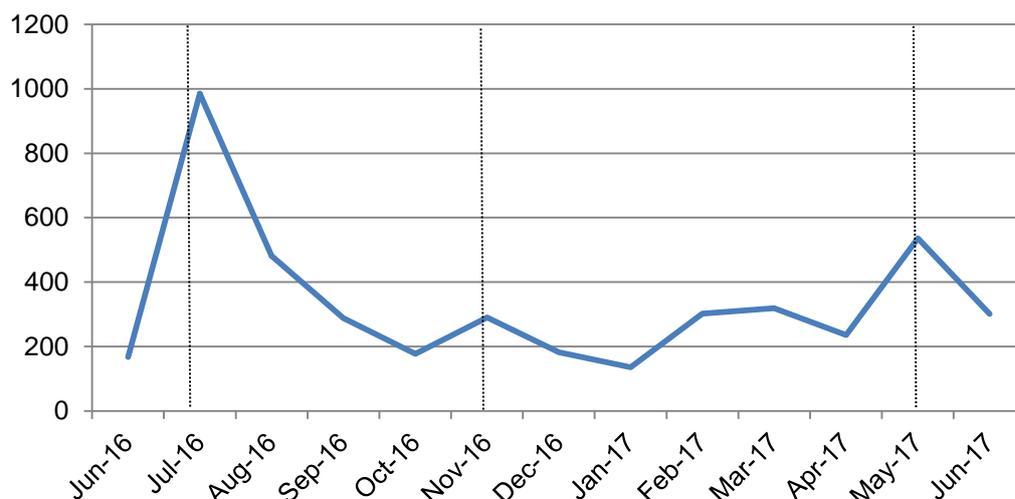
Timed and targeted emails were scheduled to pique interest and provide relevance to learners by emphasising the importance of, and reasons why, the education was useful to them. The systematic emails were sent to the newly registered users and current learners in order to increase the module completion rates and module engagement. Each email conveyed a specific message to encourage learners to return to the Learning Management System and learn more. Email content was peer-reviewed to make sure the emails sent had some type of value to reduce unsubscribes and build the relationship.

Monitoring Registrations and Uptake of Modules

Module registrations

As a result of the promotional activities, a total of 4,403 individuals have registered and accessed one or more of the six modules from the beginning of the activity to the 30 June 2017, almost doubling the target number of enrolments (2,500) set out in the activity agreement. Table 4 shows the distribution of registrations over the activity period. Not surprisingly, the biggest growth coincided with the two marketing campaigns to launch the modules and toolkit release.

Table 4: Registered User Growth - Education Modules 2016-17



At registration, demographic information including name, address, and user group – i.e., doctor, nurse or allied health professional – was collected. Because of the anticipated registrations from the primary and secondary audiences identified in the communications strategy, an ‘other’ group for each profession was included. The distribution of registrations by profession and those working in an ‘acute’ hospital or ‘other’ non-acute settings are presented below.

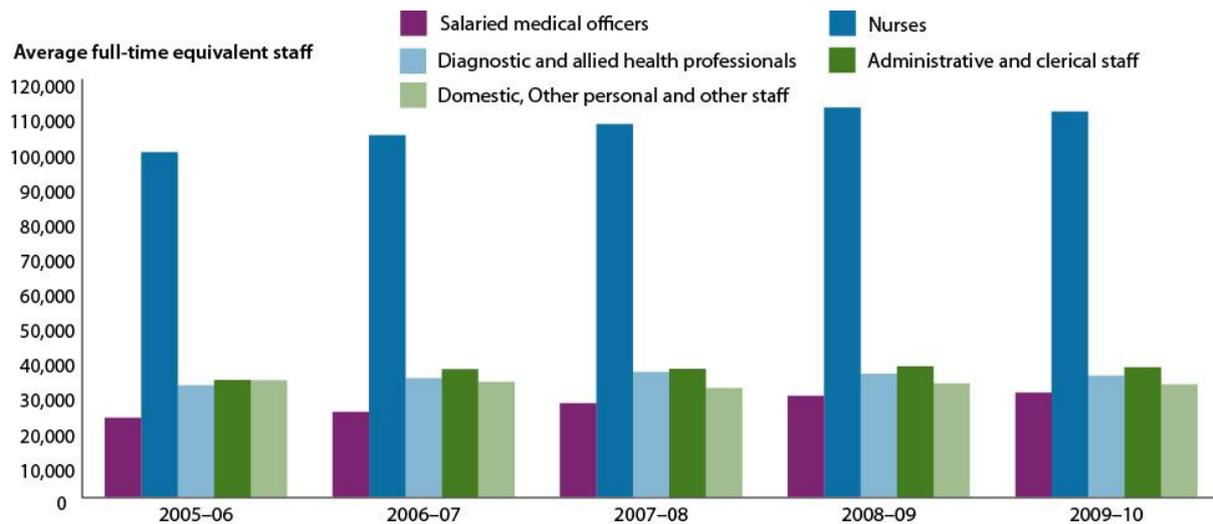
Table 5: Distribution of Module Registrations by Profession (frequencies and percent)

	Acute	Other	TOTAL
Allied Health	532 (12.1)	272 (6.1)	804 (18.3)
Doctor	290 (6.6)	32 (0.7)	322 (7.3)
Nurse	2309 (52.4)	968 (22.0)	3277 (74.4)
TOTALS	3,131	1,272	4,403

A majority of registrations (71.1%) come from those working in acute hospitals, the target group, and almost one-third (28.8%) were from non-acute settings. It is also evident from Table 5 that the profession groups enrolling were not of equal proportions. The number of registrations from nurses far exceeded the number of registrations from doctors and allied health professionals. This is congruent with the numbers of health care professionals employed in public hospitals in Australia. Statistics from the Australian Institute of Health

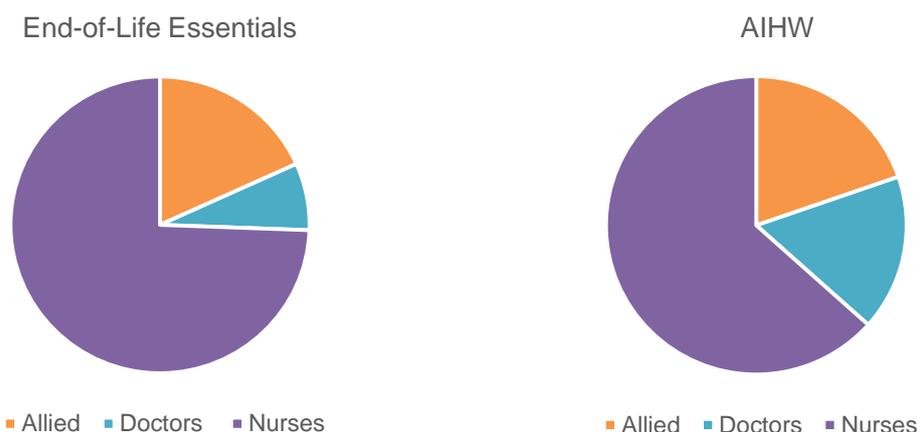
and Welfare (2009-10)⁷ found of the 251,000 doctors, nurses and allied health staff employed in public hospitals, the number of nurses far exceeded the number of medical officers (doctors), allied health professionals, and professionals falling into other groups. The proportions of different professional groups in public hospitals are presented below:

Table 6: Doctors, Nurses and Allied Health Staff Employed in Public Hospitals⁸



A comparison of the registration data to the AIHW national statistics of the workforce show similar proportions (Figure 7).

Figure 7: End-of-Life Essentials comparison to AIHW 2009-10 national statistics



⁷ Australian Institute of Health and Welfare (2011). Australia's hospitals 2009-10: at a glance. Health services series no.39. Cat. no. HSE 106. Canberra: AIHW. (NB: Figures exclude domestic workers and administrative and clerical staff).

⁸ Australian Institute of Health and Welfare (2011). Australia's hospitals 2009-10: at a glance. Health services series no.39. Cat. no. HSE 106. Canberra: AIHW. (NB: Figures exclude domestic workers and administrative and clerical staff).

The proportion of allied health professionals accessing the modules were similar to the proportion employed in public hospitals (18% and 20% respectively). Doctors were under-represented making up 17% of healthcare employees at public hospitals yet represented only 7% of module users. Nurses were over-presented; 74% of module users identifying as nurses compared to the 63% of nurses employed in public hospitals.

