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MODELLING CONNECTIONS in AGED CARE

Australian Government

Department of Health and Ageing

Clinical placements for undergraduate students in aged care - a systematic review

Abbey,J., Abbey,B., Parker,D., Jones, J., Robinson, A., Toye, C and Barnes, L.

Modelling Connections in Aged Care

Clinical Placements for Undergraduate Students in Aged Care –

A Systematic Review

Abbey, J., Parker, D., Abbey, B., Jones, J., Robinson, A., Toye, C. and Barnes, L.

January 2006

Abbey, J., Parker, D., Abbey, B., Jones, J., Robinson, A., Toye, C. and Barnes, L. (2006). Modelling Connections in Aged Care: Clinical Placements for Undergraduate Students in Aged Care – A Systematic Review. Brisbane, Queensland, School of Nursing, Faculty of Health, Queensland University of Technology.

January 2006

ISBN: 1 86295 298 1

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

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EXECUTIVE SUMMARY

Introduction

The pursuit of excellence in any branch of nursing education demands constant critical attention to the balance and dynamics of the combination of clinical education and academic preparation. Undergraduate students are greatly affected in many respects by their experience during the clinical placements they undertake during their course of study. An impact is made on their skill levels, clinical understanding, professional attitudes, sense of comfort in the nursing workplace, commitment to nursing as a career and, it appears, their early employment choices.

Given an ageing population and severe difficulties in recruiting and retaining aged care nurses, it is especially important to ensure students' experiences in aged care settings are positive in all senses. Numerous studies have shown that beginning students are rarely inclined toward careers in aged care nursing and clinical placement experiences in an aged care setting have been said to create or entrench this attitude.

This systematic review has been conducted as part of a larger research project aiming to develop and test an evidence-based best practice model for undergraduate clinical placements in aged care.

Objectives

The primary objectives of this review were:
(i) to identify, summarise and evaluate studies which have examined the experiences of undergraduate students, teachers, site staff and patients during clinical placements
(ii) to do this in a way that provides maximum assistance for the research team carrying out the later stages of the larger project.

Selection criteria

We selected studies published in the English language during the period 2000 - 2005 and related to undergraduate nursing students' clinical placements. Reference is occasionally made to earlier publications where it is desirable to trace the lineage of a particular piece of work or of a research tool.

Search terms

With the ultimate aims of the larger project in mind we formulated five specific research questions and, working from those, developed a set of search terms consisting of keywords and MESH terms.

Search strategy

We searched a wide range of databases containing journal articles and reports published during the years 2000 – 2005 in the fields of nursing, general health sciences and service delivery, education, aged care, psychology, other social sciences, quality assurance, treatment guidelines, and systematic reviews. This was followed by hand searching selected journals and the reference lists of numerous reports and investigations, using as

discriminators the same keywords and terms as used in the database searches. This yielded numerous additional items, some of which were published very shortly prior to or contemporaneously with our investigation.

A total of 617 items were identified as matching the MESH terms and keywords. The titles and abstracts of these items were examined to assess their relevance. Four hundred and eighty-four items were rejected at this stage and 133 were retained. Of these, 22 items were duplicates, leaving 111 items from these searches. Additional hand searching found another 62 items.

Therefore the total number of items selected for a full review was 173. Four reviewers then collaborated to read and rate all retained items against the criteria set out in the 'Data rating and extraction sheets' (Appendix 1), with each item reviewed independently by two or three and sometimes, where it seemed necessary, four reviewers. A further 52 were rejected during this stage, leaving a final selection of 121 items.

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The next section of this report opens by reporting that the focus and reliability of evidence and findings that emerged from the literature under review did not provide a foundation for offering recommendations of the kind that constitute the usual output of a systematic review. This is not to say that the review of the evidence has yielded nothing of value to the larger objective of this project. A sure sense of the quality of evidence available and the balance of expert opinion is of itself useful. As Egger et al[1] point out, 'Systematic reviews may demonstrate the lack of adequate evidence and thus identify areas where further studies are needed.[2]Much has been discovered that is suggestive of useful lines of inquiry or indicative of the problems any sound model of clinical education would need to surmount. The review team, in declining to offer recommendations, has taken the view that a summary of the informal conclusions it has been able to reach and an outline of remaining issues would be a more useful way to draw the value out of this quite exhaustive examination of the literature.

Summary of Discussion and Conclusions

Modern nursing education, like other areas of the health system, is struggling with the problem of creating and sustaining a broad based, fast moving dialogue involving theory and practice. Clinical placements during the undergraduate years - the crucible where aspiring professionals are initiated into that dialogue - have a vital role to play in producing competent and enthusiastic professionals.

The systematic review revealed that, taken overall, the literature on this sphere of education is abundant but often disappointing, and reliable evidence on the many difficult issues clinical education confronts is scarce.

There is no high level experimental evidence bearing on the research questions addressed in this review and there is a dearth of well-supported qualitative evidence available. On the other hand, there is a significant concurrence of expert opinion. Eighty-six per cent of the items that met the criteria for inclusion were classified as resting on qualitative studies or the opinions of experts in the field, with the latter type making up just under one-third of all included studies.

We found that few items:

- focus on the specific circumstances and needs of aged care nursing
- reported studies/gathered data from across national/cultural boundaries
- reported studies conducted in Australia
- were multi-site studies. Where they were they usually involved different groups with overwhelming similarities (eg. students of similar or identical courses at nursing schools within a region, without carefully specifying any differences or the likely impact they might have on the study's outcome)
- involved careful comparative elements, even pre- and post – testing of the same group being rather rare
- displayed sufficient 'scientific rigour' as that is conventionally understood in the systematic review literature, with only one item rated Level II and a total of only 13% of all the evidence being rated in the level II – Level IV band.

This report shows that none of the items examined contained or explicitly proposed a general model of how to conduct clinical placements in any sphere of nursing; and that such propositions as were advanced on this topic lacked the support of high level evidence and were generally narrow in scope.

