The effectiveness of strategies and interventions that aim to assist the transition from student to newly qualified nurse

Reviewers
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Background
The period of transition from student to newly qualified nurse can be stressful1-8. “Reality Shock” is a common experience in newly qualified nurses who find themselves in work situations for which they feel inadequately prepared9-12. The transition period is a time when nurses need to consolidate their knowledge and skills, and adjust to their new role. In the absence of adequate support, nurses have been found to change clinical area or leave the profession altogether13-16. The potential benefits of easing this transition could be reduction in stress and anxiety, enhanced job satisfaction and improved retention rates.

The international literature reports a variety of strategies and interventions to ease the transition process. These range from formal approaches such as graduate nurse programmes17, nurse extern programmes18-20, nurse residency programme21-22, and registered nurse internship23-24. The more informal approaches reported include mentoring25, lecturer practitioner support26, preceptorship27-29, clinical practice facilitators30 and peer support31. All of these approaches have aimed to boost the confidence, competence and sense of belonging of new graduates. However, there is little agreement in terms of what constitutes best practice and limited available evidence of the effectiveness of such approaches in achieving these desired aims and outcomes.

Two reviews have summarised the relevant evidence. In the first conducted in 2001, FitzGerald et al32, examined transition support specifically for new graduates excluding new qualified diplomates. Their review had a broad scope, investigating the effects of transition support on a wide variety of employer outcomes (retention rates, levels of competency, costs, satisfaction) and new graduate outcomes (anxiety reduction, job satisfaction, role recognition, satisfaction with programme/intervention, knowledge acquisition, role consolidation and level of expectations met). Thirteen studies were included in the review and comprised a variety of research designs, with only a few comparative studies and a number of descriptive and developmental studies. The review indicated that what little evidence exists, suggests that programmes that use multiple interventions and strategies over an extended period are useful. Nevertheless, there is a lack of evidence to indicate the optimal structure, length and content of the strategies and interventions. Where specific interventions for transition were considered, it was identified that clinical support personnel such as preceptors were important. Preceptors could aid the transition process if they were experienced, selected on specific criteria, and provided with training and support. As far as peer support groups were concerned, informal, unsupervised support was more effective than facilitator-led support groups. However, the evidence was based on a small number of studies with low scientific quality ratings.
A further narrative review suggests that formal programmes (interventions) can have a positive impact on graduates’ transition to practice, whereas mentorship and preceptorship have the potential to reduce “reality shock”. The findings of this review were constrained by the inclusion of Australian literature only, and a limited examination of research outcomes.

An initial search of the literature has identified that programmes for new graduate employment are continuing to develop. A systematic review of all the literature since the work of FitzGerald et al is required to demonstrate the efficacy of both formal transition programmes and alternative informal approaches. The purpose of this systematic review is to update and evaluate any further progress on efficacious interventions from 2000 onwards to achieve a smooth transition from student to qualified nurse in the first year of qualification. The original review included recently graduated health care professionals; the present review, however, will focus on recently graduated nursing staff only. Furthermore, this review will provide evidence to inform the development and implementation of successful strategies to improve newly qualified nurses’ transition.

Objectives
The objective of this review is to report and critically evaluate the available evidence relating to the effectiveness of support strategies and interventions for newly qualified nurses in the first year during the transition from student to practitioner.

Criteria for considering studies for this review

Types of studies
The quantitative component of the review will consider any randomised controlled trials. In the absence of RCTs other research designs, such as non-randomised controlled trials, clinical trials, cohort studies, experimental and non-experimental studies, observational studies, descriptive studies and before and after studies, will be considered for inclusion in a narrative summary. This will enable the identification of current best evidence regarding effectiveness of support strategies and interventions for newly qualified nurses.

Types of participants
The review will consider all studies that focus on newly qualified nurses during their first year of practice in the clinical area. Depending on the programme of education, this will include diplomates (those qualifying on a Diploma level course in the United Kingdom) and graduates. It will also consider student nurses who have completed the substantive components of their course and are involved in externship programmes or other such programmes prior to commencing formal employment.

Type of intervention
The review will focus on support strategies and interventions that assist newly qualified nurses in their transition from student to practitioner and will include the following:

i) Formal approaches
   - Graduate nurse programmes
• Nurse extern programmes
• Nurse residency programme
• Registered nurse internship

ii) Informal approaches
• Mentoring
• Lecturer practitioner support
• Preceptorship
• Clinical practice facilitators
• Peer support

Other support strategies and interventions as determined by the literature in the area will also be incorporated, as necessary.