Geographical spread of registrations

The distribution of registrations across states has also not been uniform. A vast majority of registrations have been from health care professionals working in services within Queensland. Reasons were possibly because of the activity supporters in the Queensland Local Area Health Networks advocating and incorporating links to the modules into their intranet as a resource for staff. With this in mind, promotional activities were targeted to states with lower registration numbers to tap into health professionals across the country. Table 8 shows the distribution of module registrations in Australia by state and profession.

Table 8: Distribution of Module Registrations by State (per cent)

State/Territory	%
QLD	47.3
NSW	15.3
VIC	13.8
SA	11.3
WA	3.8
TAS	2.4
ACT	2.3
NT	0.4
Unspecified	0.2
Other Countries	3.2

Despite targeting health care professionals within Australia, the fact that the education is placed online gives the education a global reach. Of the total registrations, 3.2% of these were from other countries presented in Table 9 below.

Table 9: Distribution of Module Registrations by Other Countries (%)

Country	%
New Zealand	24.5
United Kingdom	21.6
North America	25.9
Asia	14.4
Europe	5.8
Ireland	3.6
Africa	2.2
Middle East	0.7
Cyprus	0.7
South America	0.7

Tracking of module completions

User completion data was tracked and reported. The rationale was to use this data to directly target particular groups to encourage further uptake. Users were identified as completing a module once they had viewed all slides and completed all evaluations and quizzes. The number of completions by profession as at 30 June 2017 are presented in Table 10 below.

Table 10: Distribution of Module Completions by Profession (frequencies and per cent)

	Acute Hospital	Other	TOTAL
Allied Health	568 (11.0)	338 (6.5)	906(17.6)
Doctor	328 (6.4)	15 (0.3)	343 (6.7)
Nurse	2779 (53.8)	1136 (22.0)	3915 (75.8)
Missing			8 (0.2)
TOTALS	3,675	1,489	5,172

NB. Profession group unknown n=8

The overall number of modules completed were 5,172. Completions from eight users who were unable to be classified into a profession group (Table 10). These patterns of module completions closely mirror the proportions of registered users from each profession (shown

previously in Table 5) with the largest number of completions from nurses working in the acute sector (74.4% acute nurse registrations compared to 75.8% acute nurse completions).

In relation to the number of completions *per module*, Table 11 indicates that users were completing the six modules sequentially despite being free to complete the modules in any order.

Table 11: Number of Completions per Module as at 30 June 2017 (frequencies and per cent)

Number of completions per module	
Module 1: Dying, a normal part of life	1951 (37.7)
Module 2: Patient-centred communication and shared decision-making	1095 (21.2)
Module 3: Recognising the end-of-life	810 (15.7)
Module 4: Planning end-of-life care	570 (11.0)
Module 5: Teams and continuity for the patient	397 (7.7)
Module 6: Responding to concerns	349 (6.7)
TOTALS	5,172

Data were captured on how many modules each user had completed to target users who had registered, but hadn't completed any modules. A survey was sent on 15 March 2017 to investigate the reasons for low engagement. One-hundred and twenty three respondents identified time as the biggest obstacle. Despite being busy, users reported that they had the modules on their list of things to do. Others had simply forgotten about the education and the emails had reminded them. Some users had misplaced their login details or had problems logging in. Examples comments include:

“Unfortunately I have been doing a lot of overtime at work and have not found the time to complete all of the modules.”

“I enjoy the eLearning but unfortunately I do not think to visit site when time does allow”

“No time given within my workplace to complete... but very keen to.”

“I wanted to have a quick look at the package...I hope to create some time later to explore the modules. I think it is great that you have produced something like this though.”

“Very interested to do the course but time has been an issue.”

“Just time pressure!”

Evaluation of the Modules

As part of the deliverables for the End-of-Life Essentials activity, an evaluation of the effectiveness of the modules was undertaken;

- To identify an improvement in knowledge and confidence of registered participants per module through an immediate survey after completion of a module; and
- To identify an improvement in knowledge to recognise and address the needs of dying patients of participants 3-6 months after completion of a module

Methodology

The impact of the education modules has been evaluated in different ways (Table 12). To collect data on the effectiveness of the modules, a mandatory evaluation survey was integrated before/after each of the six modules. The baseline data (pre-evaluation) and post module data (post-evaluation) enabled pre-post perceptions of knowledge and confidence increase to be explored. Follow-up data was collected from a subset of learners three to six months post module completion. Both quantitative and qualitative practice change questions were also incorporated. The instruments and time points that were specifically designed for each module are summarised in Table 13.

Table 12: Module Survey Instruments and Time Points

Survey Instrument	When administered	Content
Pre-evaluation	Start of module (baseline)	Current knowledge/confidence in end-of-life care. Five-point scale.
Practice change	Within module	Intention of learners to change their practice in end-of-life care. Open ended response.
Post-evaluation	End of module (immediate snapshot)	Repeated questions from pre-evaluation re: knowledge and confidence in dealing with end-of-life issues. Five-point scale.
Intent to change	End of module (Final Post-evaluation question)	Intention of learners to change their practice in end-of-life care. Five-point scale.
Follow-up evaluation	3-6 months post module completion (short to medium term)	Repeated questions from <i>Module 3: Recognising Dying</i> post-evaluation: asked if they felt more confident recognising patients approaching the end of life; and if they know how to increase their skills in recognising patients approaching the end of life. Five-point scale.

The pre-evaluation, post-evaluation survey instruments consisted of a series of statements before and immediately after each of the six modules (See Appendix 1: Pre and Post Evaluation Survey Instrument). Registered learners were asked to rate their level of agreement with a number of statements that varied depending on the module. Ratings were made on a 5-point scale; where 1 = 'strongly disagree', 2 = 'disagree', 3 = 'neither agree or disagree', 4 = 'agree' and 5 = 'strongly agree'. In total there were 16 pre-evaluation and 19 post-evaluation statements. On completion of each module, learners were also required to rate their level of agreement on whether they intended to change their practice in end-of-life care.

The pre-evaluation and post-evaluation statements were inherent in this education and not an extra research requirement. In November 2015 a consent waiver for the evaluation of the module component of this activity was successfully granted from Flinders University Social and Behavioural Research Ethics Committee.

Analysis

Calculation of the percentage of learners who reported an increase in knowledge and/or confidence with regard to each module evaluation statement, responses of 4 (agree) and 5 (strongly agree) were combined to create an agreement score. The number of agreement respondent ratings were converted to percentages of the total number of responses received for each pre and post-evaluation statement. Thus a score of 4 = 'agree' or 5 = 'strongly agree' was considered for the pre-evaluation was considered confident and the same combined score was considered an improvement for the post evaluation.

Results

Pre-evaluation findings

The self-rated knowledge and confidence ratings of learners before completing the modules are displayed in Table 13. The majority of respondents rated their level of knowledge and confidence before completing each module as 'agree' or 'strongly agree' (average rating of 4). For example, 79.5% felt they could identify patients approaching end of life, and 68.1% reported that they felt confident in their clinical ability to recognise patients approaching the end of life. End-of-life communication and shared decision-making received lower ratings in knowledge and confidence with 55.7% reporting that they know how to strengthen their skills in end-of-life communication and shared decision making and 50% felt that they know how to manage disagreements.

