RESEARCH PAPER

The Career Development Year: Responding to the emergency nursing shortage in Australia

Julia Morphet, RN, MN (Education)^a, Lisa McKenna, RN, PhD, MRCNA^{b,*}, Julie Considine, RN, PhD, FRCNA^c

^a School of Nursing and Midwifery, Monash University, Clinical Nurse Educator, Emergency Department, Southern Health, Australia

^b Senior Lecturer, School of Nursing and Midwifery, Monash University, Peninsula Campus, Frankston, Australia

^c Senior Research Fellow, Deakin University/Northern Health, Australia

Received 5 April 2007; received in revised form 14 November 2007; accepted 15 November 2007

KEYWORDS

Career Development Year;
Emergency nursing;
Recruitment;
Retention

Summary

Background: The Career Development Year (CDY) is a 12 month supported entry program at one health care service in Victoria, Australia. The program targets Division One Registered Nurses with little or no emergency nursing experience. The intent of CDY is to improve recruitment to, and retention in, emergency nursing by educational and experiential preparation for emergency nursing practice.

Method: This study used a retrospective exploratory design to examine recruitment and retention of emergency nurses recruited via CDY ($n = 72$) and compare these findings with recruitment and retention data for a cohort of non-CDY participants ($n = 15$). CDY data was collected by self-report questionnaires. Descriptive statistics, correlations and inferential statistics were calculated using SPSS.

Results: CDY was found to promote recruitment of novice nurses to emergency nursing, with almost half the respondents ($n = 25$, 48.1%) reporting they would not have entered emergency nursing were it not for the supported entry program. Further, comparison with non-CDY participants revealed that CDY promoted retention within emergency nursing, with both short-term ($n = 47$, 90.4% vs. $n = 8$, 53.4%) and long-term retention doubling ($n = 50$, 96.1% vs. $n = 7$, 46.6%) following the introduction of CDY.

Conclusion: CDY was a valuable recruitment tool and successful retention strategy in the ED. Future research using a larger sample may demonstrate potential applicability to other clinical areas.

Crown Copyright © 2007 Published by Elsevier Ltd on behalf of College of Emergency Nursing Australasia Ltd. All rights reserved.

* Corresponding author.

Introduction

The Career Development Year (CDY) was developed at one health care service in Victoria, Australia¹ to address a shortage of experienced emergency nurses. Much has been published on the effect of supported entry programs on recruitment,^{2–10} however little is known about the effect of supported entry programs on long-term retention in emergency nursing. Supported entry programs are resource intensive and costly to individuals, organisations and health care systems. It is, therefore, important that outcomes such as recruitment and short and long-term retention are evaluated in a rigorous manner to examine the sustainability of CDY.

The aim of this study was to examine the recruitment and retention of CDY participants, and compare this data with historical recruitment and retention data from a cohort of novice emergency nursing staff employed in 1999 (hereafter referred to as non-CDY participants).

Literature Review

The nursing shortage is well documented^{11–15} and has had a significant impact on emergency nursing.^{16–19} A shortage of appropriately skilled, experienced emergency nurses raises significant health care system issues including: (i) an exponential increase in the potential for error, resulting in reduced patient safety and quality of care,²⁰ (ii) staff burnout as experienced nurses are consistently allocated to areas of high acuity such as triage and resuscitation cubicles¹⁵ and (iii) budget blow-outs as casual nurses are used to cover gaps in rosters.²¹ The shortage of emergency nurses also has wider implications as other areas of nursing are targeted as a potential source of new emergency nurses.²² The result of recruitment of emergency nurses from other practice domains may be the transfer of the nursing shortage to areas that support emergency department (ED) function. For example, staff shortages on inpatient units causes 'bed block' (a lack of available inpatient ward beds), overcrowding EDs and further increasing already challenging emergency nursing workloads.²³