To be more specific, there were no models advanced for the conduct of undergraduate nursing clinical placements in the aged care setting which, at any level of evidence, could reasonably be described as being evidence based. Indeed, there has been no comprehensive assembly and analysis of the materials and practices necessary to establish what best practice is in this particular area of education. More especially, there has been no attempt to develop a model that takes comprehensive account of the evidence of possibilities and pitfalls that has accumulated in the literature. There has been work on stating underpinning principles and devising mechanisms that would be required for such a model and there have been some very valuable steps taken towards constructing the foundations for the development of such a model. Much of this work has been done in Australia and has appeared in the form of major reports of inquiries or research commissioned by government [e.g. items 54, 58, 59, 84].

That said, the work of constructing and validating a comprehensive model is still to be done despite the evident gains that would accrue from success in such a venture. The volume of literature from around the world (included in the matrix in Appendix 2) is quite sufficient to show that such a model would be received with great interest.

Not the least reason for that interest is the acceptance that undergraduate nursing students' attitudes are significantly influenced by their early clinical placements experiences. Unfortunately there is substantial evidence to show that experience in aged care settings during clinical placements often creates or reinforces negative attitudes towards the prospects of a career in the area.

There are numerous studies, usually of a fragmentary nature and usually supported by low level evidence, which point to some the faults and failings in the conception and execution of clinical education conducted in healthcare sites. In this vital national undertaking of clinical education a picture emerges:

- in which the organisation of access to sites for students – an increasingly scarce commodity itself - is not well managed at a macro level, a situation not conducive to the careful selection or accreditation of training sites of the kind routinely required for,

example, for medical students
- in which poorly researched and planned, allegedly underfinanced, ill-organised placements occur with insufficient preparation given to the students, the site staff and the clinical teachers, all too often creating in the students a sense of heightened anxiety, wasted learning opportunities and feelings ranging from simple boredom to disenchantment with their career directions
- in which clinical teacher and site staff training and resources are inadequate
- in which well-founded documented agreements between the education and service agencies are rare and even then not usually appropriately ambitious in conception
- in which incentives are either absent or structured in ways most likely to impede the nominated outcomes.

There are many ideas, some voiced by experts or supported by low level evidence or anecdotes, about what might be done to address the identified faults and failings; but the reader is provided with little or no research evidence capable of showing that the proposed improvements will have, much less have had, the intended results in serious, well-designed and sustained trials.

In short, this is an area of education that most analysts and participants agree is either not working satisfactorily or, at least, delivering poorer returns than it could, and which will come under increased pressure as demographic and nursing workforce problems deepen in Australia and around the globe.

Constructive debate aimed at developing researchable questions and actionable programs must continue. In particular, further research attention should be given to evidence reported in this systematic review that suggests a broad range of steps that can be taken to overcome or at least significantly reduce negative outcomes. The results should be implemented under controlled trial conditions to derive further learning and, as a matter of urgency, more reliable evidence than now exists.

For example, there was abundant evidence, albeit at low level, that improved outcomes would be likely as a result of the implementation of:
- closer and more ambitious partnerships between universities and clinical sites which ensure that all parties understand the joint and several benefits and responsibilities associated with participation
- a raised profile for aged care nursing, its importance and its rewards, within the university nursing schools
- better designed clinical education in aged care for delivery prior to the placement
- better critical assessment of the specific training capabilities of prospective sites than is likely to occur under present conditions of scarcity and poor coordination
- better preparation of students, site staff and clinical teachers, including shared documentation of roles, responsibilities and objectives, together with skills and sensitivity training for front-line preceptors, general awareness briefings for other staff and a thorough, structured site orientation for students
- a client-driven model of clinical education, more responsive to students' sense of their needs and interests and more sensitive to the rigours of the experience they are undertaking
- better communication and coordination within the site and between the site and the supervising academic staff

- scheduled opportunities for all parties to engage in joint and separate debriefing and retrospective analysis of the meanings of the events observed and the lessons learned.

Other issues arising

- The structure of staff and institutional incentives in the aged care facilities and the universities needs to be examined to assess their impact on the perceived importance and conduct of applied clinical education for the expanding ranks of health workers.

- The value of researchers engaging over time with the participants needs thought and explication. Only two of the 121 studies included in this review can really be said to have adopted this approach; and only one of them deals with aged care.

- There is a need to pursue through the promotion of debate and consequent research a clearer understanding of the measurable objectives of clinical education and the benchmarks of success which it is appropriate for the relevant policy communities to adopt. The authors of most of the items reviewed for this project, where they touch on this issue, unquestioningly adopt the student as the arbiter of quality. A second view also represented in the included literature comes close to suggesting that quality clinical education is that which reliably produces verifiable improvements in patient outcomes. Other investigators or commentators have sought to gauge the judgements of clinical teachers, ward staff, academics and hospital administrators.

- While this review shows that progress towards evidence-based models of clinical education in general nursing or, especially, in aged care has been virtually non-existent, it also shows conclusively that the need for such an advance is urgent and, at least among nursing's leaders, well understood.

MODELLING CONNECTIONS IN AGED CARE

CLINICAL PLACEMENTS FOR UNDERGRADUATE STUDENTS IN AGED CARE - A SYSTEMATIC REVIEW

BACKGROUND

The movement from an apprenticeship model of care for nurses towards a tertiary education model has occurred in a number of countries during the closing decades of the twentieth century. The transition in Australia, one of the first countries to undertake the change, began in the mid 1970s, and was completed around 1993.[3] The apprenticeship model, which had evolved in the hospital setting, combined classroom instruction and hands-on patient care on a daily basis from very early in the training period. The new tertiary education model, in contrast, separated distinct periods of academic study and knowledge application, locating the first in the university and the second in a wide variety of healthcare service settings. This created the concept of the 'student clinical placement' and laid on it a heavy burden in the work of professional preparation.

It might be argued that, given the importance of its role, surprisingly little systematic attention was paid to *in situ* clinical education and training for some years following the establishment of the new model. Numerous factors have provided an impetus for the development of research or expert opinion on this subject recently. Among others, concerns about the costs of clinical education relative to the resources provided, the number of openings available, the impact on the workplace, and long term staffing supply questions have combined to draw the attention of workforce strategists, regulatory bodies and nurse researchers to the issues surrounding the conduct of clinical practice. In particular, there has been some recent criticism about tertiary education not preparing nurses for the realities of clinical practice in the way the apprenticeship model was able to do. One proposed solution to the problem of the perceived poor results from clinical placements is a return to the apprenticeship model. Moyes[4] states that 'Some stakeholders unfortunately advocate [a] return to hospital based training in the hope that this will fix the competence and confidence issues of new graduates'. This course was not considered to be an option by the recent round of major reviews of nursing practice[5] and preparation in Australia and will not be touched on in this systematic review. The focus here is squarely on improving outcomes for clinical placement experiences rather than discarding the education system of which they are part.

