

The Effect of Printed Educational Material from the Coroner in Victoria, Australia, on Changing Aged Care Health Professional Practice: A Subscriber Survey

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There are substantial knowledge and research gaps about the effects of printed educational material on professional practice. This study has examined whether the Residential Aged Care Coronerial (RACC) Communiqué, an electronic newsletter of narrative case reports about lessons learned from deaths in residential aged care settings reported to the coroner in Victoria, Australia, prompted subscribers to initiate change in professional practice to improve care. An anonymous electronic survey was distributed to all registered subscribers of the RACC Communiqué to collect information about self-reported changes in professional practice, respondent characteristics, reading behavior, and an assessment of effect and content of the publication. Researchers from the Victoria Institute of Forensic Medicine, Victoria, Australia, conducted the study in 2008. Of 778 subscribers invited to participate in the study, 426 (54.8%) provided valid responses. The majority of respondents were aged 45 and older, female, and working at a residential aged care facility in a management role. Half of the survey respondents reported making a change to their professional practice as a result of reading the RACC Communiqué, with one-fifth of these respondents agreeing that they would not have made the self-reported change if they had not read this publication. These findings are greater than the previously reported small effects of education through printed education material and make an important contribution to understanding the use of printed education material for initiating professional practice change. *J Am Geriatr Soc* 58:585–591, 2010.

Key words: survey; coroner; education; behavior change; electronic communication

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Many older adults are vulnerable to adverse health outcomes and are likely to benefit from careful clinical care.¹ Residents of aged care facilities are particularly vulnerable, because the majority are aged 85 and older and have multiple comorbidities, with a significant portion experiencing dementia, physical disabilities, and general frailty.² In Australia, there are more than 150,000 permanent residents living in approximately 2,900 residential aged care facilities that receive recurrent government funding of \$5.3 billion per annum.²

Information about improving care and reducing clinical harm in residential aged care facilities is found in a diverse range of publications, including specialist college position statements,³ clinical scientific literature,⁴ newsletters from aged care accreditation agencies and private legal firms,^{5,6} guides to practice from government departments,⁷ and annual reports from statutory authorities such as the Office of the Aged Care Commissioner,⁸ the Health Department, and the coroner's office.⁹

In Australia, the coroner (similar to the coroner and medical examiner in the United States) investigates deaths that result from accidents, injury, or unexpected circumstances, as well as any healthcare-related deaths of residents in aged care facilities.¹⁰ Each year, approximately 15% of the 30,000 deaths per year in Victoria, a southern state of Australia, are reported to the coroner.¹¹ The results of coroners' investigations are a valuable source of information that could potentially be used to prompt health professional practice change to improve patient safety,¹² but achieving a change in professional practice requires overcoming challenges of dissemination and use of information.¹³

The Clinical Liaison Service¹⁴ of the Victorian Institute of Forensic Medicine publishes the Residential Aged Care Coronerial (RACC) Communiqué,¹⁵ a free electronic quarterly newsletter that uses a narrative case-study approach to report lessons learned from deaths in residential aged care settings investigated by the state Coroners' Office.¹⁶ The publication is designed for an aged care health profession target audience and focuses on a single clinical theme per issue.

There are substantial knowledge and research gaps regarding the effects of printed educational material¹⁷ and of audit and feedback on professional practice.¹⁸ The purpose of the current study was to determine whether the RACC Communiqué has prompted subscribers to initiate self-reported change in their professional practice to improve patient safety.

METHOD

Study Design and Setting

A population-based cross-sectional study design was employed, using an anonymous electronic survey distributed to all registered subscribers of the RACC Communiqué. A research team from the Victorian Institute of Forensic Medicine, in Melbourne, Victoria, Australia, conducted the project in 2008.

Survey Instrument

The study objectives and researcher knowledge of the residential aged care sector informed development of the survey instrument, which was based on frameworks that publications assessing readership opinion previously used.^{19,20} The final instrument was designed using the open-source Web-based application PHPSurveyor (now known as LimeSurvey)²¹ and externally reviewed for face validity.