Initiatives to increase recruitment, retention and professional development in emergency nursing have been developed to address the shortage of emergency nurses and minimise the gap between specific requirements for speciality practice and obstacles to speciality preparation. Although there are a number of factors that contribute to the nursing shortage (staffing levels, working conditions, organisational values and culture), this literature review will focus on supported entry programs which offer incentives such as extended orientation and education are such initiatives. Key features of supported entry programs that target emergency nurses include: (i) extended orientation,^{4,7} (ii) preceptorship^{2,4,10,24,25} and (iii) education.^{1,2,5,7,24–26} Variations exist in both program structure and length of time to complete each program (from four weeks to two years) and while some programs were reported to have been conducted only once, others were an ongoing concern. Only one supported entry program had been reported in the Australian emergency nursing context.¹

Supported entry programs can be time consuming and costly to both individuals and organisations, therefore outcome measures that demonstrate their worth are important. Outcomes for supported entry programs reported to date include recruitment, retention and professional development. A variety of research methods have been used to determine outcome measures including Likert scale questionnaires, open-ended questions, focus groups and semi-structured interviews.^{1,4,10}

To date, recruitment outcomes have varied from five²⁶ to 24¹⁰ emergency nurses recruited via supported entry programs. Although such recruitment success is essential, it is also important to examine retention as a longer term outcome of supported entry programs. Many US retention studies report greatest staff turnover in the first six to twelve months of employment,^{3,8} with attrition rates reported to be as high as 92% in the first twelve months in specialty units.⁴ Several authors claim that supported entry programs are "successful in recruiting and retaining skilled, confident, professional emergency nurses"² [p. 103] and an "excellent retention strategy".²⁴ [p. 48] However, retention outcomes have been inconsistently reported and often rely on anecdotal evidence to substantiate claims of increased retention as a direct result of supported entry programs.^{2,4,5,24,26}

Authors from Australia,¹ Canada¹⁰ and the US^{2,5,26} have reported retention success from their supported entry programs. Yet to date, long-term (greater than twelve month) retention has been poorly evaluated and reported in the nursing literature. Considine and Hood¹ and Gurney⁵ are the only authors who measured long-term retention, with greater than 90% of program participants retained up to four years after the introduction of supported entry programs in emergency nursing. However, it is important to recognise that other factors may have contributed to these results. For example, Gurney⁵ implemented a two year employment contract for all staff entering the program which is likely to have increased the two year retention rate (reported to be 93% [$n=13$]). Several other authors describe the use of employment contracts that require program participants to remain in the organisation for six months to two years.^{5,7,24}

Although a number of positive outcomes related to supported entry programs have been reported in emergency nursing, many of the studies published to date have significant methodological limitations. The majority of studies were conducted at a single site.^{1,2,4,5,7,10,24–26} Both Considine and Hood¹ and Emde²⁶ report studies on supported entry programs that ran concurrently at two or more sites, yet the reported program evaluation was single site only. Single site evaluation does not allow for extrinsic factors which may contribute to the success of the program, such as unit or organisational culture and facilities. Also, many of the studies reported relied on small samples: between three and sixteen participants,^{2,4,7} which limits the generalisability of results across the population.²⁷

Despite these limitations, the combined data from the studies reviewed thus far indicates that orientation, preceptorship and education programs improve recruitment and short-term retention of emergency nursing staff. To ensure the ongoing support of such expensive and time consuming programs, it is vital that they are rigorously evaluated not

only for recruitment and short-term retention, but also for long-term retention outcomes.

Methodology

Program design

The CDY was developed in 2000 by the ED Clinical Nurse Educators at Dandenong Hospital¹ and was implemented at Monash Medical Centre Clayton in 2002. CDY is a 12 month supported entry program that targets Division One Registered Nurses with little or no emergency nursing experience. Participants have a structured orientation to the ED including one week of supernumerary time and two weeks at a reduced clinical load. CDY includes 10 study days that include the following content: adult assessment and management of respiratory distress, chest pain, altered conscious state, abdominal pain, limb injury and vaginal bleeding, paediatric assessment and management of respiratory distress, febrile illness, dehydration, child protection issues, ECG interpretation, psychiatric emergencies, aggression management, trauma, legal issues and Basic and Advanced Life Support.