The attention paid to quality training experiences for all student nurses has resulted in a great deal of research and writing; but not as yet, it appears, in the production of an evidence based /best practice model for undergraduate nursing students' clinical placements. This amounts to a serious gap in our ability to maintain the preparation of the required numbers of technically competent, confident and acculturated, work-ready nursing graduates.

Nowhere is the gap more evident than in aged care. Of the work that has been done on the

factors influencing the nature and effectiveness of clinical placements in a range of health care settings, very, very little has focused on the aged care sector and the special requirements it makes of those nurses working in the sector. It is well established that there is a shortage of nurses willing to work in aged care settings[6] and early clinical placement experience in the sector has often been thought to act as a deterrent to seeking further work there. Understanding the impact of clinical placements on future work preferences and quality nursing outcomes is vital.

This review builds on the earlier work relating to aged care clinical training for undergraduates begun independently by Abbey et al[7,8] and Robinson et al.[9,10,11,12,13] In those studies literature reviews were undertaken and items from those works have been considered for this review together with a larger number of other items discovered through broader searches undertaken specifically for this project.

OBJECTIVES

The principal objectives of this review were (i) to identify, summarise and evaluate studies which have examined the experiences of undergraduate students, teachers, site staff and patients during clinical placements; and (ii) to do this in a way that provided maximum assistance for the research team carrying out the later stages of the larger project.

CRITERIA FOR CONSIDERING STUDIES FOR THIS REVIEW

The questions this review was seeking to answer were:

1. What are the attributes of a quality clinical placement for undergraduate students?
2. What factors facilitate or obstruct the creation of quality clinical placements for undergraduate students?
3. What instruments have been developed to measure the presence, absence, or changes in the attributes of a quality clinical placement for undergraduate students?
4. Are there any models for best practice in undergraduate nursing clinical placements that have been tested?
5. Are there any models for best practice in undergraduate nursing clinical placements that have been tested in the aged care setting?

Participants of interest

Participants were any:

- Undergraduate nursing students with experience of clinical placements
- Staff involved in teaching clinical placements for undergraduate nursing students
- Staff [1] - academics, nurses or unregulated care staff - with experience of clinical placements
- Aged care residents with experience of student nurse clinical placements.

[1] Staff refers to preceptors, mentors, academic teachers and anyone involved in teaching in clinical placements, all of whom have different names around the world.

Phenomena of interest

Phenomena of interest included the following:

- Criteria for quality undergraduate nursing clinical placements
- Intervention strategies in undergraduate nursing clinical placements
- Factors seen as assisting or obstructing quality undergraduate nursing clinical placements
- Strategies or tools for identifying the extent and/or causes of the parties' satisfaction or dissatisfaction with undergraduate nursing clinical placements
- Strategies or tools for identifying and/or evaluating and explaining the uptake of learning during undergraduate nursing clinical placements
- Strategies for identifying and/or explaining and/or managing the impact of undergraduate nursing clinical placements on the placement site
- Models for teaching nursing undergraduates in a clinical setting
- Analyses of students' attitudes to ageing
- Models of best practice for quality undergraduate nursing clinical placements within aged care facilities

SEARCH STRATEGY

The search of the literature was conducted by electronically and later manually scanning published and unpublished literature appearing in the English language over the last five years, 2000 – 2005. Reference may be made to earlier publications where it is desirable to trace the lineage of a particular piece of work or of an investigative instrument. There were three phases.

1. The initial phase, a limited search of the databases, CINAHL and MEDLINE, sought to identify MESH headings and keywords contained in the title and abstract, and relevant descriptor terms.

The search terms selected through this process are listed in Table 1:

Table 1. – Search Terms

DATABASE	SEARCH TERMS USED
Blackwell Synergy	Clinical placement and nursing education Limit – aged 65 and over
Ebsco host	Clinical placements and nursing Limit aged 65 and over
Ebsco host	Clinical teaching and nursing and undergraduate
Ovid Medline/ Cinahl	Exp residential facilities/ and exp nursing education/OR exp geriatric nursing/ed OR exp students, nursing/ OR exp nursing research/ OR exp models, educational/ Limit – aged 65 and over
Blackwell synergy	Nursing homes and clinical teaching/ and student teaching/ and undergraduate nursing Clinical teaching and nursing
Sociological Abstracts	Clinical placement and nursing Clinical teaching and nursing
APAIS Health	Clinical placement and nursing Clinical teaching and nursing
Social Science Citation Index	Clinical practice and nursing Clinical teaching & nursing & undergraduate
Dissertations and thesis abstract via Pro quest	Nursing & undergraduate & clinical placements Clinical placements and nursing Clinical teaching &nursing &undergraduate
Current Contents	Clinical placement and undergraduate nursing Nursing students and residential care Clinical teaching and nursing
Cochrane (includes DARE)	Nursing and clinical Nursing and undergraduate
JBI	All systematic reviews considered
Age line	Clinical and nursing and undergraduate
Depart of Health and Ageing	All publications titled searched
DEST	Nursing undergraduate
Hand searching	Collegian, Australian Journal of Advanced Nursing, Journal of Advanced Nursing, UTAS Reports

2. A second, comprehensive search was then performed using the appropriate MESH headings and keywords for each of the following databases:
Psycinfo, Ageline, Cochrane Library, EMBASE, APAIS Health, Current Contents, Dare, Blackwell Synergy, Dissertation Abstracts, Personal Communication, Social Science Index, Sociofile, Aust/New Zealand Newspaper Refs, Informit, ProQuest, Springer Link, Web of Science, Ageing well network, Aged Care Health databases, ERIC, Australian Education Index, NHMRC guidelines.

All studies identified during this wider database search, numbering 617, were assessed for relevance to the review's objectives, using the information contained in the title, abstract and descriptor heading. All references selected for retention beyond that point, 111 in number, were entered into the electronic bibliographic software package, 'Endnote 7.0'.