Table 13: Pre-Evaluation Response Ratings (per cent)

	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree	Confidence
I can identify patients approaching end of life	2.5	3.4	14.4	57.7	21.8	79.5
I know the important elements of end-of-life care skills	1.9	8.9	21.3	52.1	15.7	67.8
I know where I need to improve my end-of-life care skills	1.2	7.6	25.4	55.9	9.8	65.7
I know my own strengths and limitations in end-of-life care communication and shared decision making	1.1	5.1	19	65.4	8.9	74.3

I know how to strengthen my skills in end-of-life communication and shared decision making	0.9	12.3	30.7	49.9	5.8	55.7
I feel confident in my clinical ability to recognise patients approaching the end of life.	1.1	8.4	22	57.3	10.8	68.1
I know where I need to improve my skills in recognising patients approaching the end of life	0.7	6.6	25.1	59.9	7.3	67.2
I can identify the essential elements in negotiating goals of care	3.2	14.3	23.3	49.7	8.5	58.2
I know how to manage goals of care conversations	1.6	13.2	32.8	46.6	5.3	51.9
I know where I need to strengthen my skills in negotiating goals of care	2.1	11.1	26.5	52.4	7.4	59.8
I can identify the essential elements in effective team work in end-of-life care	0.7	8.5	16.9	60.6	12.7	73.3
I know how to effectively speak up and raise an issue	0.7	7	26.1	51.4	14.1	65.5
I know how to approach conflict	1.4	10.6	29.6	51.4	6.3	57.7
I can identify the essential elements in responding to concern	0.8	7.4	28.7	54.9	6.6	61.5
I know how to manage disagreements	0.8	13.1	34.4	47.5	2.5	50
I know where I need to strengthen my skills in managing disagreements	0.8	12.3	22.1	58.2	4.9	63.1

Post-evaluation findings

An immediate snap shot of confidence and knowledge increase was recorded at the end of each module. Again, the majority of respondents rated their level of knowledge and confidence after completing each module as 'agree' or 'strongly agree' (average rating of 4). Respondents overall reported a high-level of knowledge and/or confidence because of completing the modules (>75%). A majority (91.8%) felt they knew how to increase my skills in recognising patients approaching the end of life, and 93.9% reported that they felt they

had increased their knowledge about negotiating goals of care. Regarding the identification of patients approaching the end-of-life, 75.5% reported increased in knowledge and confidence because of finishing the module. This lowest rating, which still accounts for a majority of the respondents, indicates that they felt relatively confident pre-module (Table 14).

Table 14: Post-evaluation Respondent Ratings (%)

	Strongly Disagree	Disagree	Neither agree or disagree	Agree	Strongly Agree	Improved
I can more easily identify patients approaching the end-of-life	0	0	22.9	59.4	16.1	75.5
I have increased my knowledge about important elements of end-of-life care skills	0	0	8.6	68.3	21.7	90
I have improved my end-of-life care skills	0	0	19	63.8	15	78.8
I have increased my knowledge about end-of-life communication	0	0	7.9	68.3	23.4	91.7
I have increased my knowledge and skills about end-of-life communication	0	0	6.5	68.9	24.4	93.3
I feel more confident about recognising patients approaching the end of life	0	0	7.8	69.1	22.5	91.6
I have improved my knowledge about how to increase my skills in recognising patients approaching the end of life	0	0	7.6	69.3	22.5	91.8
I have increased my knowledge about negotiating goals of care	0	0	5.6	70.4	23.5	93.9
I feel more confident in discussing goals of care	0	0	7.3	73.7	18.4	92.1
I have increased my knowledge about effective teams in end-of-life care	0	0	7.9	68.3	22.3	90.6
I feel more confident approaching conflict	0	0	10.8	67.6	20.1	87.7
I have increased my knowledge about managing disagreements	0	0	13.7	61.5	23.1	84.6
I feel more confident in managing	0	0	15.4	67.5	15.4	82.9

NB. All post-evaluation questions start with *"Because I have finished this module"*

Comparison of pre and post-evaluation responses

The 'pre' or baseline data and the 'post' or outcomes data was compared to measure the perceived impact of the education and whether learners reported an increase in knowledge and skills immediately following module completion. Results in Table 15 shows substantial increases in pre- to post scores. Overall, learners increased their post-test score to an average of 86.8% when compared to their pre-test score average of 63.7%. The biggest increase reported by learners was a 40.2% increase in knowledge relating to managing goals of care conversations (pre-test of 51.9% to post-test 92.1%). Only one pre to post score decreased, the very first pre evaluation question regarding identification of patients at the end of life.

Table 15: Comparison of Pre and Post-Evaluation Ratings (per cent)

	Pre-Evaluation	Post Evaluation
I can identify patients approaching end of life	79.5	75.5
I know the important elements of end-of-life care skills	67.8	90
I know where I need to improve my end-of-life care skills	65.7	78.8
I know my own strengths and limitations in end-of-life care communication and shared decision making	74.3	91.7
I know how to strengthen my skills in end-of-life communication and shared decision making	55.7	93.3
I feel confident in my clinical ability to recognise patients approaching the end of life.	68.1	91.6
I know where I need to improve my skills in recognising patients approaching the end of life	67.2	91.8
I can identify the essential elements in negotiating goals of care	58.2	93.9
I know how to manage goals of care conversations	51.9	92.1
I know where I need to strengthen my skills in negotiating goals of care	59.8	90.6
I can identify the essential elements in effective team work in end-of-life care	73.3	87.7
I know how to effectively speak up and raise an issue	65.5	84.6

I know how to approach conflict	57.7	82.9
I can identify the essential elements in responding to concern	61.5	75.5
I know how to manage disagreements	50	90
I know where I need to strengthen my skills in managing disagreements	63.1	78.8
Average	63.7	86.8

NB. All post-evaluation questions start with *“Because I have finished this module”*

Recognising the end-of-life: Confidence and skills after 3-6 months

A sub-sample of learners were re-surveyed three to six months after they had completed Module 3 to see if the education had helped them to understand how to recognise the end-of-life. A total of 54 learners completed this survey. Learners were asked to rate their level of agreement with the questions addressed in Module 3 with the same rating scales as those used in the pre-and post-evaluation questions.

The majority of the respondents rated their level of agreement with the statement as ‘agree’ or ‘strongly agree’ (average rating 4) (see Table 16) indicating that for 88.9 per cent of these learners, confidence in recognising end-of-life was maintained.

Table 16: Rating in Confidence After 3-6 Months (per cent)

	Strongly Disagree	Disagree	Neither agree or disagree	Agree	Strongly Agree	Learning maintained
Because of completing the education modules I feel more confident about recognising patients approaching the end of life	3.7	0	7.4	63.0	25.9	88.9

The majority of learners also recalled how to increase their skills three to six months later (87.1) (Table 17).

Table 17: Rating in Skills After 3-6 Months (per cent)

	Strongly Disagree	Disagree	Neither agree or disagree	Agree	Strongly Agree	Learning maintained
Because of completing the education modules I know how to increase my skills in recognising patients approaching the end of life	3.7	0	9.3	55.6	31.5	87.1

Open responses identified that respondents felt able to recognise impending end-of-life, but that the modules had provided valuable tools and increased confidence:

“I feel since completing eLearning I am more confident in approaching the end of life subjects with patients and their families.”

The eLearning has given me some valuable tools that I will reflect on and utilize.”

“Doing the course gave me the confidence to use my own intuition, acknowledging the 'signs' and when having the conversation with the patient/family”

“The knowledge that I gained from doing the eLearning course for end of life will assist me when looking after patients at end of life.”

“I already recognised those patients approaching end of life, for me communication strategies that the modules taught were more valuable.”

“I am now more confident when researching information around end of life.”

Intent to change practice in end-of-life care

Another evaluation method used to monitor the impact of the education modules has been through the intent to change end-of-life care practice questions contained within the post-evaluation instrument. Responses to these questions are presented in Table 19 and indicate a high proportion of the cohort intended to change their professional practice.

Table 18: Intent to Change Practice Per Module (%)

	Strongly Disagree	Disagree	Neither agree or disagree	Agree	Strongly Agree	Intent
Module 1: Dying, a normal part of life	0	0	15.1	65	18	83
Module 2: Patient-centred communication and shared decision-making	0	0	11.5	66.5	21.9	88.4
Module 3: Recognising the end-of-life	0	0	12.3	64.1	23	87.1
Module 4: Planning end-of-life care	0	0	9.5	68.7	21.2	89.9
Module 5: Teams and continuity for the patient	0	0	10.1	62.6	25.2	87.8
Module 6: Responding to concerns	0	0	10.3	62.4	25.6	88

In-depth open-ended practice change responses

Open-ended practice change questions were incorporated to gather more detailed in-depth qualitative data in relation to end-of-life care. The questions (See Appendix 2) were also designed to prompt learners' to focus on individual and relevant practice change points.

Example practice change questions and responses

From Module 2: Patient-centred communication and shared decision-making:

Tomorrow, the one thing I can change to more appropriately provide end-of-life care, specifically communication, is....

"To not avoid the conversation, approach it openly and respectfully - use the word dying and acknowledge fears associated with this. Ensure that I communicate effectively with not only patients, but their families and also my team."

From Module 4: Planning end-of-life care – Goals of care:

Tomorrow, the one thing I can change to more appropriately provide end-of-life care, specifically around goals of care, is:.....

"Be prepared, use the REMAP tool, be patient-centred, be aware that the goals of care will be changing according the patient's needs and what matters most to him/her. I will make sure to discuss and communicate those with the team and the family. I will acknowledge patient/family concerns, emotions, feelings and manage conflicts well and if they do not agree, or things do not go well, I will consider providing other options, advocate, seek specialist support or other opinions."