Types of outcome measure
The outcome measures for this review will include the following:

i) For the employer
• Recruitment and retention
• Turnover rates
• Clinical competency
• Costs

ii) For the new diplomate / graduate
• Anxiety
• Stress reduction
• Job satisfaction
• Knowledge/skills acquisition
• Confidence
• Professional nursing behaviours
  o Leadership
  o Critical care
  o Teaching / collaboration
  o Planning / evaluation
  o Interpersonal relations / communication
  o Professional development

Other outcomes of effectiveness as determined by the literature in the area will also be incorporated, as necessary.

Search strategy
A number of electronic databases will be searched to identify both published and unpublished studies. The search strategy will consist of high precision MeSH terminology and keywords, to ensure that all relevant material is captured. This will be adapted to suit the capabilities of different databases. A three-stage search strategy will be used.

Stage 1
This stage will involve an initial search of MEDLINE and CINAHL using preliminary keywords drawn from the natural language terms of the topic.

The preliminary keywords to be searched are:

1. Transition
2. Nurse or nursing
3. Graduate
4. Clinical and/or support
5. Internship
6. Preceptorship
7. Graduate and nurse and programme

**Stage 2**

The text words contained in the title and abstract of relevant articles along with the controlled language index terms used to describe the papers will then be analysed to develop keywords for stage two. A second extensive search will then be undertaken of all keywords and index terms identified as relevant to the review. Individual search strategies will be developed for each index using the different terminology of index thesauri.

**Stage 3**

References from retrieved articles will then be searched for additional studies for the final stage of the process. Relevant journals such as *The Journal of Nursing Staff Development, Journal of Nursing Management, Journal of Nursing Administration, Journal of Advanced Nursing,* and *Australian Journal of Advanced Nursing* will be hand-searched to ensure that any relevant papers that may not be indexed in the major databases are located.

The search will seek both published and unpublished studies from 2000 to the present date. Only English language papers will be included in this review due to the limited resources available.

**Databases**

The databases to be searched for published material include:

- CINAHL
- MEDLINE
- British Nursing Index
- Cochrane Library
- EMBASE
- PsychLit
- PsychINFO
- PsychARTICLES
- Web Of Science
- EBM Reviews
- BioMed
- TRIP
- ERIC
- Scopus
The sources to be searched for relevant unpublished material include:

- SIGLE (System for Information on Grey Literature in Europe)
- WHOLIS
- Index of Theses
- Proquest Digital Dissertations
- Grey Literature Report
- Conference proceedings
- Research and clinical trials registers
- Internet sites of relevant associations

All studies identified during the database search will be assessed for relevance to the review based on the information provided in the title, abstract and descriptor/MESH terms. A full report will be retrieved for all studies that meet the inclusion criteria of the review (see Appendix I). Where any doubt exists the full article will be retrieved. Studies identified from reference list searches will be assessed for relevance based on the study title.

**Assessment of methodological quality**

**Critical Appraisal**

Studies meeting the inclusion criteria will be assessed for methodological quality using checklists developed by Fitzgerald et al\(^\text{32}\) (see Appendix II.1 for experimental studies and Appendix II.2 for observational and descriptive studies). Assessment will be undertaken by two reviewers independently with any disagreements being resolved by discussion with a third reviewer. If disagreement is due to a lack of information then the authors of the study will be contacted for clarification. The tool may be developed and revised following the full search.

**Data Collection/Extraction**

Data will be extracted from included studies using the data extraction tool which was developed by Fitzgerald et al\(^\text{32}\) (see Appendix III). Two reviewers will independently extract data. Any disagreements will be resolved by discussion with a third reviewer. The tool may be developed and revised following the full search.

**Data Synthesis**

If a sufficient number of studies are identified the results from comparable groups of studies will be pooled in a meta-analysis to determine the success of the intervention or strategy. Heterogeneity between combined studies will be tested using standard Chi-square test. Significant heterogeneity will be considered present when the p value is less than 0.05. Where possible, odds ratio or standardised mean differences and their 95% confidence intervals will be calculated for each included study. Review Manager 4.2.8 will be used for this purpose. Where statistical pooling is not appropriate or possible, the findings will be considered for inclusion in a narrative summary.

