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ORIGINAL ARTICLE

Evaluation of an online education module designed to reduce stillbirth

Christine Andrews[1], Natasha Meredith[1], Sean Seeho[2], Megan Weller[1], Alison Griffin[3], David Ellwood[1,4], Philippa Middleton[1,5], Belinda Jennings[6] and Vicki Flenady[1]

[1]Centre of Research Excellence in Stillbirth, Mater Research Institute, The University of Queensland, Brisbane, Queensland, Australia

[2]Women and Babies Research, Faculty of Medicine and Health, The University of Sydney, Sydney, New South Wales, Australia

[3]QIMR Berghofer Medical Research Institute, Brisbane, Queensland, Australia

[4]Gold Coast University Hospital, and School of Medicine, Griffith University, Gold Coast, Queensland, Australia

[5]SAHMRI Women and Kids, South Australian Health and Medical Research Institute, Adelaide, South Australia, Australia

[6]Department of Health, Northern Territory Government, Darwin, Northern Territory, Australia

Correspondence: Dr Christine Andrews, Centre of Research Excellence in Stillbirth, MRI-UQ, Level 3 Aubigny Place, Mater Health Services, South Brisbane, QLD 4101, Australia. Email: christine.andrews@mater.uq.edu.au

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Background: The Safer Baby Bundle (SBB) eLearning is an online education module that addresses practice gaps in stillbirth prevention in Australia. It provides healthcare professionals with evidence-based resources for: smoking cessation; fetal growth restriction; decreased fetal movements; maternal safe going-to-sleep position; and timing of birth for women with risk factors for stillbirth.

Aims: To determine whether participants' reported knowledge and confidence in providing care designed to reduce stillbirth changed following completion of the module. To assess the module's suitability and acceptability, and participants' reported likelihood to change practice.

Materials and methods: In-built surveys undertaken pre- and post-eLearning module assessed participant knowledge and confidence, module suitability and acceptability, and likelihood of practice change using Likert items. Responses were dichotomised. Differences pre- and post-module were tested using McNemar's test and differences by profession were examined using descriptive statistics and Pearson's χ^2 test.

Results: Between 15 October 2019 and 2 November 2020, 5223 participants across Australia were included. Most were midwives (82.0%), followed by student midwives (4.6%) and obstetricians (3.3%). Reported knowledge and confidence improved in all areas ($P < 0.001$). Post-module 96.7–98.9% 'agreed' they had a sound level of knowledge and confidence across all elements of the SBB. Over 95% of participants agreed that the module was helpful and relevant, well organised, and easy to access and use. Eighty-eight percent reported they were likely to change some aspect of their clinical practice.

Conclusions: The SBB eLearning module is a valuable education program that is well-received and likely to result in improvements in practice.

KEYWORDS

education, online, prevention, program evaluation, stillbirth

INTRODUCTION

Globally, stillbirth remains a significant public health concern with devastating and far-reaching impacts for families, healthcare providers and society.[1] In Australia, while late gestation stillbirth rates have decreased,[2] the stillbirth rate remains relatively high[3] and more needs to be done. In up to half of stillbirths, there is evidence of inadequate or inappropriate care, and 20–30% of stillbirths are thought to be preventable.[4]

The Centre of Research Excellence in Stillbirth (Stillbirth CRE) has led the development of an Australian bundle of care, the Safer Baby Bundle (SBB), to address the priority evidence practice gaps in stillbirth prevention for implementation across Australian maternity services.[5] The Stillbirth CRE has partnered with leading professional colleges and research institutions across Australia to design a SBB eLearning module, as well as face-to-face workshops, to support healthcare professionals in reducing preventable stillbirth.

Development of the eLearning module involved refining and upscaling the Stillbirth CRE's existing programs[6–8] and integrating these into a new online platform. Content for each element was informed by evidence-based best practice recommendations for Australia and New Zealand.[1,9–13] The eLearning module has been accredited by key professional organisations and participants completing the module can obtain continuing professional development points. The SBB eLearning module was launched by the Australian Federal Minister for Health on 15 October 2019. Since then, it has been freely available and promoted widely through professional colleges and partnering Departments of Health.