The survey consisted of 38 questions in five sections designed to collect information about respondent characteristics, respondent preferences and reading behavior, respondent opinion about content, and effect of the RACC Communiqué, as well as details of any reported change in professional practice.

All questions were closed-ended, with two providing an option to make additional comments. A final three optional questions invited respondents reporting a professional practice change to provide their contact details if willing to participate in a future study. Other than these final optional questions, no identifying data were collected. The closed-ended questions were multiple choice (a single choice from several options), categorical (male or female), dichotomous (yes or no), and Likert-type questions, with the latter using 5-point rating scales ranging from 5 (strongly agree) to 1 (strongly disagree) or 5 (always) to 1 (never).

Study Population

The survey was sent electronically to all individuals who were registered subscribers of the RACC Communiqué at the time the study was conducted and for whom a valid e-mail address was available. A modified Dillman²² protocol was used to guide subscriber participation. Subscribers were contacted directly and asked to respond to the survey. Two weeks later, a follow-up reminder e-mail was sent to subscribers who had not responded, and a final reminder e-mail was sent after a further 2 weeks. Respondent anonymity was maintained and researcher blinding ensured by using the Web-based survey tool for collection and collation of data.

Data Analysis

Survey responses were downloaded and analyzed using SPSS version 15.0 (SPSS, Inc., Chicago, IL). Descriptive

statistics were used to summarize information about respondents, their reading behavior and preferences, their evaluation of the value and effect of the RACC Communiqué, and details of the nature of self-reported changes to practice. Respondent descriptors included age, sex, professional role, years of experience, practice setting, and level of contact with the state Coroner's Office. Respondent reading behavior and preferences included information about duration of subscription, whether they read every issue, amount of an issue read, and whether they read the RACC Communiqué in hard copy or electronically. Respondents' evaluation of the value and effect of the RACC Communiqué included ratings of individual subsections and an overall assessment of the readability, ease of understanding, and usefulness of the publication and whether it had a direct effect on practice. The nature of self-reported changes to practice included information about the type, scale, and perceived effect of the change on staff and residents.

Responses to questions answered along an ordinal 5-point Likert-scale were reported using the median and interquartile range and also described with dichotomous categories. The categories were determined using a conservative approach: "yes" consisted of 5 (strongly agree) and 4 (agree), whereas "no" was 3 (undecided), 2 (disagree), and 1 (strongly disagree).

Bivariate analysis was used to compare the characteristics of respondents who self-reported change in practice with the characteristics of those who did not. Characteristics including respondents' age, sex, professional role, years of experience, work setting, contact with the state Coroner's Office, and reading behavior were analyzed using the chi-square test, and odds ratios and 95% confidence intervals were calculated.

The internal reliability of the survey responses was assessed by calculating Spearman correlations for subitems within selected question and subitems between key questions about the respondents' reading behavior, effect of the RACC Communiqué, and reported change in professional practice.

Ethics

Approval for this study to proceed was obtained from the Victorian Institute of Forensic Medicine Research and Ethics Committee. Study participants were deemed to have given informed consent if they completed the survey.

RESULTS

The survey was implemented between May 1 and June 12, 2008. Of 778 RACC Communiqué subscribers invited to participate in the study, 426 (54.8%) provided valid responses, all of which were included in the analysis.

Respondent Characteristics

Descriptive demographic and professional characteristics of respondents are described in Table 1. The majority of survey respondents were aged 45 and older ($n = 314$, 73.7%), female ($n = 355$, 83.3%), and in professional roles of management ($n = 166$, 39.0%) or nursing ($n = 88$, 20.7%). Few respondents were medical practitioners ($n = 16$, 3.8%). Respondents most commonly reported their workplace set-

Table 1. Descriptive Characteristics of Survey Respondents (N = 426)