Feedback from learners using the modules

A great deal of feedback on the content of the modules, the learning resources, and overall perceptions of the education has been provided by learners to the End-of-Life Essentials team. Feedback has been extremely positive and has provided powerful testimonials to use as a marketing resource to promote the education and to generate registrations. Below are some examples testimonials:

"I think the End-of-Life Essentials learning modules are excellent. They make you think how you would react in end of life situations and give excellent guidelines to help manage such situations in the future. I believe every healthcare professional should be strongly encouraged to complete these learning modules. I now feel like I might be more confident in handling conversations in end-of-life situations." (Nurse, VIC)

"I have nothing but positive comments for the content of Module 5 and, indeed for the whole program. I am part of a national committee on how to involve doctors more in end of life discussions and have recommended your program as compulsory training." (Intensivist, NSW)

"Module 2 and its resources are exactly what I need to work with a family in conflict on end of life care for a person in residential care. All 50- 60 years of family unrest cannot be resolved in minutes but the family needed to be supported to understand dying is part of life especially when the client is 93 years old and would prefer to be comfortable, pain free and surrounded by familiar faces. Thank you. The modules reminded me I need to add End of Life Care permanently to the 6 weekly meeting agenda." (Residential Care Facility Coordinator, WA)

"I am working on the modules at the moment and so far i think your stuff is great! I'm going to promote [your education] loud and clear at my site!! Mostly I think it's good because it's free, it's online and so far it makes good common sense!" (Clinical Nurse Coordinator, NSW)

Adoption by state and national agencies

The End-of-Life Essentials activity has been used as an education tool in numerous settings. Many health care professionals have assisted in generating the education by acting as ambassadors in their own work unit, service, or local health network. While some health care professionals are using the education to educate junior staff, others are using it to drive quality of end-of-life care across whole departments and beyond. The network of health care professional 'champions' have led to the inclusion of web links to the End-of-Life

Essentials website nationally. Some of the known website and intranet links are listed below in Table 19.

Table 19: Known Website and Intranet Links to End-of-Life Essentials

Links	Web address
ACSQHC	https://www.safetyandquality.gov.au/our-work/end-of-life-care-in-acute-hospitals/
College of Intensive Care Medicine Australia & NZ	https://www.safetyandquality.gov.au/our-work/end-of-life-care-in-acute-hospitals/
Australian College of Social Workers	https://www.aasw.asn.au/professional-development/resources
Western Victoria Primary Health Network	https://westvicphn.com.au/about-us/publications/newsletters/73-about-us/publications/newsletters/your-health-connection/30378-westvic-news-wednesday-23%20November
Gippsland Primary Health Network	http://www.gphn.org.au/education-continuing-professional-development/online-training/#1470203081035-634ca4c1-3581
Country SA PHN	http://countrysaphn.com.au/healthprofessionals/professional-development/online-training-professional-development/151-end-of-life-essentials
QLD Health Metro North Hospital & Health Service (MNHHS)	Link to https://www.caresearch.com.au/EndofLifeEssentials/ on intranet
QLD Workforce Development Unit People and Culture	Link to https://www.caresearch.com.au/EndofLifeEssentials/ on intranet
QLD South West Hospital and Health Service	Link to https://www.caresearch.com.au/EndofLifeEssentials/ on intranet

PHASE 2: IMPLEMENTATION TOOLKIT

Phase 2 of the End-of-Life Essentials activity was the development of a resource toolkit to complement the education modules. Whereas the education modules focused on developing knowledge, the toolkit focuses on bringing about positive changes to workplace behaviours at the point of care. The toolkit does not attempt to address organisational or institutional policies and practices, which can be more challenging and time-consuming to change but rather focuses on actions and behaviour change.

Development & Distribution of *My Toolkit*

The toolkit was developed in late 2016 and early 2017. Feedback on the content, structure and format of the toolkit resources was sought from internal and external reviewers, which included: the End-of-Life Essentials Activity Lead, the Director of CareSearch, academics from nursing and allied health, the End-of-Life Essentials Advisory Group and intended end users (doctors, nurses and allied health professionals).

The toolkit was launched on 4th April 2017. *My Toolkit* was made available in hard copy format and consisted of a folder containing checklists of suggested actions organised under the same headings as the End-of-Life Essentials education modules. That is:

- 1) Dying, a normal part of life;
- 2) Patient-centred communication and shared decision-making;
- 3) Recognising the end-of-life;
- 4) Planning end-of-life care;
- 5) Teams and continuity for the patient;
- 6) Responding to concerns.

Examples from *My Toolkit*

From Module 2: Patient-centred communication and shared decision-making:

Think of one question from a patient approaching the end-of-life that you found difficult to respond to. Imagine you are being asked this question again now. How would you

answer that question now based on what you have learnt from the End-of-life Essentials Modules? Ask a colleague what they would have said in that situation. Talk about their suggested response.

From Module 4: Planning end-of-life care:

Take a few minutes to create a map of a patient's close ties and family. This can be the start of identifying a potential alternative decision-maker as well as identifying who needs to be included in discussions about the patient's care. Remember, 'family' is who the patient says it is. Notions of kinship may vary depending on the patient's cultural background. The closest person to a patient may be their spouse or same sex partner, biological, adopted family or in-laws, close friends, neighbours, or someone from their religious, ethnic or cultural community. The traditional 'next of kin' concept may not be appropriate for all patients. Ask them who is important to them.

In addition to the *My Toolkit* folder, a package of online resources was made available on the End-of-Life Essentials website to support the toolkit activities. These online resources included hyperlinks to policy documents, factsheets, guidelines, journal papers, and professional group specific resources, as well as video and audio resources.

Healthcare professionals could register to receive the toolkit via the End-of-Life Essentials website. Prior to the launch of *My Toolkit*, 252 registrations were received. On 5th April the availability of the toolkit was announced in the End-of-Life Essentials newsletter. This resulted in a further 236 registrations within a three week period. Once duplicate registrations were removed, 428 toolkits were distributed. Table 20 shows the distribution of *My Toolkit* by state and profession.

Table 20: Distribution of *My Toolkit*: By State and Profession (frequencies)

	Doctors	Nurses	Allied Health ⁹	Other	TOTAL
ACT	0	6	0	1	7
NSW	1	81	16	14	112
NT	0	2	0	0	2
QLD	7	104	25	11	147
SA	1	34	6	0	41
TAS	0	7	1	3	11
VIC	4	61	13	9	87
WA	0	14	5	2	21
TOTALS	13	309	66	40	428

Toolkit recipients identifying as ‘other’ included: educators, managers, volunteers, aged care workers, pastoral support workers, policy makers, activity officers, a terminally ill patient and an end-of-life doula.

To identify if the toolkit user group were representative of the target population, registrations by profession were compared to the proportions of different professional groups in public hospitals, as well as to registrations for the education modules (Table 21). As with the education modules, doctors were under-represented amongst *My Toolkit* users, though to a greater degree. Doctors make up 17% of healthcare employees at public hospitals yet represented only 3% of toolkit users. However, nurses were over-presented; 4 out of 5 *My Toolkit* users are nurses.

⁹ Social workers, a pharmacist, a paramedic and a radiographer classified their profession as ‘other’. These were reclassified as allied health professionals in Table 21.

Table 21: Proportion of Professional Groups using End-of-Life Essentials Modules and Toolkit (%)

Profession	Public Hospitals ¹⁰	Education Module Registrations	<i>My Toolkit</i> Registrations
Doctors	17	8	3
Nurses	63	74	80
Allied Health	20	18	17

NB. *My Toolkit* Registrations excluding 'other', n = 388.

This section of the report details the mixed method evaluation of the toolkit and associated resources. The aim of the evaluation was to:

- Evaluate the effectiveness of the toolkit in supporting positive changes to workplace behaviours in relation to end-of-life care;
- To identify the types of changes to workplace behaviour being implemented by *My Toolkit* users;
- To identify any common barriers experienced by *My Toolkit* users in changing workplace behaviour in relation to end-of-life care;
- To identify improvements to the content of the toolkit and associated resources;
- To identify if the format of the toolkit maximised its accessibility and usability.

The following sections of the report outline the evaluation methodology, the research findings, a discussion of the findings, and conclusions and implications for supporting quality end-of-life care in Australian hospitals.