3. The third stage involved hand searching selected journals and other sources not always or reliably indexed in electronic databases – certain journals or official reports and investigations, for instance - as well as reference lists and bibliographies of articles retrieved. This yielded 62 additional items, some of which were published very shortly prior to or contemporaneously with our investigation.

This completed the search phase of the study.

METHODS OF THE REVIEW

Levels of evidence

The National Health and Medical Research Council (NHMRC) in 1995[14] defined levels of evidence according to the following:

Table 2. – NHMRC Levels of Evidence 1995

Grade	Definition
I	Evidence obtained from a systematic review of all relevant randomised controlled trials
II	Evidence obtained from at least one properly-designed randomised controlled trial
III - 1	Evidence obtained from well-designed controlled trials without randomisation
III - 2	Evidence obtained from well-designed cohort or case-control analytic studies preferably from more than one centre or research group
	Evidence obtained from multiple time series with or without intervention
IV	Opinion of respected authorities, based on clinical experience, descriptive studies, or reports of expert committees

However in 1999 the NHMRC[15] revised these definitions and eliminated the opinions and consensus as admissible forms of evidence, leading to a revised statement of levels of evidence as shown in the following table (Table 3)

Table 3 – NHMRC Evidence Levels 1999

Grade	Definition
I	Evidence obtained from a systematic review of all relevant randomised controlled trials.
II	Evidence obtained from at least one properly-designed randomised controlled trial.
III - 1	Evidence obtained from well-designed pseudo-randomised controlled trials (alternate allocation or some other method).
III - 2	Evidence obtained from comparative studies with concurrent controls and allocation not randomised (cohort studies), case-control analytic studies, or interrupted time series with a control group.
III - 3	Evidence obtained from comparative studies with historical control, two or more single-arm studies, or interrupted time series without a parallel control group.
IV	Evidence obtained from case series, either post-test or pre-test and post-test.

The NHMRC is currently once again reviewing the levels of evidence previously defined by it in 1999, partly because these have been identified as unreasonably restrictive in their scope of application.

Levels of evidence to be used for this review

The form of the questions tackled in this review reflects the nature of the phenomena on which we are focusing and, of course, the state of nursing scholarship in relation to those phenomena. This means that attempted answers are likely to be difficult to grade using the traditional taxonomies of evidence such as those used in the NHMRC schema described earlier. Such problems are increasingly common for reasons outlined in the next section of this report and have been addressed by scholars in various ways. For example: a similar problem was encountered during the project which developed guidelines for a palliative approach in residential aged care facilities.[16] In that case, due to the dearth of articles rated as using the 1999 NHMRC Levels 1 – 4, two new levels of evidence were defined and added to the analytical apparatus. These were 'qualitative evidence (QE)' and 'consensus opinion of experts (EO) in the field'. Specifically for the grade QE a checklist for scoring the quality of evidence was developed. It consisted of eight questions with a yes or no answer (scored as 1 or 0 respectively). For articles to be included they had to have a quality rating of six or higher out of a possible score of eight. For all items - Level 1-4, QE and EO - two further ratings were made by the researchers in the palliative approach guidelines project:

1. Strength of evidence (magnitude of intervention effect) 4 = very high, 3 = high, 2 = low and 1 = very low. For articles to be included they had to have a strength rating of 3 or 4.
2. Relevance to the project (relevance of the outcome measures and the applicability of the study results to the clinical question) 4 = very relevant, 3 = relevant, 2 = of some relevance, and 1 = of little or no relevance. For articles to be included they had to be rated 3 or 4.

This study adopted that approach and therefore the levels of evidence used were as follows.

Table 4 – Levels of evidence used in this study

Grade	Definition
I	Evidence obtained from a systematic review of all relevant randomised controlled trials.
II	Evidence obtained from at least one properly-designed randomised controlled trial.
III - 1	Evidence obtained from well-designed pseudo-randomised controlled trials (alternate allocation or some other method).
III - 2	Evidence obtained from comparative studies with concurrent controls and allocation not randomised (cohort studies), case-control analytic studies, or interrupted time series with a control group.
III - 3	Evidence obtained from comparative studies with historical control, two or more single-arm studies, or interrupted time series without a parallel control group.
IV	Evidence obtained from case series, either post-test or pre-test and post-test.
QE	Qualitative evidence will be considered appropriate if they have a quality rating of 6 or higher (out of a total of 8) and both a strength and relevance rating of 3 or 4 (out of a total of 4). These studies will primarily may be descriptive but also include integrative analysis including observational or case studies. *NB: Government reports have not been rated for quality.*
EO	Articles at this level are those that contain no quantitative or qualitative evidence, but provide information about best practice from an expert in that field, as agreed by the project team.

Critical Appraisal: the process and a statistical snapshot of the results.

Having thus determined the criteria for use in the review, all identified studies that were judged as qualifying for inclusion during the search phase were now assessed for methodological quality, including relevance to the objectives. The items were distributed between four reviewers according to the fit between the item's content and method and the special expertise of the reviewer.

Data were extracted using data rating and extraction sheets based on those developed by the Joanna Briggs Institute and the Guidelines for a Palliative Approach project (Appendix 1). These instruments are suited for use with both quantitative and qualitative studies.

Reviewers read and summarised each item and, using the agreed criteria relating to quality of evidence and relevance to the topic, recorded a recommendation as to whether it should continue to be considered as part of the review or set aside with the items previously excluded. To improve the reliability of the content summaries and the ratings every article was independently rated by a second member of the research team. The results of all reviews were then entered into a single, centrally-maintained reporting matrix. Where there was disagreement between reviewers, the project team was consulted or, depending on the nature of the disagreement, the item was subjected to a third and possibly even a fourth full-scale review after which an agreed classification was produced.

This completed the process of critically appraising the items to be included in the systematic review. It remains to report our discussion of how the complexity and diversity of the selected material might best be accommodated in the systematic review format and then to proceed to present the findings.

