

# **A systematic review of the effectiveness of strategies and interventions to improve the transition from student to newly qualified nurse.**

Edwards D, Hawker C, Carrier J, Rees C.  
Int J Nurs Stud. 2015 Jul;52(7):1254-68.  
doi: 10.1016/j.ijnurstu.2015.03.007.  
Epub 2015 Mar 20.

報告者：陳麗麗護理長  
報告日期：2015.11.17

# BACKGROUND

- ❑ The transition from student to newly qualified nurse can be stressful for many newly qualified nurses who feel inadequately prepared.
- ❑ A variety of support strategies to improve the transition process have been reported across the international literature but the effectiveness of such strategies is unknown.



# **support strategies and programmes**

- ❑ Internship/residency programmes (14/30)
- ❑ Graduate nurse orientation programmes (7/30)
- ❑ Mentorship/preceptorship (6/30)
- ❑ Simulation-based graduate programmes (3/30)

# Internship/residency programmes <sup>1</sup>

- ❑ The purpose of these programmes is to bridge the gap between academic preparation and the demands of clinical practice.
- ❑ All include common elements of taught days with additional clinical support for all new graduate nurses.
- ❑ majority programmes were of 6 months to 1 year duration with only two studies of shorter duration (6–8 weeks) (Messmer et al., 2004; Owens et al., 2001).

# Graduate nurse orientation programmes<sup>2</sup>

- Although similar to nurse residency/ internship programmes in the way they are structured including both didactic elements and clinical support through preceptorship, they are generally shorter in duration (1 to 20 weeks).

# Mentorship/preceptorship<sub>3</sub>

- ❑ The common element in all of these programmes is that **qualified nursing staff were specifically trained and allocated to support and work alongside newly qualified staff within the clinical environment and therefore these studies are discussed together**
  - ❑ The terms mentorship and preceptorship are often used interchangeably, they are defined specifically in some countries, for example the UK (NMC 2008).
- ❑ duration (1to4months)

## Simulation-based graduate programmes<sup>4</sup>

- ❑ Through simulation, new graduates are provided with exposure to patient scenarios they are likely to encounter, and have the opportunity to develop knowledge and skills in a safe environment.
- ❑ Duration: 12 weeks.

# OUTCOME

## ❑ individual outcomes

- ❑ Confidence
- ❑ Competence
- ❑ Knowledge
- ❑ Job Satisfaction
- ❑ Stress and anxiety

## ❑ Organisational outcomes

- ❑ Retention
- ❑ turnover



# individual outcomes :competence<sup>1</sup>

- ❑ internship/residency study:
  - ❑ general increase (Ulrich et al., 2010)
  - ❑ Significant increase (Kowalski and Cross, 2010).
- ❑ graduate nurse orientation programmes
  - ❑ general increase in perceived competence (Allanson and Fulbrook, 2010; Crimlisk et al., 2002; Marcum and West, 2004.)
- ❑ mentorship/preceptorship
  - ❑ statistical significant increases in competence (Edmond, 2004; Komaratat and Oumtanee, 2009).
- ❑ simulation-based programme
  - ❑ statistically significant improvements in competence and readiness for practice over the life of the programme (Beyea et al., 2010).

# individual outcomes :knowledge<sub>2</sub>

- ❑ internship/residency programmes
  - ◆ observed increases in knowledge scores (Allan-son and Fulbrook, 2010; Messmer et al., 2004).
- ❑ graduate nurse orientation programme
  - ◆ observed improvement in levels of perceived knowledge (O'Malley Floyd et al., 2005).
- ❑ simulation-based programme
  - ◆ was found to be significantly more effective than both self-learning and didactic education in developing knowledge and skills (Shepherd et al., 2007).

# individual outcomes :confidence<sup>3</sup>

- ❑ Internship/residency programme
  - ❑ significant increase (Kowalski and Cross, 2010)
  - ❑ further studies observed increases in self-confidence (Beecroft et al., 2001; Ulrich et al., 2010).
- ❑ Graduate nurse orientation programmes
  - ❑ general increase in perceived confidence (Allanson and Fulbrook, 2010; O'Malley Floyd et al., 2005; Squires, 2002).
- ❑ mentorship/preceptorship study
  - ❑ statistical increase in confidence (Edmond, 2004).
- ❑ simulation-based programme
  - ❑ statistically significant improvement (Beyea et al., 2010).

# individual outcomes :

## Stress and anxiety <sup>4</sup>

### ❑ internship/residency programmes

- ❑ reduction in stress levels at 6 months (Krugman et al., 2006)
- ❑ statistically significant reductions in stress at 1 year (Goode and Williams, 2004; Williams et al., 2007).
- ❑ Another study also reported that overall anxiety decreased, but not significant (Kowalski and Cross 2010) .