***My Toolkit* Evaluation**

The evaluation study was mixed methods using an online survey and telephone interviews as data collection methods. This section outlines the research methodology, sample sizes and the analysis used in the evaluation of *My Toolkit*.

¹⁰ Australian Institute of Health and Welfare. (2011). Australia's hospitals 2009–10: at a glance. Health services series no.39. Cat. no. HSE 106. Canberra: AIHW. (NB: Figures exclude domestic workers).

Ethics

Ethics approval for this activity was provided by the Flinders University Social and Behavioural Ethics Committee (Activity number 7568).

My Toolkit online survey

All those who requested *My Toolkit* between 4th April and 27th April 2017 (n = 428) received an email with a link to a short online survey (See Appendix 3: *My Toolkit* Evaluation Survey). Recipients were given two weeks to complete the survey. Given that reminders have been shown to improve response rates¹¹, a reminder email was sent to all toolkit recipients after one week. There were 23 email delivery failures. In total, 65 completed the survey; a response rate of 16%.

Telephone interviews

As the aim was to explore the perspectives of healthcare professionals from across Australia, purposeful stratified sampling¹² by state and profession was used to ensure a diversity of views were captured. Sampling continued until ten interviews had been conducted (see Table 23 for interview sample demographics).

The aim of the interviews was to explore *My Toolkit* recipients' perspectives on the resources in more detail, to obtain examples of changes to workplace behaviour, explore barriers to successfully implementing *My Toolkit* suggestions, and to identify overall how effective the interviewees had found the resources for improving their professional practice in relation to end-of-life care (see Appendix 4: *My Toolkit* Semi-structured Interview Topic Guide).

¹¹ Shih, T.H. & Fan, X. (2009). Comparing response rates in email and paper surveys: A meta-analysis, *educational Research Review*, 4, 26-40; Snowball, C. (2010). How to improve survey response rates, *Incite*, 31(6), 24.

¹² Palinkas, L. A., Horwitz, S. M., Green, C. A., Wisdom, J. P., Duan, N., & Hoagwood, K. (2015). Purposeful sampling for qualitative data collection and analysis in mixed method implementation research. *Administration and Policy in Mental Health and Mental Health Services Research*, 42(5), 533-544.

Analysis

Online responses to the survey were collected on the Research Data Management System hosted on the CareSearch website (www.caresearch.com.au). The data was imported into SPSS version 23 for descriptive analysis. Content analysis to identify key topics of discussion was conducted on interview data, coding directly from the audio files.

Results

My Toolkit survey

Ninety-three people clicked on the survey link; however, only 65 of these went onto respond to at least some of the questions. Forty-three respondents provided qualitative responses to open response questions. Demographic data on the survey sample - where provided - is shown in Table 22 by profession.

Table 22: My Toolkit Survey Sample by profession (frequencies)

	Doctors	Nurses	Allied Health	Totals
Gender				
Male	2	2	1	5
Female		44	11	55
Age (years)				
18-30		1		1
31-40		4	3	7
41-50	1	13	1	15
51-60	1	18	6	25
60+		10	2	12
State/Territory				
ACT		3		3
NSW		18	2	20
NT				
QLD	2	11	2	15
SA		5	3	8
TAS		2		2
VIC		8	5	13
WA		2		2
Years' Experience				
5 years or less		9	2	11
6 to 10 years		5	1	6
11 to 15 years		5	6	11
16 to 20 years		1	1	2
21 years or more	2	26	2	30
Primary Work Area				
Emergency Department		1		1
Intensive Care Unit		3		3
Surgical Ward		2	2	4
General Ward		6	1	7
Outpatient Clinics		1	1	2
Quality Improvement		1		1
Other	2	29	8	39
TOTAL	2	47	12	61

NB. n = 65. Some respondents did not provide full demographic data; four respondents did not provide any demographic data.

Of the allied health professionals who completed the survey, there were: seven social workers, two paramedics, one counsellor, one speech pathologist, and one who identified as a spiritual care provider. 'Other' primary work areas included: aged care, community health, hospice/palliative care, education, gerontology and rehabilitation, advance care planning, oncology, and telehealth.

92.1% said the content of My Toolkit was relevant to them personally

It was expected that *My Toolkit* users would be healthcare workers who had completed at least some of the End-of-Life Essentials education modules. Indeed 66.1% of the sample reported that they had completed at least one of the End-of-Life Essentials modules. Of this group, 57.5% had completed all the education modules.

Overall, respondents responded very positively towards *My Toolkit* and the associated resources, with 93.7% agreeing or strongly agreeing that the content was relevant to their profession, and 92.1% that the content was relevant to them personally (Table 23). Survey respondents were also positive about the overall presentation of *My Toolkit* and how easy it was to navigate (98.4% and 95.2% respectively) (Table 23).

In the open responses, many respondents specifically reported that they found *My Toolkit* clear, easy to read, well organised, well written and practical to use:

"I love the simple format." (Paramedic, SA, Survey Open Response)

"Clear concise, well laid out and easy to negotiate. Not full of jargon, not cluttered." (State & Occupation not reported, Survey Open Response)

"Clear, well written, relevant online resources." (Nurse, NSW, Survey Open Response)

"Clear and practical - a genuine tool for use." (Nurse, VIC, Survey Open Response)

"I thought the language the toolkit used was easy to follow for either a novice or experienced clinician." (Nurse, NSW, Survey Open Response)

Importantly, 83.9% reported that after using *My Toolkit* they felt more confident in discussing end-of-life matters with patients and their families, and 85.5% reported that they felt more confident in discussing end-of-life matters with their colleagues. Overall, 93.6% said they would recommend *My Toolkit* to colleagues, and 82.2% had already recommended *My Toolkit* to at least one colleague (Table 24):

83.9% more confident in discussing end-of-life matters with patients

“I have recommended this toolkit to be completed by staff working in acute settings across our local health district and also promoted it with Clinical Nurse Educators.” (Nurse, NSW, Survey Open Response)

“I have directed a number of clinicians to this new resource.” (Nurse, NSW, Survey Open Response)

“I have discussed the toolkit and course with my colleagues and given them a copy of toolkit.” (Nurse, NSW, Survey Open Response)

Table 23: Survey respondents’ views on *My Toolkit* (per cent)

	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
The content of <i>My Toolkit</i> is relevant to my profession	55.6	38.1	1.6	3.2	1.6
The content of <i>My Toolkit</i> is relevant to me personally	42.9	49.2	3.2	4.8	0
The content of <i>My Toolkit</i> is presented clearly	56.5	41.9	1.6	0	0
The content of <i>My Toolkit</i> is organised in a logical way that is easy to navigate	61.3	33.9	4.8	0	0
Having <i>My Toolkit</i> , I now feel more confident in discussing end-of-life matters with colleagues	35.5	50.0	12.9	1.6	0
Having <i>My Toolkit</i> , I now feel more confident in discussing end-of-life matters with patients and their families	33.9	50.0	16.1	0	0
<i>My Toolkit</i> provides me with actionable behaviours to improve end-of-life care	45.2	46.8	6.5	1.6	0
I will access/refer to <i>My Toolkit</i> in the future	57.1	38.1	3.2	1.6	0
I have referred at least one colleague to <i>My Toolkit</i>	53.2	29.0	4.8	11.3	1.6
I would recommend <i>My Toolkit</i> to my colleagues	61.9	31.7	6.3	0	0

NB. n=65

As the aim of *My Toolkit* was to create a change to workplace behaviour in relation to end-of-life care, respondents were asked whether they had completed any of the *My Toolkit* suggestions. Though respondents had only had access to the toolkit for a maximum of four weeks, 59.3% reported that they had already implemented at least one action from the toolkit. Of the respondents who reported that they had not completed a suggestion from *My Toolkit* to date, 70.8% reported that they intended to implement a suggestion in the near future.

***59.3% had
implemented a
Toolkit action
within 4 weeks***

In the open responses to the survey, respondents detailed some of the actions they had taken from *My Toolkit* and implemented in their own professional practice. For many of the respondents, these actions were focused around communication with colleagues as well as with patients and their families:

“A recent dying patient was the perfect time to open the toolkit, show colleagues, discuss actions to improve our communication planning and care..... I found the toolkit an excellent resource. We initiated the conversations with the patient and his family....everyone involved had their input and needs recorded and acknowledged. After his peaceful and dignified death there were no dramas, no unexpected unhappiness ...participation and involvement to each individuals comfort level was excellent.” (State and profession not reported, Survey Open Response).