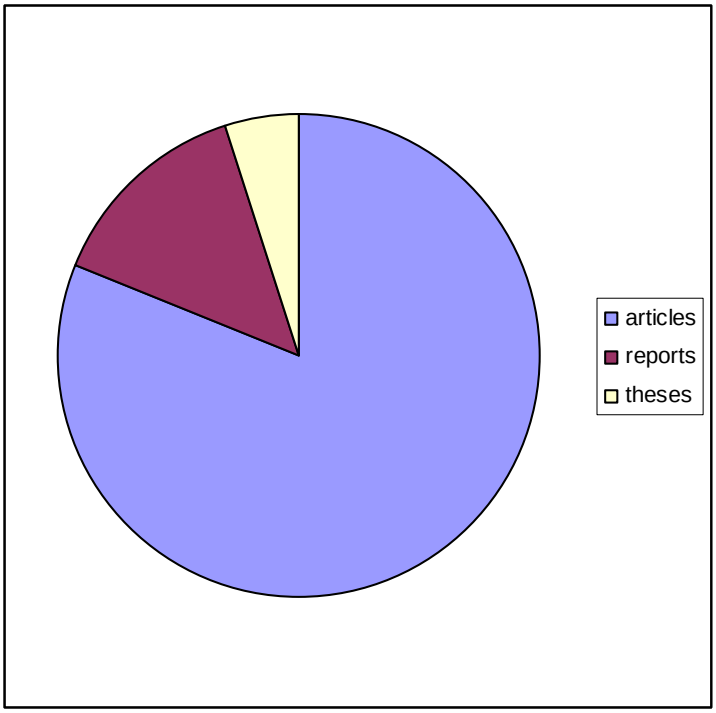
Before taking these steps however we wish to include a brief statistical snapshot of the material which the review encompasses, hoping that this will quickly provide the reader with an incisive overview of the state of the field as discovered by this systematic review.

A total of 617 items were identified as matching the MESH terms and keywords. The titles and abstracts of these items were examined to assess their relevance. Four hundred and eighty-four items were rejected at this stage and 133 were retained. Of these, 22 items were duplicates, leaving 111 items from these searches. Additional hand searching found another 62 items.

Therefore the total number of items selected for a full review was 173, 25% of the 679 found items. Four reviewers then collaborated to read and rate all retained items against the criteria set out in the 'Data rating and extraction sheets' (Appendix 1), with each item reviewed independently by two or three and sometimes, where it seemed necessary, four reviewers. A further 52 were rejected during this stage, leaving a final selection of 121 items.

The 121 retained items comprised 98 (81%) journal articles; 17 (14%) reports; and 6 (5%) theses, a distribution shown in Figure 1.

Figure 1 - Items by form of publication



Tables 5 and 6 show the Included and Excluded items by level of evidence and relevance to the topic. The tables show, for example, that no items were rated as Level I evidence; that only one item was rated as Level II evidence; and that, having been awarded a relevance rating of 3, the minimum rating needed to qualify for inclusion, it was retained in the study. Further elaboration of the meaning of each of the 'Levels of evidence' as shown in Tables 5 and 6 and in Figure 2 can be found in Table 4 above.

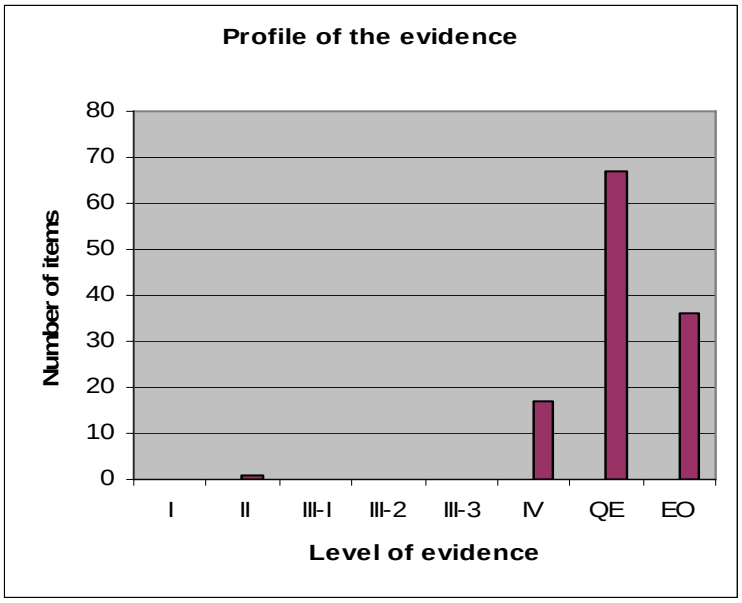
Table 5 - Included items

Level of evidence	Relevance	Totals
I	-	-
II	3	1
III-I	-	-
III-2	-	-
III-3	-	-
IV	4	5
IV	3	12
QE	4	16
QE	3	51
EO	4	5
EO	3	31
TOTAL		121

Table 6 - Excluded items

Level of evidence	Relevance	Totals
I	-	-
II	-	-
III-I	-	-
III-2	1	1
III-3	2	1
IV	2	-
IV	1	-
QE	2	15
QE	1	10
EO	2	16
EO	1	9
TOTAL		52

Figure 2: Profile of the evidence



Appendix 2 provides, for all studies that met the inclusion criteria, an outline of the methodology employed, a summary of the investigation's aims, findings and, where they were offered by the authors, recommendations

Appendix 3 identifies all excluded studies.

DISCUSSION

Complex questions, different perspectives, appropriate methodologies.

The number of items identified as potentially relevant to the review shows we may reasonably speak of a flood of publications in the last five years relating to issues surrounding clinical placements for undergraduate students. The volume of information on the topic is one indicator that the use of the systematic review technique is entirely appropriate. On the other hand, there are numerous features of the included studies that pose difficulties for the techniques normally used to test and compare the evidence extracted in the process of conducting a systematic review. For example, the studies use many different methodological approaches to cover many different aspects of what is a complex process necessarily embracing many variables, not all of which can be easily captured by a single, unambiguous definition. Moreover many of the complex entities and extended, variable processes employed are similarly resistant to quantification at the level of sophistication normally expected in systematic reviews. In some circles, at least until recent years, this might have been seen simply as evidence of an immature paradigm or as the mark of a problem not amenable to scientific method.