Characteristic	n (%)
Age	
< 34	22 (5.2)
35–44	90 (21.1)
45–54	207 (48.6)
≥55	107 (25.1)
Female	355 (83.3)
Professional role	
Nursing	88 (20.7)
Medicine	16 (3.8)
Management	166 (39.0)
Patient safety management	41 (9.6)
Allied health professional	11 (2.6)
Project officer or administrative officer	16 (3.8)
Education	27 (6.3)
Other	61 (14.3)
Experience in current professional role, years	
< 11	174 (40.8)
11–20	118 (27.7)
≥21	134 (31.5)
State or country	
Victoria	300 (70.4)
Another state or territory of Australia	116 (27.2)
Another country	10 (2.3)
Workplace setting	
Metropolitan residential aged care facility	140 (32.9)
Regional or rural residential aged care facility	115 (27.0)
Hospital	56 (13.1)
Federal or state government agency	33 (7.7)
Primary care (e.g., general practice, community nursing care)	14 (3.3)
Advisory body or advocacy service	17 (4.0)
Professional medical, nursing, or other health college	6 (1.4)
Quality or patient safety organization	6 (1.4)
University or other academic institution	9 (2.1)
Other	30 (7.0)
Primary affiliation of workplace	
Public sector	171 (40.1)
Not-for-profit and charitable sector	161 (37.8)
Private sector	76 (17.8)
Other	18 (4.2)
Practice setting	
Clinical (direct patient contact ≥1/week)	267 (62.7)
No direct contact	159 (37.3)
Level of contact with the state Coroner's Office	
High intensity (inquest)	38 (8.9)
Moderate intensity (reporting, statement, expert opinion)	95 (22.3)
Low intensity (contact not related to investigation of a death)	92 (21.6)
No contact	201 (47.2)

ting to be located in Victoria, Australia (n = 300, 70.4%), within the public or not-for-profit charitable sector (77.9%), and at a residential aged care facility (59.9%). Most reported having direct contact with patients at least once a week (n = 267, 62.7%). The majority of respondents

Table 2. Respondent Reading Behavior and Preferences (N = 426)

Characteristic	n (%)
Respondent reading behavior	
Subscriber for > 1 year	200 (46.9)
Read every issue received	389 (91.3)
Read all or almost all of the contents in an issue	389 (91.3)
Read hard copy (print it out)	242 (56.8)
Respondent preferences: regularly read the following subsections*	
Case summaries (500 words per case, 3 cases per issue)	417 (97.9)
Expert commentary (400 words per topic, 1–2 per issue)	407 (95.5)
Editorial	373 (87.6)
Additional information	372 (87.3)

* Sum of responses on 5-point Likert scale that stated always and most of the time.

had little or no contact with the state Coroner's Office (n = 293, 69%).

Respondent Reading Behavior and Preferences

Details of respondent reading behavior and preferences are provided in Table 2. Almost half of respondents were found to have subscribed to the RACC Communiqué for more than 1 year (n = 200, 46.9%). Most subscribers read every issue they received (91.3%), and most read the entire content of each issue (91.3%).

Respondent Evaluation of the Value and Effect of the RACC Communiqué

The respondents' evaluation of the value and effect of the RACC Communiqué is described in Table 3. Nearly all respondents agreed that the RACC Communiqué was easy to understand (88.0%) and clearly written (96.5%). Most respondents agreed or strongly agreed that the information provided in the publication is reliable (97.6%), useful (96.0%), and timely (88.0%).

The subsections of the publication that respondents regarded as most useful were the case summaries (97.9%) and the expert commentary (95.6%). Almost all respondents agreed that reading the RACC Communiqué was a valuable use of their time (96.5%) and would recommend the RACC Communiqué to colleagues (97.9%).

Reading the RACC Communiqué was reported to have provided most (93.7%) respondents with ideas for improving patient safety and clinical care, to have prompted a majority (69.2%) to review their practice, and to have prompted half (50.5%) to change their practice.

Self-Reported Changes to Practice

Two hundred fifty-one respondents reported making a change in their professional practice as a consequence of reading the RACC Communiqué (Table 4). The most frequently reported location for this self-reported change was residential aged care facilities (81.9%), with the focus of change most frequently reported being the clinical risk areas of physical restraint (28.8%), falls (32.6%), and choking (24.7%). Approximately half of the respondents made self-

Table 3. Respondent Evaluation of the Value and Effect of the Residential Aged Care Coronal Communiqué (N = 426)