“Patient nearing the end of his life wanted me to initiate the end-of-life talk with his children, so he could let them know that it was "going to be OK", that he had wishes and concerns and he wanted to make them clear and give his children some input. It was very productive, sad and tearful for the family, however productive and he did die 5 days later with the family present who wanted to be present..... We wrote down his wishes, we had a clear phone tree for family who wanted to be with him.... it was a peaceful dignified death.” (Nurse, VIC, Survey Open Response)

“The toolkit has been useful in my dealings with a palliative care patient this last week. Simple things are so important and the family appreciate our efforts in just providing someone to talk to. Thank you for the toolkit.” (Nurse, NSW, Survey Open Response)

Another respondent found *My Toolkit* valuable as an education resource in her department:

“We are currently in the process of organising staff training sessions with the toolkit to educate all doctors and nurses in the department so there is consistency throughout the department. We have some consultants on board who are keen on the process who I have referred to your toolkit also and are currently undertaking the modules.” (Nurse, VIC, Survey Open Response)

A further respondent reported that *My Toolkit* was being used as a resource on her Post Graduate facilitation course (Nurse, NSW, Survey Open Response).

Survey respondents identified a number of future actions they planned to take, including: initiating end-of-life conversations, sharing and discussing *My Toolkit* at team meetings and workshops, recommending and promoting the toolkit to others, implementing better self-care strategies, and using the toolkit in training sessions. A couple of respondents observed that due to their long-term expertise in palliative care, they were already performing most of the suggested actions in the toolkit. As a result, they did not find the toolkit at an appropriate level for them. Despite this feedback, both respondents agreed that the toolkit was a great resource for less experienced staff:

“The toolkit is not particularly applicable in the ICU environment when we deal with palliation frequently..... The toolkit is a fantastic resource for staff unfamiliar with end-of-life or ward based care.” (Nurse, VIC, Survey Open Response)

“I believe this bodes well for the accessibility and of the toolkit for care workers and non-health professionals but that it may be less in depth for more advanced care workers seeking a higher level of understanding.” (Occupation not reported, TAS, Survey Open Response)

Respondents identified a number of barriers to improving the quality of end-of-life care, including: lack of training in end-of-life care, lack of whole person care, organisational culture and bureaucracy, time pressures, not always being able to recognise impending end-of-life, and societal taboos about discussing dying and death:

“It can be very difficult to get the home medical/surgical team to look past their area of interest and at the whole patient picture and what is best for the patient.” (Nurse, VIC, Survey Open Response)

“Our Western society treats discussion about end-of-life matters as taboo. A lot of people either want to defer talking about it at all; or defer “until I am sicker”. Death and dying are not part of our everyday life discussions.” (Nurse, QLD, Survey Open Response)

“More hours to dedicate to the dying person and their family to support them through a home death.” (Nurse, NSW, Survey Open Response)

Telephone interviews

For the interviews, only recipients of *My Toolkit* who reported they were doctors, nurses or allied health professionals were invited to participate (see Table 24: for demographics of the telephone interview sample). All interviewees were female. The mean age of interviewees was 48.0 years (range 35-62 years) and the mean years of experience as a healthcare professional was 23.7 years (range 13-37 years). Interviews lasted an average of 20 minutes (range 10 to 40 minutes).

Two of the ten interview participants were introduced to *My Toolkit* through the recommendation of a colleague. As with the survey respondents, most interview participants were very positive about *My Toolkit* and the potential impact it could have on their practice. For this participant, the toolkit well exceeded her expectations:

“I think it’s the best thing I have ever read really....as an educational tool...it’s really considered, easy to read, easy to understand, easy to follow...and the resources that you suggested for further exploration is bang on the money, so you are not wasting my time.” (Interview 1, Nurse, ACT)

Other participants also reported that they found the toolkit to be a valuable resource. Notably, participants reported that the toolkit format was novel and they appreciated having a resource that was Australian-specific:

I've never seen another toolkit like this....this is a really, really good start.... I am not really aware of any Australia stuff, like this otherwise out there. If we can start on this and work on it, I think it's a great idea. (Interview 4, Clinical Nurse Manager, QLD)

It's relevant to everyone. I think it's amazing – it's the first one of its type I've seen....and I thought...this is it! (Interview 3, Nurse, NSW)

Table 24: *My Toolkit* Telephone Interview Sample by Profession (frequencies)

	Doctors	Nurses	Allied Health	Totals
Gender				
Male				
Female		7	3	10
Age (years)				
18-30				
31-40			1	1
41-50		2		2
51-60		4	2	6
60+		1		1
State/Territory				
ACT		1		1
NSW		1		1
NT				
QLD		2		2
SA			1	1
TAS				
VIC		3	2	5
WA				
Years' Experience				
5 years or less				
6 to 10 years				
11 to 15 years		2	1	3
16 to 20 years		1	1	2
21 years or more		4	1	5

NB. n = 10

One participant, who was from a culturally and linguistically diverse background (Interview 6, Social Worker, VIC), particularly valued the actions and resources based on cultural awareness and cultural sensitivity as she reported that, in her own personal and professional experience, this had been lacking amongst healthcare professionals.

“I think it’s amazing – it’s the first one of its type I’ve seen”

Some participants thought the toolkit was more aimed at nurses than allied health professionals or doctors. However, a social worker who was interviewed reported: *“I felt the toolkit was talking to me”* (Interview 6, Social Worker, VIC). Most participants thought that a general toolkit aimed at doctors, nurses and allied health worked well rather than having tailored toolkits by profession. However, some participants speculated that few doctors would use it, and indeed, doctors are under-represented amongst *My Toolkit* users.

Interviewees agreed that communication about end-of-life and discussing patients’ wishes was a major area in which the toolkit could and would support quality end-of-life care practice. Participants observed that there was a great amount of discomfort and denial about end-of-life, and a tendency to push such conversations into others:

“I heartedly endorse it!”

“no one dies on my shift”...I hear that a lot...[I hear] “the social worker deals with that kind of thing. I’ll get the social worker to come and speak to you”...those on the spot questions: “Am I going to die?” “Oh Hang on; I’ll get the social worker”. It’s not appropriate. (Interview 3, Nurse, NSW)

“Encourage timely conversation....the big improvement would be in the communication area.” (Interview 1, Nurse, ACT)

As with the survey respondents, several of the interview participants reported that they saw value in the toolkit not only as a personal resource but also as an educational resource. Even though a couple of the interviewees felt that the content of the toolkit was too basic for

their own needs, they saw it as an invaluable resource for more junior staff or those that were not routinely involved in palliative care. For example, Interviewee 7 felt that the toolkit *“wasn’t extending my practice”* (Interview 7, Nurse, VIC) as a palliative professional with 34 years’ experience. However, she reported that she would use the toolkit when providing on-the-job education to graduate nurses, and that she *“would definitely recommend it to junior staff or ward staff”* (Interview 7, Nurse, VIC).

Other participants saw that *My Toolkit* had a lot of offer a wide cross section of healthcare roles, and varying lengths of experience. One participant advised:

“We are not just going to push it [My Toolkit] through [the] emergency [department], we are going to push it through the hospital ... [I have] managed to get people from a lot of different departments...interested in the topic at the moment....starting on the floor within an ED [Emergency Department] as a trial and filtering out into other departments. I’m excited to get working on the change that is going to happen...it is good to see the consultants jumping on board and it’s not just the nurses.”
(Interview 9, Nurse, VIC)

Finally, both survey respondents and interview participants were asked if they thought anything was missing from *My Toolkit*. Many of them replied that they were happy with the toolkit as it was and didn’t perceive any deficiencies or missing materials:

“I feel it [My Toolkit] is complete.” (Nurse, NSW, Open Survey Response)
“I have not found anything [missing] as yet.” (State & occupation not reported, Open Survey Response)

One interviewee, who had not undertaken any of the End-of-Life Essentials education modules, thought that the toolkit needed more of an introduction regarding its intended audience and use. One survey respondent felt that the focus was on end-of-life of the aged and did not significantly cover dying at early life stages, particularly paediatric end-of-life care.

Other suggestions were to include case studies, mini posters, a program of ongoing tips via email, and more information about cultural sensitivity towards different ethnic and religious

groups. Several participants reported that they would like to see *My Toolkit* online or on a phone app.