Outcomes

This study had three major outcomes: recruitment to emergency nursing, retention in emergency nursing, and professional development of CDY participants. For the purpose of this study, recruitment was defined as employment of Registered Nurses with no previous emergency experience into the specialty of emergency nursing. Short-term retention was defined as completion of the twelve month CDY program, while long-term retention was defined as those nurses who remained in the specialty of emergency nursing greater than one year after commencing employment, either within or external to the original CDY site. For the purpose of this paper, only the recruitment and retention outcomes will be reported.

Design

A retrospective exploratory design was used to examine the relationship between CDY and recruitment to, and retention in, emergency nursing from two campuses of one health care service in Victoria, Australia. The research setting was the EDs of a large Melbourne metropolitan health care service which provides services to a population of greater than 700,000 people. ED 'A' treats 45,000 patients annually and ED 'B' treats 53,000 patients annually.

Participants in this study completed a questionnaire on their perceptions of CDY, likelihood to have entered emergency nursing without CDY and the influence of CDY over their current employment choice. Recruitment and retention data for CDY participants were compared with historical recruitment and retention data of non-CDY participants, novice emergency nurses employed at ED 'A' in 1999, prior to the inception of CDY. Historical employment data for ED 'A' was obtained through archived rosters from 1999. Non-CDY participants were recruited from 1999 as all

novice emergency nurses employed to the ED following the introduction of CDY were employed into the CDY program.

Participants

The convenience sample comprised all CDY participants from 2000–2004 ($n = 72$) which was the duration over which the course had been offered, all of whom were invited to participate in the study. The questionnaire return rate was 72.2% ($n = 52$). There were 34 CDY participants from ED 'A' and 18 participants from ED 'B'. Given that ED 'A' had more CDY participants ($n = 43$ vs. $n = 29$), this disparity was not unexpected.

Reliability and validity of data collection tools

The CDY questionnaire developed by the researcher combined 5-point Likert scale questions with fixed response questions and open-ended questions. The questionnaire consisted of three sections, collecting data related to (i) participants' characteristics, including areas of nursing experience prior to entering CDY, (ii) participants' experience of CDY, including likelihood to have entered emergency nursing without CDY and years spent in emergency nursing after CDY and (iii) current nursing practice, including the influence of CDY over their current employment choice.

Questionnaire validity was established by content and research expert panel review. Reliability was established by undeclared piloting of the questionnaire on a group of current CDY participants, not involved in the study. Results of the pilot study indicated strong agreement in interpretation of questions; with similar answers and non-answers given (as expected given that this sample had not yet completed the CDY program).

Data collection/procedure

The questionnaire and an explanatory statement were sent to each potential participant inviting them to participate in the study. Self-addressed envelopes were provided to facilitate return of the questionnaire. Recruitment and retention data for the non-CDY participants was collected via archived rosters and through discussions with ED management.

Ethical considerations

Participation in the study was voluntary, and responses anonymous. In this study consent was implied by return of the questionnaire. Ethical clearance to conduct the research was sought and obtained from relevant hospital and university ethics committees.

Data analysis

Each item response was entered into the Statistical Package for Social Sciences (SPSS) 14.0 data file for cross-tabulation analysis to allow for differences between the groups to be identified. Descriptive statistics were used to summarise the study data. CDY data was compared with non-CDY data to determine variations in recruitment and retention since the

introduction of CDY. Nominal and ordinal data were compared using non-parametric tests.²⁸ Content analysis was used to identify themes in the responses of the qualitative open-ended questions.

Results

A total of 52 emergency nurses participated in the study giving a response rate of 72.2%. There were 34 participants from ED 'A' and 18 participants from ED 'B'.