Evaluation Criteria	n (%)	Median (25th–75th Percentile)
Information given in the Communiqué is*		
Clearly written using plain language	411 (96.5)	5 (5–5)
Is easy to understand	375 (88.0)	5 (4–5)
Timely	375 (88.0)	5 (4–5)
Reliable	416 (97.6)	5 (4–5)
Useful	409 (96.0)	5 (4–5)
The following sections of the Communiqué are useful*		
Case summaries	417 (97.9)	5 (5–5)
Expert commentary	407 (95.6)	5 (4–5)
Editorial	368 (86.4)	5 (4–5)
Additional information	362 (85.0)	4 (4–5)
Reading the Communiqué had the following effect†		
Resulted in changing my practice	215 (50.5)	4 (3–4)
Resulted in reviewing my practice	295 (69.2)	4 (3–5)
Provides ideas for improving patient safety and clinical care	399 (93.7)	5 (4–5)
Reading the Communiqué is a valuable use of my time†	411 (96.5)	5 (4–5)
Recommend the Communiqué to colleagues†	417 (97.9)	5 (5–5)

* Five-point Likert scale: 5 = always to 1 = never.

† Five-point Likert scale: 5 = strongly agree to 1 = strongly disagree.

reported changes that involved one work group (56.3%), and 33 (15.3%) made self-reported changes that involved four or more work groups. The self-reported changes involved multiple strategies, usually toward altering an existing initiative (87.4%), the most common being education and training (91.6%) and the least common being modifying staff attitude (57.7%). A majority of respondents reporting a change in practice considered that this had improved resident care (86.5%) and positively affected staff (86.5%), but fewer believed the change had affected organizational issues such as cost saving (43.7%).

Almost all respondents who had self-reported change in professional practice agreed that the RACC Communiqué contributed to promoting change because it raised awareness (98.6%), engaged with staff (82.8%), had authority (93.5%), included suggestions for improvement strategies (94.9%), and prompted staff to evaluate existing practice (93.5%). Three-quarters of respondents (158/215) who reported a change agreed that each of the five factors was important.

One-fifth of respondents (20.9%) reported that, if they had not read the RACC Communiqué, they would not have made the self-reported practice change at all, and more than half indicated that the change would have been delayed (54.4%) or limited in scope (52.1%).

Twenty-nine of the respondents who reported making a change in their professional practice (13.5%) indicated a willingness to participate in a future study to further investigate this change.

Table 4. Description of Self-Reported Changes in Professional Practice (N = 215)

Changes in Practice	n (%)
Workplace	
Residential aged care facility	176 (81.9)
Hospital	18 (8.4)
Primary care (e.g., general practice)	7 (3.3)
Other	14 (6.5)
Residential Aged Care Communiqué concern that stimulated the change	
Physical restraint	62 (28.8)
Falls	70 (32.6)
Choking	53 (24.7)
Interfaces of care	27 (12.6)
Consolidation	3 (1.4)
Who was involved in the practice change	
One work group (e.g., nurses only)	121 (56.3)
Two work groups (e.g., nurses and kitchen staff)	45 (20.9)
Three work groups (e.g., nurses, kitchen staff, pharmacists)	16 (7.4)
Four or more work groups	33 (15.3)
Strategies: nature of the change to practice	
Education and training	197 (91.6)
Policy, procedures, and protocols	169 (78.6)
Clinical practice	191 (88.8)
Evaluation of care	180 (83.7)
Documentation of practice	175 (81.4)
Improve staff attitude/morale	124 (57.7)
Environmental	132 (61.4)
The nature of the practice change was	
Introduce a new initiative	67 (31.2)
Alter an existing initiative	188 (87.4)
Discontinue an existing initiative	70 (32.6)
The practice change has affected*	
Resident care (e.g., reduced pain and suffering, better quality of life, reduced exposure to potential harm)	186 (86.5)
Staff (e.g., safer practice, staff retention, standardize practice, increased confidence)	186 (86.5)
Organization (e.g., shortened length of stay, reduced readmission, cost saving)	94 (43.7)
The Communiqué directly contributed to the change in practice because*	
It raised awareness	212 (98.6)
It assisted in engaging staff	178 (82.8)
of the authority of the publication	201 (93.5)
It suggested improvement strategies	204 (94.9)
It prompted to staff evaluating their existing practice	201 (93.5)
If the Communiqué had not been available, the change in practice would have*	
Occurred anyway	82 (38.1)
Been delayed	117 (54.4)
Been limited in reach	112 (52.1)
Not have occurred	45 (20.9)

* Sum of responses on 5-point Likert scale that stated strongly agree and agree.