### ❑ mentorship/preceptorship programme

- ❑ reported that 50% (159/318) of qualified nurses surveyed felt that that mentors moderated their stress levels (Beecroft et al., 2006).

# individual outcomes :

## Job Satisfaction 5

- ❑ Internship/residency programmes
  - ❑ showed no significant change (Altier and Krsek, 2006; Setter et al., 2011; Williams et al., 2007).
  - ❑ One study observed an increase in job satisfaction over 24 months (Ulrich et al., 2010)
  - ❑ another study (Halfer et al., 2008) reported a non-significant decrease at 12 months but a significant increase at 18 months.

# Organisational outcomes :

## turnover rate <sup>1</sup>

- Turnover : actual turnover/turnover intent/anticipated turnover.
- simulation-based programme
  - actual turnover reduced at 1 year and 2 years compared to levels before simulation-based practice was implemented (Beyea et al., 2010).
- internship/residency programmes
  - improved turnover rates (Beecroft et al., 2001; Newhouse et al., 2007; Ulrich et al., 2010) but these results were not always sustained (Beecroft et al., 2001).
- influenced factors:
  - new graduates were satisfied with their jobs and pay,
  - felt committed to the organisation
  - passed the NCLEX .
  - the establishment had greater experience of running internship/residency programmes.

# Organisational outcomes:

## Recruitment and retention <sup>2</sup>

- ❑ High retention rates of 73–94.5% were reported at one year across all strategies

(Altier and Krsek, 2006; Crimlisk et al., 2002; Kowalski and Cross, 2010; O'Malley et al., 2005; Owens et al., 2001; Setter et al., 2011; Squires, 2002).

- ❑ Significantly higher retention rates :
  - ❑ internship/residency programmes groups (Newhouse et al., 2007)
  - ❑ graduate nurse orientation programmes groups (Friedman et al., 2011) at 12 months when compared to control groups.

# Conclusion

- ❑ This systematic review demonstrates the beneficial effects of transitional support strategies for newly qualified nurses from the perspective of the new nurse and their employer.
- ❑ The overall impact of support strategies appears positive, irrespective of the type of support provided.
- ❑ This may suggest that it is the organisations' focus on new graduate nurses that is important, rather than simply leaving them to acclimatise to their new role themselves.
- ❑ Future research should involve well designed randomised controlled trials with larger sample sizes, using more objective and reliable outcome measures.



# 文獻評讀

## ① 系統性文獻回顧快速評讀

步驟一：系統性回顧問題為何？

步驟二：系統性回顧品質為何（FAITH）？

## ② 結果



# PICO

## □ Population:

- ◆ newly qualified nurses during their first year of practice in the clinical area.

## □ Intervention:

- ◆ any support strategies or programmes

## □ Outcome:

- ◆ any individual and organisational outcomes.

# Find - 否找到所有的相關證據？

## ☑是

Electronic database searched for published papers from January 2000 to April 2011:

- CINAHL
- MEDLINE
- British Nursing Index
- Cochrane Library
- EMBASE
- PsychLit
- PsychINFO
- PsychARTICLES
- Web Of Science
- EBM Reviews
- BioMed
- TRIP
- ERIC
- SCOPUS

### Search terms used

**Graduate Nurse:** Nurs\$ graduate\$, nurse grad\$, new graduate\$, new\$ nurs\$, novice\$ nurs\$, neophyte nurs\$,  
**Intervention:** simulator program\$, program\$ implementation, peer support, support group\$, peer group, self-help groups, hospital program\$, hospital training program\$, inservice training, in\*service training, capstone courses, Internship and Residency, intern\$, transition\$, group de\*briefing, program\$ evaluation, residency, NRP residency program\$, preceptor program\$, preceptor\$, orientation, orientation program\$, employee orientation

Fig. 1. Search strategy.

Electronic databases searched for unpublished papers January 2000 to April 2011:

- 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

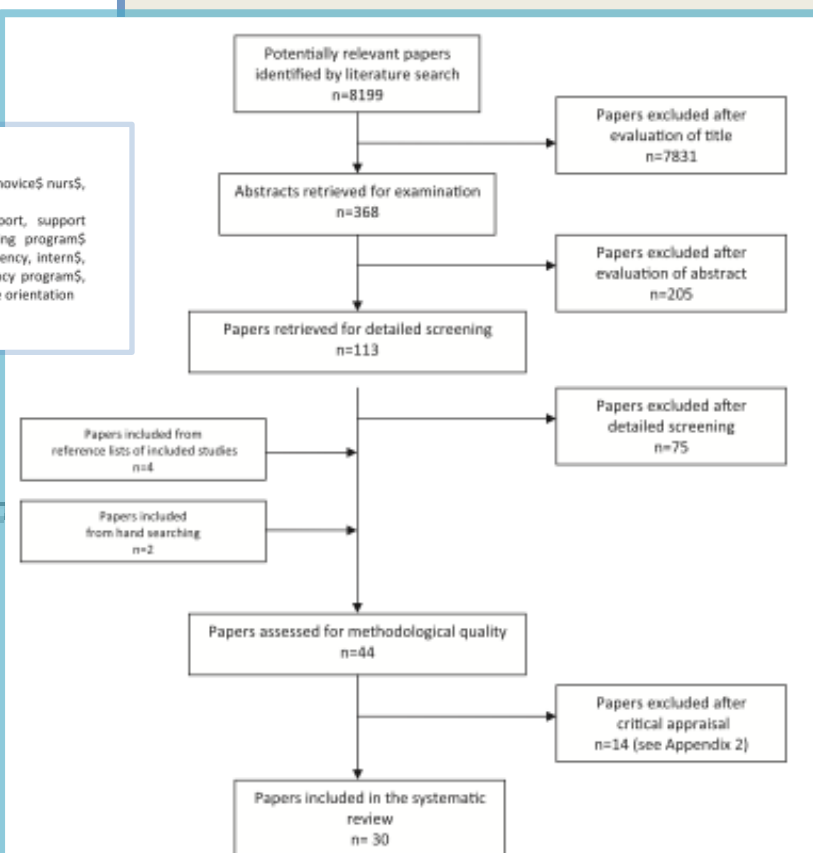


Fig. 2. Search results and study selection.

# Appraisal - 文獻是否經過嚴格評讀?

## ☑是

### ❑ Assessment of methodological quality :

- ❑ Joanna Briggs Institute checklists (Joanna Briggs Institute, 2011)
- ❑ Assessments were undertaken by two reviewers independently, with any disagreements resolved by discussion with a third reviewer.

#### 2.4. Assessment of methodological quality

Studies meeting the inclusion criteria were quality assessed using the appropriate Joanna Briggs Institute checklists (Joanna Briggs Institute, 2011) specific to the design of identified studies (i.e., experimental design and non experimental design). Assessments were undertaken by two reviewers independently, with any disagreements resolved by discussion with a third reviewer.

Table 2  
Included studies by JBI levels of evidence.

JBI levels of evidence	Effectiveness	Number of included studies	Citation
1	Meta-analysis (with homogeneity) of experimental studies (e.g. Randomised Controlled Trials (RCT) with concealed randomisation)	1	Shepherd et al. (2007)
2	OR One or more large experimental studies with narrow confidence intervals	2	Newhouse et al. (2007), Sorensen and Yankech (2008)
3	OR One or more smaller RCT's with wider confidence intervals	30	
4	OR Quasi-experimental studies (without randomisation)		Beecroft et al. (2001), Setter et al. (2011), Goode et al. (2009), Williams et al. (2007), Krugman et al. (2005), Altier and Krsek (2006), Owens et al. (2001), Messmer et al. (2004), Kowalski and Cross (2010), Roud et al. (2005), Ulrich et al. (2010), Beecroft et al. (2008), Haller et al. (2008), Olson et al. (2001), Beyea et al. (2007), Beyea et al. (2010), Leigh et al. (2005), Vasseur (2009), Edmond (2004), Komaratat and Oumtanee (2009), Beecroft et al. (2006), O'Malley Floyd et al. (2005), Allanson and Fulbrook, 2010, Crimlisk et al. (2002), Friedman et al. (2011), Young et al. (2008), Marcam and West (2004), Squires (2002) None found
a. Cohort studies (with control group) b. Case controlled c. Observational studies (without control group) expert opinion, or physiology bench research, or consensus			

# Included-是否只納入具良好效度的文章

## ☑否

**Table 2**

Included studies by JBI levels of evidence.

JBI levels of evidence	Effectiveness	Number of included studies	Citation
1	Meta-analysis (with homogeneity) of experimental studies (e.g. Randomised Controlled Trials (RCT) with concealed randomisation) OR	1	Shepherd et al. (2007)
2	One or more large experimental studies with narrow confidence intervals OR	2	Newhouse et al. (2007), Sorensen and Yankech (2008)
3	One or more smaller RCT's with wider confidence intervals OR	30	
4	Quasi-experimental studies (without randomisation)  a. Cohort studies (with control group) b. Case controlled c. Observational studies (without control group) Expert opinion, or physiology bench research, or consensus		Beecroft et al. (2001), Setter et al. (2011), Goode et al. (2009), Williams et al. (2007), Krugman et al. (2006), Altier and Krsek (2006), Owens et al. (2001), Messmer et al. (2004), Kowalski and Cross (2010), Roud et al. (2005), Ulrich et al. (2010) Beecroft et al. (2008), Halfer et al. (2008), Olson et al. (2001), Beyea et al. (2007), Beyea et al. (2010), Leigh et al. (2005), Vasseur (2009), Edmond (2004), Komaratat and Oumtanee (2009), Beecroft et al. (2006), O'Malley Floyd et al. (2005), Allanson and Fulbrook, 2010, Crimlisk et al. (2002), Friedman et al. (2011), Young et al. (2008), Marcum and West (2004), Squires (2002) None found