Participants' characteristics

The majority of participants were female ($n=44$, 84.6%), half were aged between 26 and 30 years ($n=29$, 55.8%) and a further one quarter were aged between 21 and 25 years ($n=12$, 23.1%). More than half of the participants ($n=27$, 51.9%) had only one year of post-registration nursing experience and a further third ($n=17$, 32.7%) had less than three years post registration nursing experience prior to commencing CDY. Only eight participants (15.4%) had more than four years post registration nursing experience prior to commencing CDY.

The majority of respondents reported having medical ($n=40$, 76.9%) and surgical ($n=45$, 86.5%) experience prior to commencing in the CDY program (Table 1). A small number of participants had worked in paediatrics ($n=12$, 23.0%) or anaesthetics/recovery ($n=13$, 25.0%) prior to undertaking CDY. Other specialty experience prior to CDY included; coronary care, high dependency, geriatrics, psychiatry, mid-wifery and theatre. This experience was generally gained during a graduate year rotation. Four participants (7.7%) reported a four-month graduate year rotation in the ED and nine respondents (17.3%) reported having an undergraduate ED rotation.

Recruitment

Between February 2000 and August 2004, a total of 72 novice emergency nurses were recruited to the CDY program: 43 nurses were recruited to CDY at ED 'A' and 29 nurses were recruited to CDY at ED 'B'. ED 'B' had no CDY participants in 2000 and 2001 because the program did not commence until 2002 at that site.

CDY was found to have had a positive impact on recruitment. Almost half the participants ($n=25$, 48.1%) reported that they would not have entered emergency nursing without the CDY. Participants were unanimous in agreement that

CDY was an effective entry point into emergency nursing ($n=52$, 100%) and the majority agreed that CDY provided supported orientation to the ED ($n=51$, 98.1%). Participants reported the following reasons for participation in CDY: clinical support ($n=52$, 100%), orientation ($n=48$, 92.3%), study days ($n=42$, 80.8%), camaraderie ($n=23$, 44.2%), good entry point ($n=10$, 19.2%), education ($n=8$, 15.4%) and clinical progression ($n=5$, 9.6%).

Participants identified reasons that may adversely effect recruitment to emergency nursing in the absence of supported entry programs as: inexperience ($n=23$, 44.2%), lack of knowledge ($n=23$, 44.2%) and lack of confidence ($n=20$, 38.5%).

Retention

Short-term retention was found to be 90.4% ($n=47$) for CDY participants and 53.4% ($n=8$) for non-CDY participants. Long-term retention of CDY participants was 96.1% ($n=50$) and 46.6% ($n=7$) for non-CDY participants (Fig. 1). It is important to note that long-term retention of participants was greater than short-term retention. This is because short-term retention was measured in terms of staff who completed the CDY program, while long-term retention was measured in terms of staff who remained in emergency nursing great than one year, regardless of the geographical location.

Participant perceptions of retention

Forty seven participants (90.3%) reported that CDY prepared them for a career in emergency nursing. Forty five participants (86.5%) reported that CDY was the intervention which encouraged them to remain in emergency nursing and 43 participants (82.6%) reported feeling that they were valued members of the ED team.

Participant expectations of CDY and retention

To ascertain if meeting participant expectations enhances retention, participants' expectations were examined and compared with retention. Participants reported their expectations of CDY included supported orientation ($n=48$, 88.8%), clinical support ($n=52$, 96.2%) and study days ($n=42$, 80.7%). The majority of participants ($n=39$, 75%) reported their expectations were met by the CDY program. However there was no significant difference in the retention of those who reported their expectations were met versus those who reported their expectations were not met,

Table 1 Participants' nursing experience prior to CDY

Type of experience	CDY Participants ($n=52$)	
	<i>n</i>	%
Surgical	45	86.5
Medical	40	76.9
Anaesthetics/Recovery	13	25.0
Paediatrics	12	23.1
Other	27	51.9

Figure 1 Participant retention.

with long-term retention of 97.4% ($n = 38$) and 92.3% ($n = 12$) respectively.