However, the scope of health studies has continued and will continue to broaden, causing it to encompass system design and management, care and treatment delivery mechanisms, entitlement and rationing questions, staffing issues such as scope of practice, training and functional demarcation and other topics. Governments, the public and practitioners themselves will increasingly demand that policy and practice in these areas also be evidence based and subjected to the same general sorts of systematic evaluation and review that has become commonplace in the area of clinical guidelines.

Thus will the underlying problem faced by this study become more evident and more urgent to resolve. We refer to the tension between, on the one hand, to recognising only those forms of knowledge gained through a narrow range of investigative techniques and, on the other, our pressing need to gather and act on the best available, useable, evidence-based answers to questions of undeniable importance which are not easily approached *via* those traditional techniques[17].

As noted previously, the present systematic review is part of a larger current research study and the main purpose was the highly practical one of assisting the research team to know what evidence was available on which to build a model for best practice in clinical placements for undergraduate students in aged care. Since so many (86%) of the items included in this review were either qualitative studies or expert opinion, the adoption of the traditional RCT-focused systematic review model would have lead to much data that could be useful in the larger project being rejected as too 'low level' to be useful.

One response to this type of problem has been to begin to develop alternative formats for the systematic review, adapting the instrument to the material to which it must be applied.[18,19] There already are numerous definitions of a systematic review. A Google search produces at least eight; Egger et al[20] start their book with five; and Glasziuo et al[21] carefully explain the complexities of systematic reviews and how they may need to be adapted for different questions. Pawson et al[22] discuss '… a new method of systematic review designed for complex policy interventions' which they term 'realist review'. Here the objective changes to fit what they believe is realistically achievable under the model of knowledge that underlies

qualitative scholarship: 'the basic evaluative question- what works? changes to 'what is it about this programme that works for whom and in what circumstances?' This is a part but not the whole of the aspiration of this systematic review.

A slightly different approach was taken by Hawker et al.[23] Using the methods of a traditional literature review, combined with the techniques involved in a systematic review, Hawker and her colleagues were able to produce a piece of work with a similar purpose to ours.

Accordingly this study has been built around the following broader-than-usual definition.

> Systematic reviews are **explicit** (*emphasis in original*): they state the question to be addressed, the methods by which potential materials are identified, the criteria by which eventual source materials are selected, the scales or checklist by which they are subsequently appraised and any techniques of synthesis or analysis by which they are presented.[24]

We will report in a combination of systematic review and literature review style for the purpose of setting out clear recommendations for the researchers to follow. Information from what are regarded, within the more formalised quantitative tradition, as the highest levels of evidence will be reported, followed by a thematic analysis of, first, the QE items, next the EO items and finally, information specific to or heavily concentrated on aged care.

QUALITY OF EVIDENCE

LEVEL II

In the included studies there was only one item rated as Level II, equivalent to just under 1% of all the items selected for review.

Model of care

This item was a systematic review of nursing education literature to provide a summary of research evidence about the effectiveness of models of nursing education and training. The authors found 'the evidence regarding broad models of nursing education .. notably weak …' for reasons they went on to explain. Their chief conclusion was that:

> While there is no evidence to recommend particular models, nor is there evidence to recommend against the models of nursing education in Australia at the time of writing [item 1, Executive Summary, p1].

The review also noted that 'some of the reviewed studies were concerned with application of learning to practice but almost none with patient care outcomes'[1], a very interesting observation to which we will return in a broader discussion (at p.38 below).

LEVEL IV

Seventeen of the included items, equivalent to 14% of all the items selected for review, were rated at this level. Five (29%) of them had relevance ratings of 4, while the remaining 12 (71%) scored relevance ratings of 3.

(a) Instruments:

Listed immediately below are the instruments reported in these items that have been developed to assess factors relevant to providing quality clinical placements for nursing undergraduate students.

The Nursing Clinical Teaching Effectiveness Inventory (NCTEI) [items 10, 12 and 7]

The NCTEI was originally developed by Mogan and Knox[25] for their study reported in 1987 and that study was replicated by Nehring in 1990.[26] The instrument was used in two studies covered for this review, items 7 and 10 reported in 2005 and 2002 respectively.

The purpose of the NCTEI is to determine what students and other staff regard as the characteristics of 'best' and 'worst' clinical teachers. The 48-item Likert scale checklist describes discrete teacher characteristics clustered into five subscales or categories: teaching ability, nursing competence, personality traits, interpersonal relationship and evaluation. Respondents are asked to rate their 'best' clinical teacher using the NCTEI and then their 'worst' clinical teacher. The reliability and validity of the tool has been tested in various countries [and citations to those studies are provided in item 10 at p.413].

Observations of Nursing Teaching in Clinical Settings (ONTICS) [item 7]

This instrument was developed by Mogan and Warbinek in 1994.[27] The authors' initial psychometric testing found construct validity, internal consistency reliability and test-retest reliability were acceptable. The purpose of the instrument is to observe and record the teaching behaviours exhibited by clinical instructors while supervising nursing students. The ONTICS consists of 44 items grouped into nine categories of desirable and undesirable teaching behaviours: questioning method; responding style; method of giving feedback; teaching skill; method of demonstration; interaction with patient/family; interactions with health team; undesirable teaching behaviours; and undesirable questioning/responding method.

Beitz and Wieland [item 7] compared the specific measures included in the ONTICS with those on the NCTEI and found the correlations to be to be reliable at reasonable levels of significance. While Mogan and Warbinek suggest in the abstract published with their article that ONTICS 'appears to capture an aspect of clinical teaching not readily identified by other, more subjective, instruments', students told Beitz and Wieland [item 7, p 43] that, while they

were generally positive about the discriminatory power of the instrument, they found it 'not flexible enough to capture their experiences of very different teaching in different settings'.

Effective Clinical Teaching Behaviours Inventory (ECTB) [item 7]

The ECTB was developed by Zimmerman and Westfall in 1988.[28] The authors indicate that 'content validity of the scale is adequately documented, and factor analysis suggests that the tool is measuring one major factor, "effective clinical teaching behaviours".' Internal consistency and test-retest reliability coefficients achieved satisfactory standards for reliability.' The ETCB is a 43-item, 5 point Likert scale. Beitz and Wieland [item 7] do not report on any aspects of this scale in their results.