A survey of maternity service leads across Australia identified inconsistencies in healthcare professionals' knowledge and practice as a barrier to providing best practice care in stillbirth prevention.[14] Few online programs address these training needs or have been evaluated to determine the extent to which they provide healthcare professionals with the necessary knowledge, confidence, and skills.[15] The primary aim of this study was to determine whether participants' reported knowledge and confidence in providing care to reduce stillbirth changed following completion of the eLearning module. Secondary aims included assessing the eLearning module's suitability and acceptability, and determining participants' reported likelihood to change aspects of their clinical practice following completion.

METHODS

Online education module being evaluated

The SBB eLearning module comprises an introductory chapter and five learning chapters: one for each element of the SBB (Table S1 and https://learn.stillbirthcre.org.au/).

Study setting/participants

Participants from Australia who completed the eLearning module from 15 October 2019 to 2 November 2020 were included in this study. This evaluation describes Australian participants whose identified profession has a clear role in the provision of care to reduce stillbirth. International participants, allied health professionals, participants who did not specify a profession, and those with incomplete and/or missing survey responses were excluded.

Study design

After completing the eLearning module's registration page, participants were automatically directed to an in-built electronic survey. The in-built survey was completed before commencing the eLearning module (pre-module) and again following completion (post-module).

Data collection

Demographic characteristics (location, profession) were collected via the eLearning module's registration page.

Participants were administered an identical 12-question survey pre- and post-completion of the eLearning module. An additional nine questions were included in the 'post-module' survey (Figure S1).

The first six questions asked participants to rate their perceived level of knowledge around latest clinical best practice for: (1) risk factors for stillbirth; (2) supporting women to stop smoking in pregnancy; (3) detection and management for fetal growth restriction (FGR); (4) raising awareness and improving care for women with decreased fetal movements (DFM); (5) improving awareness of maternal safe going-to-sleep position in late pregnancy; and (6) improving decision-making about the timing of birth for women with increased risk factors for stillbirth. The next six questions asked participants to indicate their level of confidence when talking with pregnant women about issues in relation to reducing their risk of stillbirth across the same areas. Items were rated on a five-point scale (1 = strongly disagree; 3 = neutral; 5 = strongly agree).

The additional nine questions in the 'post-module' survey included six questions designed to assess the overall suitability and acceptability of the eLearning module by asking participants to rate their level of agreement with the following statements: overall I found the module helpful and relevant to my learning needs; the module was organised and flowed in a logical sequence; the module improved my knowledge of the assessment and management of stillbirth risk factors; the module encouraged me to reflect upon my knowledge and skills; the module was engaging and enjoyable; and it was easy to access and use. Participants were then asked to indicate how likely (1 = not likely at all to 5 = extremely likely) they were to: recommend the eLearning module to work colleagues; and change any aspect of their clinical practice as a result of completing the eLearning module. The final question asked participants about how the SBB eLearning experience compared to any other online education programs that they had previously undertaken.

Data analysis

All variables were treated as categorical and were described using frequency (percent). Likert items for confidence, knowledge and suitability/acceptability were dichotomised as 'did not agree' (strongly disagree/disagree/neutral) and 'agreed' (agree/strongly agree), while items for recommendation and intention to change practice were dichotomised as '1–3' and '4–5' on a scale where 1 = not likely

at all and 5 = extremely likely. Evidence for a difference in perceived knowledge or confidence between pre- and post-module surveys was tested using McNemar's test for binary matched data.

Differences by profession in perceived knowledge or confidence were examined using descriptive statistics (pre- and post-module) and Pearson's χ^2 (pre-module). Professional groups for comparison included: midwives, student midwives, nurses, obstetricians/gynaecologists, trainee obstetricians, general practitioners, medical students, and Aboriginal and Torres Strait Islander health workers. Participants identifying themselves as doctors/medical officers were not included in analyses by profession because it was not possible to determine their individual medical specialty. As this group has the potential to be highly diverse, considering them as a single group was not thought to be appropriate.

Associations between profession and responses to suitability/acceptability, recommendation of the eLearning module, and intention to change practice questions were assessed using Pearson's χ^2 test or Fisher's exact test for tables with small expected cell counts. χ^2 contributions, observed counts and expected counts were examined in statistically significant tables to identify which cells contributed most to differences by profession. Statistical analysis was performed using Stata 15.1 (Stata Corp, College Station, TX, USA) and a *P*-value <0.05 was considered statistically significant throughout inferential analysis.

Ethics approval was obtained from the Royal Brisbane & Women's Hospital Human Research Ethics Committee (HREC/2019/QRBW/47709).