The reasons cited by participants for leaving emergency nursing were; workload ($n = 4$), workplace stress ($n = 4$), lack of ED support ($n = 4$), personal reasons, including international travel and parenting ($n = 5$), shiftwork ($n = 2$) and preference for another clinical environment ($n = 1$).

Discussion

Study characteristics

This is the first study to explore long-term effects of a supported entry program on recruitment and retention of emergency nurses. With 52 participants, it is the largest identified study of its kind both in Australia and internationally.

Participants' characteristics

The relative youth and inexperience of participants was expected given that CDY was aimed at novice emergency nurses, and is in keeping with other emergency nursing recruitment and professional development studies.^{2,4,7,10,24,26} Given the predominance of females in nursing it was also expected that the majority of participants were female.

Recruitment outcomes

CDY was a successful recruitment strategy, with unanimous agreement that CDY was an effective entry point to emergency nursing. Further, half the participants reported they would not have entered emergency nursing without the supported entry program. An important element in recruitment of staff involves orientation of new employees with the clinical environment.^{4,29} While success is evident by the majority of participants reporting that CDY provided them with supported orientation, an important benefit of CDY is the streamlining of orientation, with a large number of participants orientated to the department by a single Clinical Nurse Educator, thus reducing the cost burden. By comparison, each of the fifteen non-CDY participant's commenced employment in the ED on different days, equating to 120 hours of Clinical Nurse Educator time spent orientating them.

Retention

Having established that CDY is an effective recruitment strategy for novice emergency nurses, it is important to examine whether these nurses remain in emergency nursing. A comparison of both short-term and long-term retention of CDY participants with non-CDY participants reveals a doubling in retention of participants following CDY and suggests that high retention follows the introduction of CDY, and is not intrinsic to the ED. The dramatic and significant increase in both short-term and long-term retention of CDY participants is an important finding.

The majority of participants regard CDY to be the intervention which prompted them to remain in emergency

nursing. Further supporting the premise that CDY promoted retention of emergency nurses, was the finding that the majority of participants perceived that CDY prepared them for a career in emergency nursing and that they were valued members of the ED team. Adequate preparation for a specialty unit^{3,4,8,9,30,31} and feeling like a team member³² are reported to enhance retention.

Although the attrition of CDY participants was low, reasons for attrition were identified to establish if changes to delivery of CDY could further reduce the attrition rate. 'Personal reasons' was the most frequently indicated response which was a positive sign for department managers and coordinators of the CDY, as it implied that most participants left for reasons outside the control of department managers and CDY coordinators (for example travel and parenting). Workload, workplace stress and lack of support were each identified by four respondents, with no clear indication as to whether these were as significant in attrition as personal reasons.

The expectations of CDY which were most reported by participants were the provision of orientation, clinical support and education. These same three expectations have been reported to improve retention.^{5,29,33,22,34} One quarter of CDY participants reported that CDY did not meet their expectations and the literature indicates greater attrition among staff whose expectations are not met,^{16,35} however the data indicated that failure to meet expectations did not impact on long-term retention of CDY participants in emergency nursing.

Limitations

This study has made an important contribution to the body of knowledge concerning recruitment to emergency nursing via supported entry programs, the efficacy of CDY as an entry point to emergency nursing, and the effect of CDY on staff retention. A major strength of this study was the examination of long-term retention of participants – an area which had previously not been extensively reported.

Limitations of this study include the statistically small sample, and failure to examine extraneous variables such as variations in program structure or support provided between the two sites examined, which may influence results. To some extent this is addressed by the similar recruitment and retention outcomes reported in the international literature in relation to supported entry programs.^{1,2,4,5,7,8,10,24–26}

This research compared recruitment and retention of CDY participants, with non-CDY participants. Disparity in data collection methods and employment dates between the two groups may limit the comparisons made. For example, non-CDY participants were not contacted and subsequently, their reasons for attrition and current employment status were not known. However, it was not feasible to contact non-CDY participants as some members of this cohort had left the organisation up to six years previous to the study and would be difficult to locate. Data collected about non-CDY participants was in relation to duration of employment and clinical progression within the department, which was recorded on the archived rosters. In addition, it is recognised that not having both groups from the same time period is a limitation of the study.