Finally, some respondents' main concern was that *My Toolkit* would be reviewed and kept up to date:

"I hope the toolkit can be continuously reviewed and updated as required. The saddest thing is when a great resource becomes outdated and no longer usable."
(Nurse, QLD, Survey Open Responses)

"Keep updating it, it is great." (Nurse, QLD, Survey Open Responses)

Discussion

The evaluation findings from the education modules and the implementation toolkit demonstrate that the intended learning outcomes have been achieved, with most learners reporting an increase in knowledge, confidence, and change in workplace behaviour in relation to end-of-life care following completion of modules and/or use of the toolkit.

With respect to the education modules, the knowledge and confidence in end-of-life care increased post module, and was maintained 3-6 months later. This was true for all pre to post evaluation scores except for the statement relating to the identification of patients at the end-of-life. This shift highlights the possible learnt complexity of recognising end of life, that is, the more a learner knows can sometimes highlight the more a learner doesn't know.

My Toolkit was also praised by users, with most finding it relevant to both their profession and their current role. Importantly users reported an increase in confidence in discussing end-of-life matters with co-workers, patients and families. This is an important activity outcome as psychological research has shown that confidence is a pre-requisite to actual behaviour change.¹³

One aim of the implementation toolkit evaluation was to identify the type of changes to workplace behaviour being implemented by users. Many of the survey respondents and interview participants were able to describe changes they had made to their workplace behaviour in relation to end-of-life care. Most of these changes related specifically to communication around end-of-life matters. These examples demonstrated that users were focusing on spending time discussing patients' wishes, involving family members, and ultimately supporting the dignified end-of-life for those in their care.

¹³ Bandura, A. (1997). Self-efficacy: the exercise of control. New York: W.H.Freeman and Brown RL, Pfeifer, J.M., Gjerde, C.L., et al. (2004). Teaching patient-centered tobacco intervention to first-year medical students. *Journal of General Internal Medicine*, 19:534–9.

Overall, users saw communication around end-of-life care as a major area of deficit amongst healthcare professionals, and advised that *My Toolkit* was helping address this deficit. It is important to note that almost 60% of users had implemented a change to their own workplace practice in 4 weeks or less. Of those who had not yet implemented a change, most were planning on making a change to their workplace behaviour in the near future. Similarly, the evaluation of the education modules found that a majority of users (87.4%) intended to change end-of-life care practice after completing the modules.

Another aim of the toolkit evaluation was to identify any common barriers experienced by users in changing workplace behaviour in relation to end-of-life care. The most commonly named barriers were lack of training and skills development in end-of-life care, and lack of time. Other barriers raised by participants were organisational culture and bureaucracy, not always being able to recognise impending end-of-life, and general societal taboos about discussing dying and death. These findings suggest that, while a resource to change individuals behaviour has been effective, changing practice in hospitals overall requires a multi-level approach that tackles barriers at the team, managerial and organisational level as well as at the practitioner level.

Challenges to achieving the Activity Performance Indicators

Despite the later than anticipated beginning of this project in early 2015, there have been only minor challenges to achieving the performance indicators encountered during the activity period.

One challenge has been marketing the education to the relevant doctors, nurses and allied health professionals across Australia. The highly complex and multifaceted acute hospital system provides challenges in terms of connecting to individuals who work in that system. With this complex system in mind the importance of the communications strategy has been vital in bolstering and achieving enrolment and completion target outcomes. However, notwithstanding the short time frame of the activity and the impressive completion data, only a fraction of the 251,000 health care professionals employed in public hospitals have completed the education and used the implementation toolkit. The challenge remains to

increase uptake, evaluation and to continue to systematise the availability of the activity within local area health jurisdictions across Australia.

There were only minor challenges encountered by module users but these were all quickly resolved by the team. For example, many health care services have restricted internet and were unable to view YouTube clips. Momentary problems with logging in to the Learning Management System were experienced however the team were able to resolve problems by providing troubleshooting tips to learners as required.

In relation to the toolkit, it is worth acknowledging that the timeframe for the evaluation was more contracted than anticipated. It was hoped that the evaluation would have been extended over a longer period in order to potentially capture a larger sample, and a wider range of workplace behaviour changes. This shortened timeframe was due to development issues in late 2016 resulting in additional recruitment to develop the toolkit. Time delays also resulted from the decision to seek ethics approval for the evaluation. Therefore, the evaluation of changes to workplace behaviours following receipt of *My Toolkit* was only able to be established over a maximum period of 4 weeks. Despite this, the performance against activity indicator 8 was almost achieved with 59.3% of respondents reporting they had made a change to workplace behaviour against a target of 60%. That many recipients were able to make behavioural changes within such a short time period is a good indicator of the effectiveness of this resource.

Activity learnings

A finding that emerged from the module completion data was that despite giving the learners the freedom to complete the modules in any order, the users were likely to complete the modules in a sequential fashion. Module titles on their own - without numbering may have minimised this, thus encouraging learners to self-select topics that most suit their learning needs.

Two themes emerged that were not anticipated and will be discussed here in brief. Firstly, although the modules and toolkit were targeted at individuals, the package has been used as an educational resource both within work units, with students, and with recent graduates. One toolkit interview participant noted that they were gathering momentum to

use the End-of-Life Essentials resources across the whole hospital and she was personally engaged in this activity, starting with her own department. As such, the toolkit is being used to improve quality end-of-life care beyond the practitioner level to team and organisational levels.

Secondly, though the modules and toolkit were intended to be used by doctors, nurses and allied health professionals working in acute hospitals, it was found to be used by a wider audience. Of the users registering to the modules, 28.8% identified as working in non-acute or 'other' settings. In relation to the toolkit, 9.3% fell into the 'other' category; these were: educators, managers, volunteers, aged care workers, pastoral support workers, policy makers, activity officers, a terminally ill patient and an end-of-life doula. Some recipients were aged care workers or healthcare professionals working in the aged care sector; these users made up over 15% of survey respondents. These participants and others saw that the toolkit as potentially useful to aged care workers in both community and residential settings. Given that patients near the end-of-life may shift between residential or community settings and acute hospital care, extending the toolkit resources to this sector would potentially further improve both quality and continuity of care for Australians nearing the end-of-life, wherever they receive care. Currently, more than 240,000 workers are employed in direct care worker roles across the residential and community sectors¹⁴ so extending the education to the aged care sector represents a substantial opportunity to improve the quality of end-of-life care for many Australians.

Conclusion

The End-of-Life Essentials activity has successfully achieved or surpassed all performance indicators on time and within budget. Working with key stakeholders and industry across Australia, peer-reviewed, evidence-based resources have been crafted to educate the workforce and improve the end-of-life care capacity and capabilities of Australian health care professionals. The evaluation data demonstrates that the suite of modules, materials and resources have increased user knowledge and confidence in addressing end-of-life

¹⁴ King, D., Mavromaras, K., Wei, Z., He, B., Healy, J., Macaitis, K. et al. (2012). The aged care workforce – Final Report. Department of Health and Ageing. Report prepared by the National Institute of Labour Studies, Flinders University.

issues with patients and their families. Whilst the education was intended as a resource for individual use in acute hospital settings, the education had broader appeal both in terms of its applicability in other settings and for other user groups.

Given the level of continued interest in the education modules and requests for *My Toolkit*, an ongoing demand for, and continued uptake of the resources is anticipated. With an ageing population and increasing rates of chronic disease, interest and need for the activity resources is expected to increase. Ensuring quality end-of-life care is provided by a highly skilled acute hospital workforce is paramount. Continuing to connect with, and increase the skills of health care professionals employed in Australian public hospitals is crucial to improve the end of life care for Australians.