Factors associated with respondents changing their practice are described in Table 5. Self-reported professional practice change was found to be associated with having patient contact, working in management, working in a residential aged care facility (especially if located outside the

Table 5. Characteristics of the Respondents Who Did (n = 215) and Did Not (n = 211) Report a Change in Their Professional Practice

Characteristic	n (%)		Total	Odds Ratio (95% Confidence Interval)
	Did Not Change Practice	Changed Practice		
Age				
All respondents excluding the group of interest				1.00
< 34	10 (45.5)	12 (54.4)	22	1.19 (0.51–2.75)
35–44	45 (50.0)	45 (50.0)	90	0.98 (0.61–1.55)
45–54	94 (45.4)	113 (54.6)	207	1.37 (0.94–2.02)
≥ 55	62 (57.9)	45 (42.1)	107	0.64 (0.41–0.99)*
Sex				
Male	38 (53.5)	33 (46.5)	71	1.00
Female	173 (48.7)	182 (51.3)	355	1.21 (0.73–2.01)
Professional role				
All respondents excluding the group of interest				1.00
Nurse	46 (52.3)	42 (47.7)	88	0.87 (0.54–1.39)
Medical	11 (68.8)	5 (31.2)	16	0.43 (0.15–1.22)
Other health professional	9 (50.0)	9 (50.0)	18	0.98 (0.39–2.45)
Patient safety management	16 (39.0)	25 (61.0)	41	1.60 (0.84–3.07)
Management	68 (41.0)	98 (59.0)	166	1.76 (1.19–2.61)†
Other	61 (62.9)	36 (37.1)	97	0.49 (0.31–0.79)
Clinical contact				
No patient contact	94 (59.1)	65 (40.9)	159	1.00
Patient contact (≥ 1/week)	117 (43.8)	150 (56.2)	267	1.85 (1.25–2.76)†
Funding				
Public sector	88 (51.5)	83 (48.5)	171	1.00
Not-for-profit and charitable sector	71 (44.1)	90 (55.9)	161	1.34 (0.87–2.07)
Private sector	39 (51.3)	37 (48.7)	76	1.01 (0.59–1.72)
Other	13 (72.2)	5 (27.8)	18	0.41 (0.15–1.15)
Location				
Other	77 (67.0)	38 (33.0)	115	1.00
Metropolitan residential aged care facility	60 (42.9)	80 (57.1)	140	2.70 (1.62–4.50)†
Regional rural residential aged care facility	44 (38.3)	71 (61.7)	115	3.27 (1.91–5.61)†
Hospital	30 (53.6)	26 (46.4)	56	1.76 (0.92–3.36)
Experience				
All respondents excluding the group of interest				1.00
< 10 years	93 (53.4)	81 (46.6)	174	0.77 (0.52–1.13)
11 to 20 years	58 (49.2)	60 (50.8)	118	1.02 (0.67–1.56)
> 21 years	60 (44.8)	74 (55.2)	134	1.32 (0.88–1.99)
Level of contact with state Coroner's Office				
No contact	147 (50.2)	146 (49.8)	293	1.00
Involved in a death investigation	64 (48.1)	69 (51.9)	133	1.09 (0.72–1.63)
Subscriber characteristics				
< 1 years subscriber‡	91 (45.5)	109 (54.5)	200	1.00
> 1 years subscriber‡	104 (53.3)	91 (46.7)	195	0.73 (0.49–1.08)
Do not read every issue	26 (70.3)	11 (29.7)	37	1.00
Read every issue received	185 (47.6)	204 (52.4)	389	2.61 (1.27–5.35)*
Do not read all or almost all of issue	28 (75.7)	9 (24.3)	37	1.00
Read all or almost all of issue	183 (47.0)	206 (53.0)	389	3.50 (1.63–7.49)†
Read hard copy	102 (42.1)	140 (57.9)	242	1.00
Read electronic copy	109 (59.2)	75 (40.8)	184	0.50 (0.34–0.74)†