Clinical Learning Environment and Supervision Scale (CLES) [items 8 and 5]

Saarikoski and Leino-Kilpi [item 5] reported a study of student responses to and perceptions of a clinical learning environment with a view to developing an instrument that could eventually be used provide reliable measures of the impact of a clinical environment and the quality of supervisory relationships on learning uptake. The initial instrument was developed from a literature review of earlier studies and improved upon in the light of a comparative study, Saarikoski, Leino-Kilpi and Warne [item 8], using data gathered from Finnish and UK students. The Clinical Learning Environment and Supervision Scale (CLES) consists of 27 statements, sub-divided into five sub-dimensions looking at ward atmosphere, leadership style, underlying principles of nursing care, premises of learning and supervisory relationships. The authors indicated that there were limitations to their study and did not confirm reliability and validity of the instrument. Nonetheless the authors consider that this instrument does begin to capture the multi-dimensional relationships within the clinical environment, which are not featured in other approaches.

Clinical Teaching Survey (CTS) [item 9]

Cook [item 9] found the Clinical teaching Survey (CTS) to be a reliable and valid instrument. Content validity has been reported previously.[29] The CTS is a 44 item instrument used to measure the student's perceptions of personally and professionally inviting behaviours of clinical teaching. It uses a 5 point Likert scale.

Spielbergers' State Anxiety Scale(S-Anxiety Scale) [item 9]

Spielbergers' State Anxiety Scale(S-Anxiety Scale) is designed to measure both state and trait anxiety in individuals while undergoing their clinical experience. Only state anxiety was measured in Cook's study [item 9].

Critical Success Factor ratings [items 13 and 6]

The technical purpose of the study was to identify the critical success factors affecting the transfer of nursing knowledge during clinical practice placements. Seventeen Critical Success factor ratings were identified by students during this study. One of the key factors of interest to the researchers was to use the instrument to detect any differential impact of prior knowledge on the patterns of learning evident among the students.

(b) Findings from Level IV studies

Most valued traits of clinical teachers from the student perspective:

Students, when asked to identify and rank the qualities that distinguished effective from ineffective clinical teachers, repeatedly identified skills in forming and managing 'interpersonal relationships' as the primary identifier.

- A replication in 2002 by Australian-based researchers [item 10] of an earlier study (Mogan and Knox 1987)[30] asked 104 nursing students and 17 clinical teachers to identify and rank the most important characteristics of effective clinical eductors. 'Interpersonal relations' was rated very highly as a key area of excellence. The 10 highest ranked characteristics of effective clinical educators as ranked by students were: 'good role model', 'encourages a climate of mutual respect', 'is self-confident', 'demonstrates clinical skill, judgement and clinical procedures and techniques', 'provides support and encouragement', 'listens attentively', 'helps students make use of practice opportunities', 'demonstrates communication skills and corrects students without belittling them' [item 10].

- A 2005 Taiwanese study of the opinions of 214 nursing students from two separate schools found they saw 'professional competence' as desirable but as a relatively less salient discriminator between 'effective' and 'ineffective' clinical teachers. Their most highly rated category, 'interpersonal relations', embraced attributes/predispositions such as 'treats students sincerely and objectively'; 'treats students as people with thoughts and wisdom'; 'avoids subjectively judging students' [item 6].

- A 2002 Irish study, using intensive methods with a small sample group, added some further detail to the student perception: highly rated clinical teachers were perceived as aware of the student's level of development, thus recognising the student as an individual with needs specific to a particular point in their learning trajectory; they behaved inclusively, making students feel part of the ward team; and fostered professional and personal development as well as clinical learning [item 2]. The importance of conflict resolution skills was also raised by students in one other study.

- A study reported from the USA in 2000 used data gathered from a total of 229 senior and junior students across ten nursing programs further reinforced the importance of the personal relationship enjoyed by the teacher and the student by discovering statistical evidence showing that the student's perception of the mentor (positive perceptions of personality/behavioural characteristics *versus* negative ones) influences the student's anxiety during their clinical placement; and that this is almost as marked among advanced students as among those in the early years of their course [item 9].

- A Finnish study conducted in 2002 [item 5] using the Clinical Learning Environment and Supervision Scale (CLES) found that the most important factor in the students' clinical learning is the supervisory relationship. The two most important factors constituting a 'good' clinical learning environment are the management style of the ward manager and the premises or governing principles of nursing on the ward.

The need to be prepared:

Clinical practice is more effective (as measured by three scales) if mentors are deliberately and systematically prepared, but care may need to be taken in choosing the appropriate methods.

- Findings from a 2005 study [item 7] suggest that universities need to provide good orientation to clinical preceptors and educational tools. Preceptors need to act quickly on negative feedback from students, promptly review any observed shortcomings and use a clinical warning notification system to highlight any unsafe student practice and thus contribute to practice development through a continuous improvement model
- Student perceptions of the effectiveness of mentors was improved after a series of workshops and provision of materials explaining the mentoring scheme [items 7 and 11]. These findings based on Level IV evidence are reinforced by QE evidence found in items 24 and 53, but item 81 shows workshops sometimes require reinforcement *via* other training or information packages.

Student – teacher contact:

- Students prefer to have fairly frequent contact with their own personal mentor on a one-to-one basis, most probably reflecting the importance found in other studies to be attached to the personal quality and multifaceted nature of the clinical teaching relationship [items 8 and 3].
- A model of supervision using a student group as the basic unit rather than the individual was outlined. In the group supervision session students were asked to reconsider a situation that had occurred in practice, and each student would reflect on that and share their feelings with the group. Findings showed that the structure and climate of the group sessions affect students' satisfaction with the supervision as a whole, with their group members' activities and their feelings of confidence in their supervisor [item 15].

Peer teaching:

Fellow students, especially later-year students, may be an under-utilised resource as mentors, advisors, coaches, etc. Students can quickly feel independent in completing some tasks and then are willing and eager to teach others. Participants, both novices and later-year students report enjoying the relationship [item 4].

Learning styles:

Students with more/better academic preparation may adopt different and possibly more self directed learning styles.