# Total up - 作者是否以表格和圖表「總結」試驗結果？

## ☑是

❑ Data synthesis : The review did not identify any comparable randomised controlled trials.

❑ Outcome data : narrative summary.

### ◆ Table 1

**Table 1**  
Description of included studies.

Authors	Study Design	Sample size	Intervention	Outcome measures	Findings
Internship/Residency Programmes					
Paper 1: Altier and Krsek (2006) USA	Prospective longitudinal	316	UHC/AACN National Post baccalaureate nurse residency programme 1 year	MMSS Retention	Job satisfaction: no change ( $p = 0.055$ ) 1 rate: 87%
Paper 2: Beecroft et al. (2008) USA	Prospective longitudinal (7 years)	889	RN residency programme 22 weeks	CNRCS/OCQ, PNAS/SCSCS, SNCRS/WOCR, CWEC/GCS, NJSS/CDMS, WSS/LEBS, Turnover intent	Older respondents were 4.5 times more turnover intent if they did not get their choice ( $p < 0.01$ ). When GNs were satisfied with the organisation ( $p < 0.01$ ) the odds of turnover were low these factors explained 79% of year retention rate – estimated 83% to 1 group comparable or better on all measures.
Paper 3: Beecroft et al. (2001) USA	Descriptive comparative survey	I = 50 C = 28	RN residency programme 6 months	CNRCS/OCQ, PNAS/SCSCS, NCIRS/ATS	Self Confidence: increased for I group. Anticipated voluntary turnover in 6 months significantly lower for I group than C group ( $p < 0.05$ ) but no significant difference between I group and C group at 12 months ( $p = 0.20$ )
Paper 4: Goode et al. (2009) USA	Descriptive case study	1,484	UHC/AACN National Post baccalaureate nurse residency programme 1 year	CFGNES/MMSS, GCOPS/ Turnover REF	Significant decrease increase in job satisfaction at 6 months ( $p = 0.00$ ) and rising again by 12 months but still lower than baseline ( $p = 0.00$ ) Significant increase in skills and abilities ( $p = 0.002$ ).

#### 2.5. Data synthesis

The review did not identify any comparable randomised controlled trials which could be pooled for further

statistical analysis. Outcome data extracted from included studies were therefore combined and presented as a narrative summary.

# Heterogeneity異質性

## - 試驗的結果是否相近

- ❑ There is clearly a need for **more robust studies with larger sample sizes** and greater use of **objective and reliable outcome measures**.
- ❑ More comparative and experimental studies are required in order to determine the **efficacy of support strategies**.
- ❑ **More valid and reliable measures** are also needed to **explore the outcomes of confidence, competence, knowledge, stress and anxiety**. ↩

- Within each group of interventions, the review identifies there are considerable variations in their content, structure and duration, making the adoption of effective solutions difficult.
- Evaluation studies of transition solutions varied in methodological approach and quality; many had weak designs.

說明：因納入文獻的異質性太大，故未進行 meta-analysis

# 萬芳醫院新進人員訓練

- 全院共通課程：一天
- 護理部課程：3天
  - ◆ 課室教學+技術 (OSCE)
- 病房專科性訓練：2~3個月
  - ◆ 疾病、檢驗/檢查、藥物
  - ◆ 專科常見技術及評量
  - ◆ 專屬輔導員，一對一指導
- 新進人員心理座談會/ 輔導...
- 我們還缺少什麼？





□ 哪些策略可以有效協助護理學生渡過新進護理師面臨的現實休克？

□ 是否考慮新進人員訓練中加入擬真訓練？



■ 是

- 增加對臨床情境的適應性及應對
- OCSE及技術評量 ≠ 臨床實境
- 有助於新人留任

■ 再考慮

- 訓練人力、成本
- 納入學校教育？
- 新進人員：開床、訓練？

A close-up photograph of a healthcare professional's hands wearing blue nitrile gloves. The hands are positioned in the center of the frame, with the fingers slightly curled. In the background, a person wearing teal scrubs and an orange stethoscope is visible, though out of focus. The overall scene suggests a medical or clinical setting.

**THANKS**