P ≤ *.05. † .005. ‡ Values do not total 426 because of missing values.

metropolitan area), frequency of reading the RACC Communiqué, and quantity of each issue read. An unexpected finding was that being in a patient safety management role was not associated with self-reported change in practice, nor was years of experience or level of contact with the state Coroner's office. Subscribers who read every issue they received (odds ratio (OR) = 2.61, 95% confidence interval (CI) = 1.27–5.35) and read the entire issue were more likely to change (OR = 3.50, 95% CI = 1.63–7.49). The internal reliability of the survey was found to be moderate, with Spearman correlation coefficients ranging from 0.30 to 0.76 on the subitems within and between selected questions.

DISCUSSION

This survey-based study has sought to determine whether reading the RACC Communiqué, an electronic newsletter from the state Coroners' Office written for an aged care health profession target audience, prompted subscribers to initiate change in their professional practice to improve patient safety. The study found that half of the survey respondents reported making a change to their professional practice as a result of reading the RACC Communiqué, with one-fifth of these respondents agreeing that this self-reported change would not have occurred if they had not read the publication. Therefore, the most conservative estimate of the effect of RACC Communiqué on change is approximately 10%.

This is a surprising result in light of the previously reported small effects of education through printed education material¹⁷ and the moderate effects of audit and feedback on change to practice.²³ Another survey-based study investigating the effect of a different newsletter from the Victorian state Coroner's Office that reports case studies of deaths in the acute healthcare sector, the Coronial Communiqué, found that only 41.6% of survey respondents reported making a change to their professional practice as a result of reading the publication.²⁴ The different findings about the effectiveness of these two publications to promote self-reported change may be because of differences in newsletter content, the target audience, the setting of case studies, or the survey instruments used to assess self-reported change. To the authors' knowledge, this study of the RACC Communiqué is the first to provide empirical evidence that an electronic publication describing lessons learned from case studies of deaths in an aged care setting in Australia has led to self-reported change in the professional practice of subscribers.

Potential sources of error in this study are related to the validity of self-reported practice change and to responder bias, both of which are likely to lead to an overestimation of the effect of the RACC Communiqué on practice change. Ideally, validation of self-reported change through external objective evaluation of the change to practice would strengthen the evidence base of this study, although the willingness of 29 of 215 (13%) respondents who had reported change to participate in a future study to investigate this in detail using a dose-response relationship between frequency and quantity of the RACC Communiqué read and the frequency of responses to questions evaluating the effect of the publication (provision of ideas (93.7%), to review practice (69.2%), to change practice (50.5%)) that

are consistent with recognized stages of behavior change supports the validity of the results.²⁵

Responder bias is likely to have occurred if respondents and nonrespondents differed in relation to the study question. RACC Communiqué subscribers who have made self-reported changes to practice may be overrepresented among respondents. The subscriber list and the anonymous approach to the study did not permit a comparison of characteristics of respondents and nonrespondents. Although the participant rate of 55% for this survey is consistent with the experiences of other research studies and better than expected given the widespread decline in response rates for all types of surveys,²⁶ future surveys should consider adopting multiple alternative methods to increase survey response rate.

The survey respondents were older (≥ 45 ; 73.7% vs 40.1% in the workforce) and predominantly female (83.3% vs 94.0% in the workforce) and had proportionately fewer nurses (20.7% vs 34.6% in the workforce) than the Australian healthcare workforce in 2004.²⁷ Much less is known about the composition of non-nursing staff in residential aged care in Australia,²⁸ such as managers (who made up 39% of the sample) and are likely to be overrepresented.

Survey questions also explored responder reading behavior, preferences, and evaluation of the value and effect of the RACC Communiqué and compared respondents who made self-reported practice change with those who did not. Respondents who reported making a change in professional practice were more likely to have contact with patients at least once a week, to work in management, to work in a residential aged care facility, and to read almost all and every issue of the RACC Communiqué they received than were those who did not report making a change in practice. Most respondents who had made a self-reported practice change agreed that the RACC Communiqué contributed to change because it increased awareness, engaged staff, had authority, suggested improvement strategies, and stimulated an evaluation of practice. The subsections of the publication that respondents regarded as most useful were the case summaries and the expert commentary, although these findings reveal little about the circumstances precipitating the self-reported change by individual respondents or of features of the RACC Communiqué that were most influential.