Further research comparing supported entry programs across sites and health care services, examining differences in program structure and delivery, workplace culture and work case load should be undertaken to validate the findings from this study of CDY within a single service.

Finally, an important issue which warrants further investigation is to determine the cost of providing a supported entry program. By measuring the costs of the program, and comparing the cost with the program benefits within the department, the true value of supported entry programs can be established.

Recommendations

This study has significant implications for recruitment and retention of emergency nurses. To address the current shortage of experienced emergency nurses, supported entry programs such as CDY should be considered as a recruitment strategy in EDs with EFT deficits. The introduction of a Career Development Year for specialty areas such as intensive care, coronary care, anaesthetics and recovery, theatre or paediatrics may also provide attractive recruitment options.

Retention of emergency nurses was increased following CDY, so it may be proposed that the introduction of a supported entry program to a greater diversity of Australian EDs will improve emergency nursing retention and assist in reducing the emergency nursing shortage. It could further be argued that the introduction of supported entry programs to other specialty areas will improve specialty nurse retention, as supported orientation and relevant education are key factors in retention of new employees.^{3,4,8,9,30,31}

Conclusion

This research has confirmed that CDY can improve recruitment to emergency nursing. Despite the nursing shortage, there are novice emergency nursing staff willing to commence in emergency nursing if they are supported appropriately. This study is one of the few studies that examined the effect of supported entry programs on long-term retention and results are extremely encouraging. The results indicate that CDY had a positive impact on long-term retention in emergency nursing, with long-term retention of emergency nurses having doubled since the introduction of CDY. To address the current shortage of skilled emergency nurses, supported entry programs such as CDY should be considered as a recruitment and retention strategy in EDs with EFT deficits.

Competing Interests

The authors declare that they have no competing interests.

Funding

No funding was received during this study or the preparation of this paper.

References

1. Considine J, Hood K. Career Development Year in emergency nursing: using specific educational preparation and clinical support to facilitate the transition to specialist practice. *Nurse Educ Pract* 2004;4(3):168–76.
2. Tychan K, Mullins C, Hertz S. Recruitment and retention of newly graduated nurses in the emergency department. *J Emerg Nurs* 2003;29(2):103.
3. Roche JP, Lamoureux E, Teehan T. A partnership between nursing education and practice: using an empowerment model to retain new nurses. *J Nurs Adminis* 2004;34(1):26–32.
4. Loiseau D, Kitchen K, Edgar L. A comprehensive ED orientation for new graduates in the emergency department: the 4-year experience of one Canadian teaching hospital. *J Emerg Nurs* 2003;29(6):522–7.
5. Gurney D. Developing a successful 16-week “transition ED nursing” program: one busy community hospital’s experience. *J Emerg Nurs* 2002;28(6):505–14.
6. Craven C. GNOSIS program pays off. *Nurs Manage* 2002;33(8):15–6.
7. Alban A, Coburn M, May C. Addressing the emergency nursing staffing shortage: implementing an internship using a nursing school instructor model. *J Emerg Nurs* 1999;25(6):509–13.
8. Almada P, Carafoli K, Flattery JB, French DA, McNamara M. Improving the retention rate of newly graduated nurses. *J Nurses Staff Dev* 2004;20(6):268–73.
9. Beecroft PC, Kunzman L, Krozek C. RN internship: outcomes of a one-year pilot program. *J Nurs Adminis* 2001;31(12):575–82.
10. Betts L. An emergency department recruitment strategy: a pilot mentorship program in Ontario’s Trillium Health Centre realized even more positive outcomes than hoped. *Can Nurse* 2003;99(9):28–31.
11. Australian Institute of Health and Welfare, *Nursing Labour Force 2002*, AIHW cat. no. HWL 29. Canberra: AIHW; 2003.
12. Australian Nursing Federation, *Australia’s Demographic Challenges*. Melbourne, Australia: Australian Nursing Federation; 2004.
13. General Accounting Office, *Nursing Workforce: Emerging nurse shortages due to multiple factors*, in *Report to the Chairman, Subcommittee on Health, Committee on Ways and Means, House of Representatives*. USA: General Accounting Office; 2001.
14. Australian Institute of Health and Welfare, *Nurse Labour Force 1999*, in *National Health Labour Force Series*, Number 20, Canberra: Australian Institute of Health and Welfare; 2001.
15. Senate Community Affairs Committee, *Report on the Senate Inquiry into Nursing – The Patient Profession: Time for Action*, in *Report on the Senate Inquiry into Nursing*. Canberra: Australian Government; 2002.
16. Robinson K, Jagim M, Ray CE. Nursing workforce issues and trends affecting emergency departments. *Top Emerg Med* 2004;26(4):276–86.
17. Presley D. An evaluation of nursing job satisfaction in the emergency department. *J Emerg Nurs* 2001;27(5):429.
18. Seago JA, Barr SJ. New graduates in critical care. The success of one hospital. *J Nurses Staff Dev* 2003;19(6):297–304.
19. Stechmiller JK. The nursing shortage in acute and critical care settings. *Am Assoc Crit-Care Nurses Clin Issues* 2002;13(4):577–84.
20. Emergency Nurses Association, *Position Statement: Patient safety in the emergency department*. Des Plaines, Illinois: Emergency Nurses Association; 2005.
21. Auditor General for Western Australia, *Performance Examination: A critical resource: Nursing shortages and the use of agency nurses*. Perth: Government of Western Australia; 2002.