**Conflict of Interest**

There is no conflict of interest to report regarding this systematic review.
References


### Appendix 1: Screening Tool

**Inclusion criteria:**
Strategies and interventions to assist the transition from student to newly qualified nurse.

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<tr>
<th>Author:</th>
<th>Record Number</th>
<th>Reviewer</th>
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<th>Year:</th>
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<th>Types of participants</th>
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<tr>
<td>Newly qualified nurses in initial transition from student to practitioner</td>
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<td>Student nurses (e.g. externship program, capstone courses)</td>
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<th>Methods</th>
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<tr>
<td>Evaluations of interventions / programme</td>
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- Experimental
- Descriptive

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<th>Types of Intervention</th>
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<tr>
<td>Intervention(s) relating to the transition from student to practitioner</td>
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</table>

- Graduate nurse programmes / orientation strategies
- Externship
- Internship (residency)
- Mentoring
- Preceptorship
- Lecturer practitioner support
- Clinical practice facilitators
- Peer support
- Other

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<th>Types of outcome measures</th>
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<tbody>
<tr>
<td>Nurse retention / reduced / attrition rates</td>
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</table>

- Clinical Competency
- Cost Effectiveness
- Job Satisfaction
- Anxiety / Stress
- Knowledge / Skill
- Confidence
- Professional nursing behaviours

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<th>Leadership</th>
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<td>Planning / evaluation</td>
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<td>Interpersonal relations / communication</td>
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<th>Teaching / collaboration</th>
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<td>Professional development</td>
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- Other

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**Critical Appraisal**

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<tr>
<th>Include</th>
<th>Exclude</th>
<th>Seek Further Info</th>
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**Comments**

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9
**Appendix II.1: Checklist – Experimental Studies**

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<th>Question</th>
<th>Yes</th>
<th>No</th>
<th>Not Clear</th>
<th>N/A</th>
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<tbody>
<tr>
<td>1) Were the participants randomised to study groups.</td>
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<td>2) Other than the research intervention, were participants in each groups treated the same.</td>
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<td>3) Were the outcomes measured in the same manner for all participants.</td>
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<td>4) Were groups comparable at entry</td>
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Questions 1 to 4 must be answered “yes” for study to be included in a meta-analysis.

5) Was there adequate follow-up of participants.  
   - [ ] Yes  
   - [ ] No  
   - [ ] Not clear  
   - N/A  
   (more than 80% followed up)  
   (less than 80% followed up)

6) Was allocation to treatment groups concealed from the allocator.  
   - [ ] Yes  
   - [ ] No  
   - [ ] Not clear  
   - N/A

7) Were those assessing outcome blinded to treatment allocation (if outcome not objective such as survival or length of hospitalisation).  
   - [ ] Yes  
   - [ ] No  
   - [ ] Not clear  
   - N/A

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**Critical Appraisal**  
Include □  
Exclude □  
Seek Further Info □

**Comments**

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# Appendix II.2: Checklist – Observational & Descriptive Studies

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<tr>
<td>Is the study based on a random or pseudo-random sample?</td>
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<td>Are the criteria for inclusion in the sample population clearly defined?</td>
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<td>Were outcomes assessed using objective criteria?</td>
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<td>If comparisons are being made, was there sufficient description of the groups?</td>
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<td>Was an appropriate statistical analysis used?</td>
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**Critical Appraisal**

- Include ☐  Exclude ☐  Seek Further Info ☐

**Comments**

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Appendix III: Data Extraction Form

Author: ___________________________________
Year: ___________________________________
Record Number ___________________________________
Reviewer ___________________________________

Method ___________________________________

Types of Intervention

Graduate programmes ☐ Preceptorship ☐ Other ☐
Externship ☐ Peer support ☐
Internship (residency) ☐ Lecturer practitioner support ☐
Mentoring ☐ Clinical practice facilitators ☐

Types of outcome measures

Retention: _________________________________________________________________________________
Turnover: _________________________________________________________________________________
Attrition rates: _____________________________________________________________________________
Competency: _______________________________________________________________________________
Cost Effectiveness: __________________________________________________________________________
Job Satisfaction: ____________________________________________________________________________
Stress: ____________________________________________________________________________________
Knowledge: ________________________________________________________________________________
Skill: _____________________________________________________________________________________
Confidence: __________________________________________ 
Professional nursing behaviours: ______________________________________________________________ 
Leadership: ______________________________________________________________________________ 
Critical care: ______________________________________________________________________________ 
Teaching / collaboration: _____________________________________________________________________ 
Planning / evaluation: ______________________________________________________________________ 
Interpersonal relations / communication: ______________________________________________________ 
Professional development: __________________________________________________________________
Other: _____________________________________________________________
Program Description

• Type of Programme

• Setting

• Duration

• Clinical Orientation / Induction

• Clinical Support

• Clinical Placement

• Didactic elements

• Registration Requirements

• Other information
Experimental Studies

Number of participants
Group A: _______________  Group B: _______________  Group C: _______________

Description of Interventions

Intervention A
____________________________________________________________
____________________________________________________________

Intervention B
____________________________________________________________
____________________________________________________________

Intervention C
____________________________________________________________
____________________________________________________________

Results

Dichotomous Data

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Findings

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Authors Conclusions

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Reviewers Conclusions

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