As expected, the majority of self-reported changes concerned modifying existing initiatives, with the more commonly selected strategies such as education and training or policy changes likely to be easier to implement than environmental changes. An unexpected finding was that the professional role of "manager" was significantly associated with change. It may be that these respondents have dual clinical and management roles, which is common in Australia because the majority of facilities are relatively small (usually <100-bed capacity).

This survey did not include measures of sustainability, an important omission in a study about change because practice change cannot be solely examined as being present or absent, with the sustainability of change being of equal significance. Methodological concerns regarding the measuring of sustainability of change in a residential aged care setting are complex,²⁹ but it is important that this issue be addressed in future.

Further research, ideally using an analytical design, is required to better elucidate the relationship between the RACC Communiqué and changes to practice, validate self-reported change, clarify the relative importance of factors that enhance the RACC Communiqué capacity for prompting change, and determine whether changes to practice are sustainable.

This study has shown that an electronic educational publication from the coroner prompted self-reported change to professional practice. These findings make an important contribution to better understanding the use of printed education material for initiating professional practice change.

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Conflict of Interest: Potential conflict: Joseph E. Ibrahim is the founding and current editor of the RACC Communiqué.

Author Contributions: JEI conceived the study and led the design of the survey instrument and manuscript preparation. JPE contributed to the design of the survey, created the online survey, implemented the data collection protocols, analyzed the data, and contributed to the preparation of the manuscript. JAM contributed to substantial revision and the preparation of the manuscript.