22. Heath PC. *Our duty of care: national review of nursing education*. Canberra: Commonwealth of Australia; 2002.
23. Duffield C, O'Brien-Pallas L. The causes and consequences of nursing shortages: a helicopter view of the research. *Aust Health Rev* 2003;**26**(1):186–93.
24. Truman KM. Education enhances R and R in the ED. Don't eat your young; nurse them. *Nurs Manage* 2004;**35**(7):45–8.
25. Zavotsky KE. Developing an ED training program: how to "grow your own" ED nurses. *J Emerg Nurs* 2000;**26**(5):504–6.
26. Emde K. A state-wide ED nursing course for new graduates or nurses without ED experience: using a traditional approach/interactive videoconference technology. *J Emerg Nurs* 2003;**29**(5):474–9.
27. Schneider Z. Strategies for conducting a critical review. In: Schneider Z, Elliot D, LoBiondo-Wood G, Haber J, editors. *Nursing research: methods, critical appraisal and utilisation*. 2nd ed. Sydney: Mosby; 2003.
28. Pallant J. *SPSS survival manual*. 2nd ed. Sydney, Australia: Allen & Unwin; 2005.
29. Armstrong F. Addressing workforce issues. *Aust Nurs J* 2001;**9**(1):28–30.
30. Adams A, Bond S. Hospital nurses' job satisfaction, individual and organizational characteristics. *J Adv Nurs* 2000;**32**(3):536–43.
31. Wittman-Price R, Kuplen C. A recruitment and retention program that works! *Nurs Econ* 2003;**21**(1):35–8.
32. Australasian College for Emergency Medicine, *Nursing Education Review Secretariat*. Canberra: Australasian College for Emergency Medicine; 2001.
33. Cowin L, Jacobsson D. Addressing Australia's nursing shortage: is the gap widening between workforce recommendations and the workplace? *Collegian* 2003;**10**(4):20–4.
34. Pope B. Education: The key to retention. *Dimensions Crit Care Nurs* 2001;**20**(4):56–7.
35. Sullivan C, Reading S. Nursing Shortages: let's be flexible. *Collegian* 2002;**9**(4):24–8.