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Appendix I: Pre and Post Evaluation Survey Statements

	Question	Pre	Post
Module 1	1	I can identify patients approaching end of life	Because I have finished this module, I can more easily identify patients approaching the end-of-life
	2	I know the important elements of end-of-life care skills	Because I have finished this module, I have increased my knowledge about important elements of end-of-life care skills
	3	I know where I need to improve my end-of-life care skills	Because I have finished this module, I have improved my end-of-life care skills
	4		I intend to change my practice in end-of-life care
Module 2	1	I know my own strengths and limitations in end-of-life care communication and shared decision making	Because I have finished this module, I have increased my knowledge about end-of-life communication
	2	I know how to strengthen my skills in end-of-life communication and shared decision making	Because I have finished this module, I have increased my knowledge and skills about end-of-life communication
	3		I intend to change my practice in end-of-life care
Module 3	1	I feel confident in my clinical ability to recognise patients approaching the end of life.	Because I have finished this module, I feel more confident about recognising patients approaching the end of life ¹⁵
	2	I know where I need to improve my skills in recognising patients approaching the end of life	Because I have finished this module, I have improved my knowledge about how to increase my skills in recognising patients approaching the end of life ¹⁶
	3		I intend to change my practice in end-of-life care
Module 4	1	I can identify the essential elements in negotiating goals of care	Because I have finished this module, I have increased my knowledge about negotiating goals of care
	2	I know how to manage goals of care conversations	Because I have finished this module, I feel more confident in discussing goals of care
	3	I know where I need to strengthen my skills in negotiating goals of care	I intend to change my practice in end-of-life care
Module 5	1	I can identify the essential elements in effective team work in end-of-life care	Because I have finished this module, I have increased my knowledge about effective teams in end-of-life care
	2	I know how to effectively speak up and raise an issue	Because I have finished this module, I feel more confident approaching conflict
	3	I know how to approach conflict	I intend to change my practice in end-of-life

¹⁵ Question 1 Module 3 was used at 3-6 month follow-up but ended with "because of completing the e-learning"

¹⁶ Question 2 Module 3 was used at 3-6 month follow-up but ended with "because of completing the e-learning"

			care
Module 6	1	I can identify the essential elements in responding to concern	Because I have finished this module, I have increased my knowledge about managing disagreements
	2	I know how to manage disagreements	Because I have finished this module, I feel more confident in managing disagreements
	3	I know where I need to strengthen my skills in managing disagreements	I intend to change my practice in end-of-life care

Appendix 2: Practice Change

	Please answer this question which will assist us understanding the impact of this learning. Your response is totally de-identified or anonymous.
Module 1	Tomorrow, the one thing I can change to more appropriately provide end-of-life care, is
Module 2	Tomorrow, the one thing I can change to more appropriately provide end-of-life care, specifically communication, is
Module 3	Tomorrow, the one thing I can change to more appropriately provide end-of-life care, specifically recognising dying, is
Module 4	Tomorrow, the one thing I can change to more appropriately provide end-of-life care, specifically around goals of care, is
Module 5	Tomorrow, the one thing I can change to more appropriately provide end-of-life care, specifically my team work skills, are
Module 6	Tomorrow, the one thing I can change to more appropriately provide end-of-life care, specifically acting when things aren't going well, is

Appendix 3: My Toolkit Evaluation Survey

Introduction

You recently received the End-of-Life Essentials Toolkit. We hope that you have had time to read through these resources and to consider how they might support your professional practice in relation to end-of-life care.

This short online survey is for you to provide your evaluation of the resource materials and any additional feedback. This survey is entirely voluntary. You are free to answer all, some, or none of the survey questions. You can complete this survey at one time, or start it and come back to it later.

All responses will be anonymous and your responses can't be linked to you in any way. The survey will take approximately 10-15 minutes to complete.

Please refer to your Participant Information Sheet for more information. If you have any additional questions, please contact claire.hutchinson@flinders.edu.au.

About You

1. Age:
(Drop down: 18-30/31-40/41-50/51-60/60+)
2. Gender:
(Drop down: Male/Female/Other)
3. Postcode where you work:
(4 character)
4. Occupational role: Doctor/nurse/allied health professional. If allied health professional (specify)
5. Years' experience in occupational role? (years)
6. What is your primary work area within the hospital:
Drop down: ED/ICU/Surgical Ward/ General Ward/Outpatient Clinics/Quality Improvement/Other, Other – please specify
7. Have you completed any End-of-Life Essentials modules?
Yes/No/Not sure
8. How many?
1 or 2/ 3-5/All six

About My Toolkit

Please indicate your level of agreement or disagreement with the following statements:

	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
9. The content of <i>My Toolkit</i> is relevant to my profession.					
10. The content of <i>My Toolkit</i> is relevant to me personally.					
11. The content of <i>My Toolkit</i> is presented clearly.					
12. The content of <i>My Toolkit</i> is organised in a logical way that is easy to navigate.					
13. Having <i>My Toolkit</i> , I now feel more confident in discussing end-of-life matters with colleagues.					
14. Having <i>My Toolkit</i> , I now feel more confident in discussing end-of-life matters with patients and their families.					
15. <i>My Toolkit</i> provides me with actionable behaviours to improve end-of-life care.					
16. I will access/refer to <i>My Toolkit</i> in the future.					
17. I have referred at least one colleague to <i>My Toolkit</i> .					
18. I would recommend <i>My Toolkit</i> to my colleagues.					

Your actions

19. Have you completed any of the suggestions in *My Toolkit*?

Drop down: Yes/No

If yes, were they related to: (can tick more than one option)

Module 1: dying, a normal part of life;

Module 2: patient-centred communication and shared decision-making;

Module 3: recognising the end-of-life;

Module 4: planning end-of-life care;

Module 5: teams and continuity for the patient;

Module 6: responding to concerns.

20. If yes, please provide an example of something you have done?

Text Box

21. If No – do you intend to implement a suggestion in the near future?
Drop down: Yes/No
22. If yes, please provide an example of something you intent to do in the near future?
Text Box
23. If No – what is the main reason for not actioning a suggestion from *My Toolkit*?
Textbox
24. What is the best thing about *My Toolkit*?
Textbox
25. What could be improved in *My Toolkit*?
Textbox
26. What is missing from *My Toolkit*?
Textbox
27. What makes it difficult to change end-of-life care in your hospital?
Textbox
28. What else could be done to bring about positive change to end-of-life care in your workplace?
Textbox
29. If you have any further comments/suggestions to make about *My Toolkit*, please use this space.
Textbox

Thank you for participating in this survey.

Appendix 4: *MyToolkit* Semi-structured Interview Topic Guide

Interview Structure

The interview will cover four broad areas:

1. Introduction/demographic data.
2. The relevance and quality of the materials and resources in the End-of-Life Essentials toolkit to their professional practice.
3. Whether the toolkit supports positive and effective changes to workplace practice with regards to end-of-life care.
4. Final comments/conclusion.

Indicative Interview Questions

1. Introduction/Demographic Data

- What is your gender? Age?
- What is your occupation? Length of time in occupation? State/territory in which you work?
- Have you done the end-of-life modules? How many? Which ones?
- What prompted you to register for a toolkit?

2. The relevance and quality of the materials and resources in the End-of-Life Essentials toolkit to their professional practice

- Overall, what did you think of the End-of-Life Essentials Toolkit?
 - Did it meet your expectations?
- What aspects of the toolkit do you think are most relevant to your provision of end-of-life care?
- What aspects of the toolkit are least relevant to you?
- Was there anything that you think should have been in the toolkit but wasn't? Anything you would like to see in future versions?
- Format: Did you like the hardcopy format? It is envisioned that the toolkit will be online, how do you think this will affect accessibility? Usefulness? (e.g. searchable, need access to devise). Would an End-of-Life Essentials Toolkit app make it more usable, accessible?
- Do you think the Toolkit compliments the online training modules? In what way?
- What do you think the main barriers to healthcare staff accessing the toolkit resources are?
- Have you / would you recommend the toolkit to your colleagues?
- How much do you anticipate you will use/refer to the toolkit in the future?
- Is it useful having resources specific to different professions?

3. Whether the toolkit supports positive and effective changes to workplace practice with regards to end-of-life care.

- Overall, do you think that the toolkit will promote and support positive changes to workplace practice in end-of-life care? If so, how?
- As a result of reviewing the toolkit, have you been able to change any of your own workplace behaviours in relation to end-of-life care?
 - If so, can you give me an example: what was the behaviour change? Why did you decide on this behaviour change/why did you think it was important? What happened/ what was the outcome? (for patients, carers, families, other staff) Do you think this new behaviour is sustainable? Why or why not? Did you experience any barriers when implementing this behaviour? Would you encourage co-workers to adopt this behaviour in the future?
 - Interviewee can provide additional examples if desired.
- If you have not been able to implement a behaviour change yet, are there any new behaviours you are considering implementing in the near future?
 - If yes, can you give me an example: what is the anticipated change? Why are you considering this behaviour change / Why do you think this is important? What outcome are you anticipating from this behaviour change? (for patients, carers, families, other staff), Do you think co-workers would also benefit from building this behaviour change into their professional practice? Do you anticipate any barriers in implementing this behaviour change?
 - Interviewee can provide additional examples if desired.

4. Conclusion

- Is there anything else about the toolkit you would like to discuss?
- Thank you for your participation.