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REFERENCES

- Fried LP. Establishing benchmarks for quality care for an aging population: Caring for vulnerable older adults. *Ann Intern Med* 2003;139:784–786.
- Australian Institute of Health and Welfare 2007. *Older Australia at a Glance*. Cat. no. AGE 52, 4th Ed. Canberra: AIHW, pp 134–136.
- Scherer S. (ed). *Position Statement 9: Medical Care for People in Residential Aged Care Services*. Australian Society for Geriatric Medicine, 8th October 2001 [on-line]. Available at http://www.anzsgm.org/pdfdocs/position_statements/PositionStatementNo09.pdf Accessed September 15, 2009.
- Corrigan JM, Donaldson MS, Kohn LT et al. *Crossing the Quality Chasm: A New Health System for the 21st Century*. Washington, DC: Committee on Quality of Health Care in America, Institute of Medicine, National Academy Press, 2001.
- Aged Care Standards and Accreditation Agency Ltd. *The Standard*, 2008 [on-line]. Available at <http://www.accreditation.org.au/about-us/the-standard/> Accessed December 18, 2008.
- Russell Kennedy Pty Ltd. *Health and Aged Care Newsletter - Winter 2008* [on-line]. Available at <http://www.rk.com.au/pages/newsletters.asp?ID=11&archive=no#85> Accessed December 18, 2008.
- Australian Government Department of Health and Ageing. *Gastro-Info Gastroenteritis Kit for Aged Care: Resources to assist residential aged care homes in preventing, identifying & managing outbreaks of gastroenteritis*, 2008 [on-line]. Available at <http://www.health.gov.au/internet/main/publishing.nsf/Content/ageing-publicat-gastro-kit.htm> Accessed December 18, 2009.
- Aged Care Commissioner. *Annual Report, 1 July 2007–30 June 2008*, 2008 [on-line]. Available at <http://www.agedcarecommissioner.net.au/pdf/07-08-annual-report.pdf> Accessed December 18, 2008.
- Western Australian Department of Health: Office of Safety and Quality in Health Care. *From Death we learn: Lessons from the Coroner*. 2006 [on-line]. Available at http://www.safetyandquality.health.wa.gov.au/docs/mortality_review/From_Death_We_Learn2006.pdf Accessed December 18, 2008.
- State Coroner's Office of Victoria. *About the State Coroner's Office*. 2009 [on-line]. Available at <http://www.coronerscourt.vic.gov.au/wps/wcm/connect/Coroners+Court/Home/About+Us/> Accessed September 15, 2009.
- Australian Bureau of Statistics, 2009. *Causes of Death, Australia, 2007: Technical Note 2 Coroner Certified Deaths*. Cat. no. 3303.0 [on-line]. Available at [http://www.ausstats.abs.gov.au/ausstats/subscriber.nsf/0/0704E1206AE55EB5CA25757C00137C46/\\$File/33030_2007.pdf](http://www.ausstats.abs.gov.au/ausstats/subscriber.nsf/0/0704E1206AE55EB5CA25757C00137C46/$File/33030_2007.pdf) Accessed September 15, 2009.
- Hanzlick R, Parrish R. The role of medical examiners and coroners in public health surveillance and epidemiological research. *Annu Rev Public Health* 1996;17:383–409.
- Bero LA, Grilli R, Grimshaw JM et al. Getting research findings into practice: Closing the gap between research and practice: An overview of systematic reviews of interventions to promote the implementation of research findings. *BMJ* 1998;317:465–468.
- Bohensky M, Ibrahim JE, O'Brien AJ et al. World without borders: Integrating clinical perspectives into the coronial jurisdiction in Victoria, Australia. *Med Law* 2006;25:13–29.
- Ibrahim JE, Nay R. Residential Aged Care Coronal Communiqué. Clinical Liaison Service, State Coroner's Office, Victorian Institute of Forensic Medicine, Southbank, Victoria, Australia [on-line]. Available at <http://www.vifm.org/communiqu.html> Accessed January 30, 2010.
- Ibrahim JE, Davies Z, Nay R. Residential Aged Care Coronal Communiqué. *Australas J Ageing* 2007;26:205–205.
- Farmer AP, Légaré F, Turcot L et al. Printed educational materials: Effects on professional practice and health care outcomes. *Cochrane Database Syst Rev* 2008. Issue 3. Art. no.: CD004398. doi: 10.1002/14651858.CD004398.pub2.
- Pattinson RC, Say L, Makin JD et al. Critical incident audit and feedback to improve perinatal and maternal mortality and morbidity. *Cochrane Database of Systematic Reviews* 2005. Issue 4. CD002961.
- Agency for HealthCare Research and Quality. *Patient Safety Culture Surveys, 2007* [on-line]. Available at <http://ahrq.gov/qual/hospculture/> Accessed January 10, 2010.
- Zimmer BP, Shriner JA, Scheer SD. Use and evaluation of a statewide 4-H volunteer newsletter. *J Exten* 2006;44.
- Open source. *PHPSurveyor*, 2007 [on-line]. Available at <http://www.limesurvey.org/> Accessed January 10, 2010.
- Dillman DA. *Mail and Telephone Surveys: The Total Design Method*. New York: J Wiley, 1999.
- Jamtvedt G, Young JM, Kristoffersen DT et al. Audit and feedback: effects on professional practice and health care outcomes. *Cochrane Database of Systematic Reviews* 2006. Issue 2. CD000259.
- Ibrahim JE, Ehsani JP. The impact of the Coronal Communiqué on changing patient safety: A subscriber survey. *Aust Health Rev* 2009;33:583–591.
- Prochaska J, DiClemente C. Stages and processes of self-change in smoking: Toward an integrative model of change. *J Consult Clin Psychol* 1983;51:390–395.
- Tourangeau R. Survey research and societal change. *Annu Rev Psychol* 2004;55:775–801.
- Richardson S, Martin B. *The Care of Older Australians. A Picture of the Residential Aged Care Workforce*. Adelaide: The National Institute of Labour Studies, Flinders University, Australia, 2004.
- Healy J, Richardson S. *Who Cares for the Elders? What We Can and Can't know from Existing Data*. Adelaide: The National Institute of Labour Studies, Flinders University, Australia, 2003.
- Shediach-Rizkallah MC, Bone LR. Planning for the sustainability of community-based health programs: Conceptual frameworks and future directions for research, practice and policy. *Health Educ Res* 1998;13:87–108.