RESULTS

There were 5223 participants included in analyses, from a total of 5679 participants who completed pre- and post-module surveys between 15 October 2019 and 2 November 2020. Of these 456 participants were excluded (191 international, 99 incomplete survey responses, 142 did not specify a profession, and 24 allied health professionals). Midwives were the most common profession (82.0%; *n* = 4282). The other participants were student midwives (4.6%; *n* = 238), specialist obstetricians/gynaecologists (3.3%; *n* = 170), nurses (3.3%; *n* = 172), general practitioners (2.0%; *n* = 106), medical students (1.6%; *n* = 83), doctors/medical officers (1.5%; *n* = 78), trainee obstetricians (1.4%; *n* = 72), and Aboriginal and Torres Strait Islander health workers (0.4%; *n* = 22).

Knowledge and confidence before and after completion of the eLearning module

Before completing the eLearning module, knowledge and confidence varied by topic (Tables 1 and S2). Participants felt most knowledgeable and confident talking with pregnant women about DFM (86.3% and 88.9% 'agreed' with the knowledge and confidence statements, respectively) and least knowledgeable and confident about timing of birth for women with risk factors for stillbirth (61.3% and 61.0% for knowledge and confidence statements, respectively). There was strong evidence for a difference in perceived knowledge and confidence between pre- and post-module surveys for all the topics (all $P < 0.001$, Table 2). A very high proportion (≥93.4%) of those who 'did not agree' with the statements pre-module 'agreed' post-module, indicating increased perceived knowledge and confidence. Additionally, almost all (≥98.5%) of those who 'agreed' with each statement pre-module continued to 'agree' post-module. Overall, over 96% of participants 'agreed' with each statement post-module.

TABLE 1 Agreement with knowledge and confidence statements pre- and post-module (*N* = 5223)

Topic	Agreed *n* (%)	
	Pre	Post
Risk factors for stillbirth		
Knowledge	3853 (73.8)	5160 (98.8)
Confidence	3287 (62.9)	5114 (97.9)
Supporting women to stop smoking in pregnancy		
Knowledge	3914 (74.9)	5124 (98.1)
Confidence	3740 (71.6)	5093 (97.5)
Detection and management of fetal growth restriction		
Knowledge	3792 (72.6)	5101 (97.7)
Confidence	3547 (67.9)	5093 (97.5)
Raising awareness and improving care for women with decreased fetal movements		
Knowledge	4506 (86.3)	5160 (98.8)
Confidence	4645 (88.9)	5165 (98.9)
Improving awareness of safe going-to-sleep position in late pregnancy		
Knowledge	4013 (76.8)	5163 (98.9)
Confidence	4004 (76.7)	5162 (98.8)
Improving decision-making about the timing of birth for women with risk factors for stillbirth		
Knowledge	3203 (61.3)	5077 (97.2)
Confidence	3186 (61.0)	5049 (96.7)

'Agreed': agree/strongly agree.
'Knowledge': knowledge statement 'I have a sound level of knowledge around'.
'Confidence': confidence statement 'I feel confident talking with pregnant women about'.

Analysis by profession

There were differences in responses for level of knowledge and confidence in the pre-module survey between the different professional groups (Pearson's χ^2 $P < 0.001$ for all statements, Figures 1 and 2 and Table S3). Pre-module most obstetricians/gynaecologists 'agreed' (80.6–94.7%) with each of the knowledge and confidence statements, indicating high baseline reported knowledge and confidence for that group. Many trainee obstetricians and midwives (61.1–92.2%) also 'agreed' (61.1–92.2%) with each statement, but

TABLE 2 Cross tabulations for knowledge and confidence of participants pre- and post-module (*N* = 5223)

			Post *n* (%)		
			Did not agree	Agreed	*P*-value†
I have a sound level of knowledge around:					
Risk factors for stillbirth	Pre	Did not agree	36 (2.6)	1334 (97.4)	<0.001
		Agreed	27 (0.7)	3826 (99.3)	
Supporting women to stop smoking in pregnancy	Pre	Did not agree	56 (4.3)	1253 (95.7)	<0.001
		Agreed	43 (1.1)	3871 (98.9)	
Detection and management of fetal growth restriction	Pre	Did not agree	76 (5.3)	1355 (94.7)	<0.001
		Agreed	46 (1.2)	3746 (98.8)	
Raising awareness and improving care for women with decreased fetal movements	Pre	Did not agree	33 (4.6)	684 (95.4)	<0.001
		Agreed	30 (0.7)	4476 (99.3)	
Improving awareness of safe going-to-sleep position in late pregnancy	Pre	Did not agree	36 (3.0)	1174 (97.0)	<0.001
		Agreed	24 (0.6)	3989 (99.4)	
Improving decision-making about the timing of birth for women with risk factors for stillbirth	Pre	Did not agree	97 (4.8)	1923 (95.2)	<0.001
		Agreed	49 (1.5)	3154 (98.5)	
I feel confident talking with pregnant women about:					
Risk factors for stillbirth and individualisation of pregnancy care	Pre	Did not agree	78 (4.0)	1858 (96)	<0.001
		Agreed	31 (0.9)	3256 (99.1)	
Supporting women to stop smoking in pregnancy	Pre	Did not agree	98 (6.6)	1385 (93.4)	<0.001
		Agreed	32 (0.9)	3708 (99.1)	
Fetal growth restriction and how to detect and manage it during pregnancy	Pre	Did not agree	96 (5.7)	1580 (94.3)	<0.001
		Agreed	34 (1.0)	3513 (99)	
The importance of being aware of their baby's movements and care for women with concerns about decreased fetal movements	Pre	Did not agree	33 (5.7)	545 (94.3)	<0.001
		Agreed	25 (0.5)	4620 (99.5)	
The importance of safe going-to-sleep position in late pregnancy	Pre	Did not agree	35 (2.9)	1184 (97.1)	<0.001
		Agreed	26 (0.6)	3978 (99.4)	
The timing of birth for women with risk factors for stillbirth	Pre	Did not agree	127 (6.2)	1910 (93.8)	<0.001
		Agreed	47 (1.5)	3139 (98.5)	

'Did not agree': strongly disagree/disagree/neutral. 'Agreed': agree/strongly agree.
†McNemar's test for a within-person difference between surveys.

there was more variability in responses for these groups. Medical students (16.9–47.0% 'agreed'), nurses (25.6–64.0% 'agreed') and Aboriginal and Torres Strait Islander health workers (22.7–77.3% 'agreed') reported the lowest knowledge and confidence pre-module.

Post-module, a very high percentage of participants from all professions 'agreed' with each of the statements (81.8–100%). The range of difference between professions for those who 'agreed' with each statement was much smaller post-module, with Aboriginal and Torres Strait Islander health workers, nurses and medical students showing the largest increase for reported knowledge and confidence levels.

SBB eLearning module suitability/ acceptability and intention to change practice

Overall suitability and acceptability of the eLearning module was very high with over 95% of participants agreeing with each item (Tables 3 and S4). There was a high level of agreement among participants that the eLearning module was helpful and relevant (*n* = 5135, 98.3%); well organised (*n* = 5130, 98.2%); and easy to access and use (*n* = 5047, 96.6%). Most participants reported they would recommend the eLearning module to work colleagues (*n* = 4982, 95.4%). The large majority of participants (*n* = 4636, 88.8%) reported that they were likely or extremely likely to change some aspect of their clinical practice as a result of completing the eLearning module.

Most participants reported the experience was much better than (*n* = 2959, 56.7%) or about the same as (*n* = 2100, 40.2%) other online learning they had done. Only 54 (1.0%) reported that it was not as good as previous online learning they had done, while the remaining 110 (2.1%) reported that they had not done any previous online learning.

DISCUSSION

This study demonstrates that the SBB eLearning module successfully increases Australian maternity healthcare professionals'

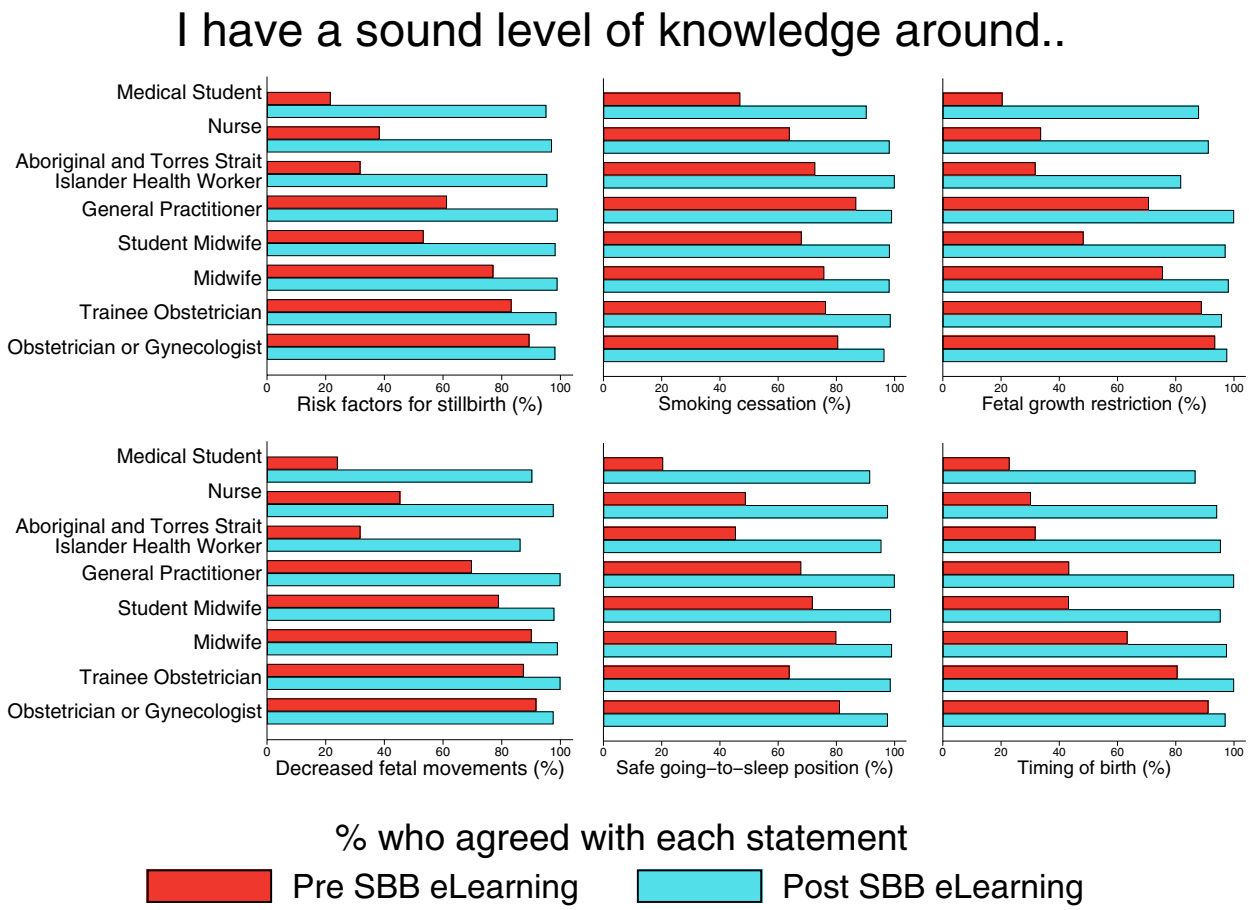

FIGURE 1 Percentage of each profession who agreed with the statements 'I have a sound level of knowledge around: risk factors for stillbirth; supporting women to stop smoking in pregnancy; detection and management for fetal growth restriction; raising awareness and improving care for women with decreased fetal movements; improving awareness of maternal safe going-to-sleep position in late pregnancy; improving decision-making about the timing of birth for women with increased risk factors for stillbirth' pre- and post-module.

reported knowledge and confidence to provide care to women on strategies designed to reduce stillbirth. Most healthcare professionals whose reported knowledge and confidence was low prior to undertaking the eLearning module shifted to high following completion. Additionally, post-module the vast majority of participants (96.7–98.9%) reported having a sound level of knowledge and confidence to discuss each element of the SBB with women. Participants also rated the eLearning module very highly in terms of suitability and acceptability, with almost all (98.3%) agreeing that it was helpful and relevant to their learning needs.

Conversations with pregnant women and their families around stillbirth prevention are sensitive. It is imperative all healthcare professionals are adequately trained to communicate effectively and feel knowledgeable and confident in having these conversations.[15] The SBB eLearning was designed for multi-professional education, therefore differences between professions for reported baseline levels of knowledge and confidence were expected. For example, obstetricians reported the highest levels of all professional groups, and this may reflect their prior intensive training in this area and that much of the eLearning module content relates to medical decision-making. Regardless, only a very small proportion (7.1%) found that the eLearning module was not relevant to their learning needs.

Encouragingly, nine out of ten participants indicated they would be likely to change some aspect of their clinical practice as a result of completing the eLearning module. Across the professional groups, student midwives, general practitioners and midwives indicated the highest level of agreement for intention to change practice. These findings concur with a recent survey,[14] highlighting that healthcare professionals across both midwifery and obstetrics are engaged with and committed to improving care practices recommended in the SBB. Importantly, having the online education module as an integral part of the SBB initiative[16] has the advantage of making these best practice recommendations available to all healthcare professionals providing maternity care in Australia regardless of their location. With higher rates of stillbirth observed for Aboriginal and Torres Strait Islander women, and women living in remote areas,[17] meeting the training needs of healthcare professionals working across rural and remote settings is imperative.

There has been a considerable focus on improving clinical management of women who report DFM since the update of

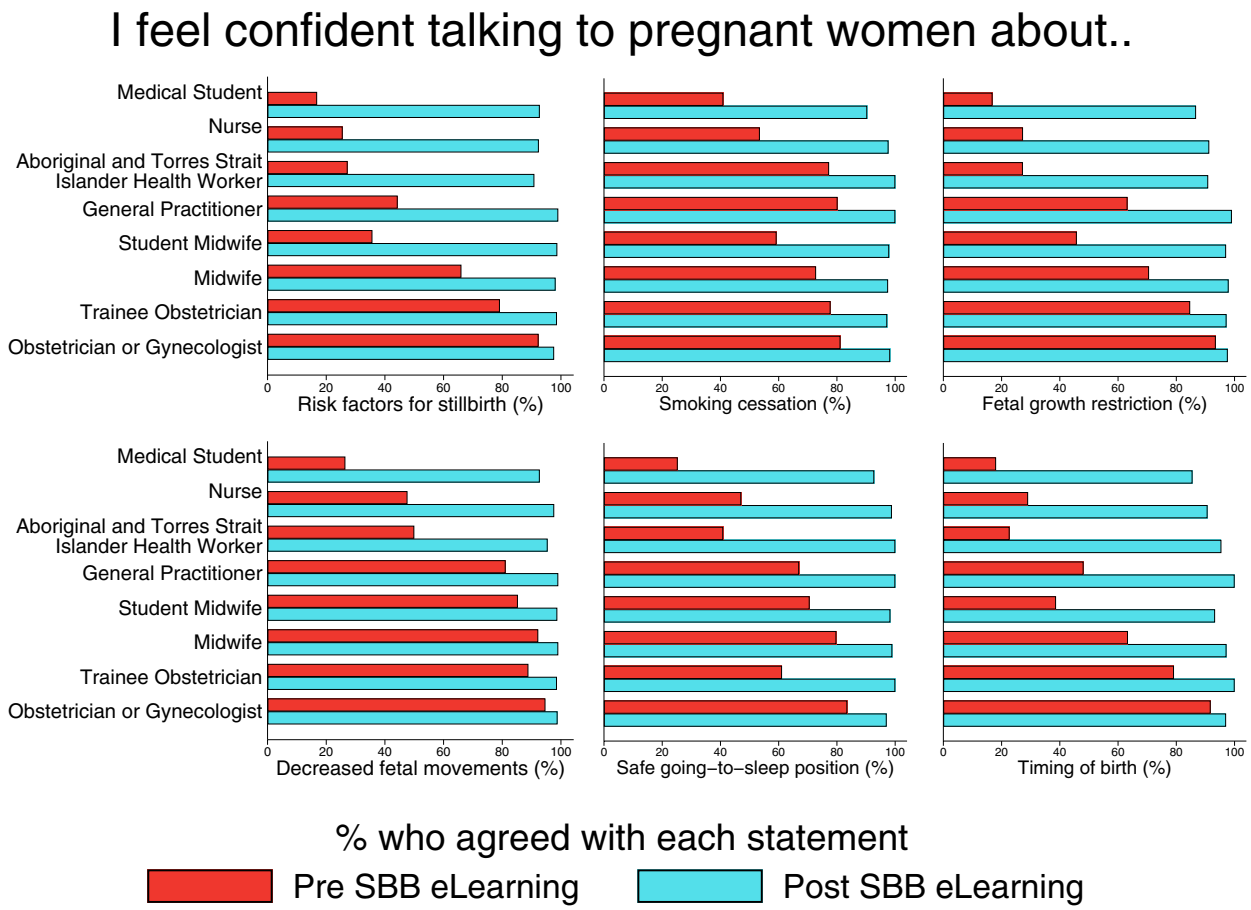

FIGURE 2 Percentage of each profession who agreed with the statements 'I feel confident talking with pregnant women about: risk factors for stillbirth and individualisation of pregnancy care; supporting women to stop smoking in pregnancy; fetal growth restriction and how to detect and manage it during pregnancy; the importance of being aware of their baby's movements and care for women with concerns about decreased fetal movements; the importance of safe going-to-sleep position in late pregnancy; the timing of birth for women with increased risk factors for stillbirth' pre- and post-module.

the clinical guideline on caring for women with DFM[13] in 2018. Reassuringly, of the 5223 Australian healthcare professionals included in this study (including 4282 midwives), the vast majority reported feeling knowledgeable (86.3%) and confident (88.9%) in caring for women with DFM prior to undertaking the eLearning module. Compared to the other SBB elements, these baseline figures were the highest. Fewer than two-thirds of participants reported feeling knowledgeable (61.3%) and confident (61.0%) prior to completing the element on improved decision-making around timing of birth for women with stillbirth risk factors. This demonstrates the importance of the eLearning module for meeting training needs in this area.

This study is strengthened by the large number of participants and the linkage of individual participant's pre- and post-module survey responses. Moreover, as the surveys were in-built into the platform, all participants undertaking the eLearning module completed the survey, ensuring that responses were reflective of the general experience. However, it should be noted the eLearning module was not mandatory training and healthcare professionals with an interest in stillbirth prevention may have been more likely to participate. A key limitation of the study was that only intent to change clinical practice was reported and the type of practice change was not requested. Whether the knowledge gains from undertaking this eLearning can influence sustained clinical behaviour change was not assessed. Comprehensive evaluation of changes to clinical practice as a result of SBB implementation (of which the SBB eLearning is a crucial component) is planned[16] and may provide evidence of behaviour change. Another limitation of the study design was the survey assessed self-reported knowledge and confidence in providing care to reduce stillbirth. Also, the value of the reported comparison of the SBB eLearning module with other eLearning experiences might have been improved by specifying a timeframe, as improvements in eLearning technology have occurred in recent years. Furthermore, the findings from this study would have been enhanced if additional information on the sociodemographic characteristics of participants had been collected, as this could have informed

TABLE 3 Responses to suitability/acceptability, overall recommendation, and intention to change practice post-module: overall and by profession

	Total‡	Midwife	Student midwife	Obstetrician/ gynaecologist	Trainee obstetrician	Nurse	General practitioner	Medical student	Aboriginal and Torres Strait Islander health worker	*P*-value§
	N = 5223	*N* = 4282	*N* = 238	*N* = 170	*N* = 72	*N* = 172	*N* = 106	*N* = 83	*N* = 22	
Suitability/acceptability										
Overall, I found the Safer Baby Bundle eLearning module helpful and relevant to my learning needs										
Did not agree	88 (1.7)	56 (1.3)	5 (2.1)	12 (7.1) †	1 (1.4)	6 (3.5)†	0 (0.0)	6 (7.2)†	1 (4.5)	<0.001
Agreed	5135 (98.3)	4226 (98.7)	233 (97.9)	158 (92.9)	71 (98.6)	166 (96.5)	106 (100.0)	77 (92.8)	21 (95.5)	
The module was organised and flowed in a logical sequence.										
Did not agree	93 (1.8)	70 (1.6)	5 (2.1)	4 (2.4)	1 (1.4)	5 (2.9)	0 (0.0)	5 (6.0)†	2 (9.1)†	0.02
Agreed	5130 (98.2)	4212 (98.4)	233 (97.9)	166 (97.6)	71 (98.6)	167 (97.1)	106 (100.0)	78 (94.0)	20 (90.9)	
The module improved my knowledge of the assessment and management of stillbirth risk factors.										
Did not agree	90 (1.7)	63 (1.5)	4 (1.7)	12 (7.1)†	1 (1.4)	3 (1.7)	1 (0.9)	5 (6.0)†	1 (4.5)	<0.001
Agreed	5,133 (98.3)	4,219 (98.5)	234 (98.3)	158 (92.9)	71 (98.6)	169 (98.3)	105 (99.1)	78 (94.0)	21 (95.5)	
The eLearning module encouraged me to reflect upon my knowledge and skills.										
Did not agree	107 (2.0)	72 (1.7)	6 (2.5)	9 (5.3)†	1 (1.4)	7 (4.1)†	2 (1.9)	8 (9.6)†	1 (4.5)	<0.001
Agreed	5116 (98.0)	4210 (98.3)	232 (97.5)	161 (94.7)	71 (98.6)	165 (95.9)	104 (98.1)	75 (90.4)	21 (95.5)	
The eLearning module was engaging and enjoyable.										
Did not agree	212 (4.1)	168 (3.9)	6 (2.5)	11 (6.5)	2 (2.8)	7 (4.1)	6 (5.7)	8 (9.6)	2 (9.1)	0.06
Agreed	5011 (95.9)	4114 (96.1)	232 (97.5)	159 (93.5)	70 (97.2)	165 (95.9)	100 (94.3)	75 (90.4)	20 (90.9)	
It was easy to access and use.										
Did not agree	176 (3.4)	145 (3.4)	4 (1.7)	7 (4.1)	0 (0.0)	9 (5.2)	3 (2.8)	6 (7.2)	1 (4.5)	0.12
Agreed	5047 (96.6)	4137 (96.6)	234 (98.3)	163 (95.9)	72 (100.0)	163 (94.8)	103 (97.2)	77 (92.8)	21 (95.5)	
Overall										
How likely are you to recommend the Safer Baby Bundle eLearning module to your work colleagues?¶										
1-3	241 (4.6)	183 (4.3)	8 (3.4)	18 (10.6)†	5 (6.9)	9 (5.2)	4 (3.8)	9 (10.8)†	2 (9.1)	0.002
4-5	4982 (95.4)	4099 (95.7)	230 (96.6)	152 (89.4)	67 (93.1)	163 (94.8)	102 (96.2)	74 (89.2)	20 (90.9)	
How likely are you to change any aspect of your clinical practice as a result of completing the Safer Baby Bundle eLearning module?¶										
1-3	587 (11.2)	454 (10.6)	15 (6.3)	40 (23.5)†	11 (15.3)	29 (16.9)†	11 (10.4)	15 (18.1)†	5 (22.7)	<0.001†
4-5	4636 (88.8)	3828 (89.4)	223 (93.7)	130 (76.5)	61 (84.7)	143 (83.1)	95 (89.6)	68 (81.9)	17 (77.3)	

Results presented as number (%). 'Did not agree': Strongly disagree/disagree/neutral. 'Agreed': Agree/strongly agree.
†Indicates the cells which were the largest contributors to statistically significant differences by profession (highest χ^2 contributions).
‡The total includes all professions whereas testing between professions excludes Doctor/medical officer.
§Fisher's exact test unless otherwise indicated.
¶On a scale of 1–5 where 1 = not likely at all and 5 = extremely likely.
††Pearson's χ^2 test for a difference by profession.

strategies to target engagement with certain groups of participants, such as rural and remote clinicians, and clinicians working with minority communities.

Clinical demands can present a significant barrier for maternity healthcare professionals to participate in continuing education. Compared to conventional face-to-face training, online learning can provide knowledge and skills required among multi-disciplinary healthcare professionals at relatively low cost and without geographical constraints.[18] Additionally, access to online learning allows for training in this area to continue, regardless of any restrictions to face-to-face education delivery imposed during the COVID-19 pandemic. It is anticipated this eLearning module will facilitate a standardised approach to guide maternity care providers to address important aspects of best practice care which are fundamental to achieving the goal of nationally reducing stillbirth rates.

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AUTHOR CONTRIBUTIONS

CA assisted in development of the study and prepared the manuscript. NM, SS, MW, DE, PM, BJ assisted in design of the study, reviewed the manuscript, and approved the final version. AG oversaw the development of statistical methods, reviewed the manuscript, and approved the final version. VF conceived the study and in consultation with the study investigators led the development of the study, reviewed the manuscript, and approved the final version.

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SUPPORTING INFORMATION

Additional supporting information may be found online in the Supporting Information section at the end of the article.

Table S1. Content outline of the Safer Baby Bundle eLearning module.

Table S2. Descriptive statistics for frequency of responses to perceived level of confidence and knowledge pre- and post-module (*N* = 5223).

Table S3. Number of each profession who 'agreed' with statements around knowledge and confidence pre- and post-module.

Table S4. Perceived suitability and acceptability of the Safer Baby Bundle eLearning module (*N* = 5223).

Figure S1. Safer Baby Bundle eLearning post-module survey questions