- A study using the Critical Success Factor ratings [item 13] found that students with 'prior knowledge' – defined as those who had graduated from a vocational high school of nursing' - adopted more self-directed learning, were more confident in trying nursing skills although they may fail. Students with no prior knowledge were dependent on

hospital nurses and clinical instructors. However, they more readily transferred new knowledge.

- Rural students were found to be more confident about clinical placements than metropolitan students. The higher level of confidence and competence reported b y the rural students may be related to the perception of rural nursing as a speciality that requires high levels of competence, confidence and initiative [item 17].

QUALITATIVE EVIDENCE (QE)

Sixty-seven (55%) of the total of 121 included items were rated as QE and 16 (24%) of those QE items were assessed as having the higher relevance rating of 4, while the remaining 51 (76%) had a relevance rating of 3, the minimum that merited inclusion.

Collaboration:

At least 11 studies [items 20, 23, 28, 35, 40, 46, 55, 56, 58, 72, and 80] explicitly dealt with the need for improved collaboration between the educational institution and the clinical placement provider, the consequences of failing in this area and some strategies that can be employed to achieve the desired goal of collaboration. The building of closer and mutually supportive relationships, the foundation of what should be a partnership, is seen by some observers as necessarily extending into the management chains of both agencies and including supervising/otherwise-involved university academics on the one hand and, on the other, the onsite nursing staff of all grades. Patterns of collaboration varied from a case study involving a high degree of integration of clinical staff into the university's teaching program [item 20], with some joint appointments and teaching becoming part of the clinicians' normal role; to the provision of some training for facility staff by academics in recognition of their cooperation [item 40]. A couple of broader plans and theoretically conceived models worth further attention were located and these can be found by reference to the matrix of item summaries [items 55, 58].

Preparation:

This was a frequently recurring factor [e.g. items 21, 24, 27, 28, 33, 42, 44, 58, 59, 84, 85] among those identified as important in the conduct of successful (well-received and apparently effective) clinical practice experiences. Among the steps taken/recommended were:

- early, clear and full notice to all parties of student names, placement dates, rostering arrangements, academic staff/coordinator visits, etc [item 84]
- careful academic and practical preparation of students prior to the placement's commencement [item 84]
- adequate orientation of students to the clinical site during/even before the first working visit [item 59]
- arrangements for the regular and careful debriefing of students during and after their clinical placements [items 27, 42]
- the provision to all parties – onsite teachers, ward staff, local management, students and supervising university staff - of documentation explaining mentor/preceptor roles, what is expected from students, what their learning objectives are, and so on [e.g. item 27]
- preparation of staff in the clinical area, including those not directly involved in student teaching or supervision, to make them aware of:
    - students' needs, including the need to feel welcome, safe and valued
    - the benefits that come with the site's hosting of student placements and how to make the most of them [e.g. items 28, 58]
    - how to overcome/manage any frictions or frustrations felt by any parties [item 26]

Mentors/teachers/preceptors:

The findings relating to mentors/preceptors as outlined earlier in the level IV evidence are repeated and sometimes extended in many of the studies rated at the QE level [item numbers: 20, 25 27, 29, 30, 31, 32, 40, 55, 64]. One article [item 49] has urged the general adoption of distinct usages for the terms 'mentor' and 'preceptor', with the first describing a supportive, educative senior peer – junior peer relationship and the second reserved for a supportive, instructional practitioner – trainee relationship. Others take up the task of clarifying the terms [e.g. item 25] but in fact these terms, as well as others such as 'clinical teacher' or 'clinical practice facilitator', are used interchangeably by many writers [e.g. item 64]; and so they are here.

Despite this terminological uncertainty, there is a lot of attention paid in the QE studies to the delineation of the role and its major attributes [e.g. item 29]. Prominent among the qualities and functions nominated are: being an advisor, being a supporter, being a regulator, being a negotiator, being a networker, assisting, befriending, guiding, advising, and counselling.

However it may be defined or portrayed, the studies reviewed leave no doubt that effective mentoring/preceptoring/clinical teaching, for which the teacher is trained and well recognised, is a very significant part of any successful clinical placement for students. One statement contained in the matrix of item summaries [see item 26] – 'Having a good mentor and reporting a good placement usually coincide.' – would find support in many of the studies reported at the QE level.

Other factors raised in this level of evidence included

- Specific education for mentors/preceptors, to ensure that their role is fully understood as a specialised area of teaching, is useful and effective [items 20, 31,40, 55]
- Debriefing opportunities need to be available for mentors/preceptors to meet short term needs and to harvest their longer term observations [item 27]
- Mentors need to be clinically experienced and know the area where they are working with students, but at least as much importance must be given to their management of their relations with students in their charge [eg, items 24, 25, 26]
- Clinical staff who are simultaneously fulfilling a nursing role and mentoring/preceptoring students must have workload adjustments so as to ensure that they are allowed separate time for student mentoring [e.g. items 25, 30, 32, 60 and 84].

In general, the many studies that discuss mentoring come to the same kind of conclusions as reported earlier in the section of the report relating to Level IV evidence. Among those worth singling out for mention are items 41, 55 and 63, which mention peer support and reinforce a point about the potential of peer teaching made in our earlier report on Level IV evidence.

Curriculum:

Item 52 outlines a curriculum module for nurse educators in Taiwan to improve skills in clinical teaching. The course taught educators skills needed to assist students in applying knowledge to practice, discussing professional values and enhancing affective and psychomotor skills.

Other curriculum-related studies at this level of evidence focussed on aged care specific matters and these are grouped with the other aged care studies at the end of this report.

Models of best practice in undergraduate nursing clinical education:

There are several major studies that are considered by the review team as warranting careful attention in preparing for the next stage of this project. They include items 58, 59, 61 and 84. These examine the literature, report consultations with key stakeholders and set out recommendations for best practice in respect in this sphere of undergraduate education. While aspects of their production have earned the rating of QE, it should be noted that at this stage their recommended courses of action are themselves untested. Notwithstanding their rating under the severe terms of the systematic review regime, they are rich in insights and pointers to where future possibilities may be found.

Models of clinical placements in generic settings:

The nurses Board of WA discussion paper 'Clinical education for the future discussion paper (CEFF)' [item 56] outlines general principles for a model of clinical education. The principles outlined are:

- Maintenance of professional competency
- A learning culture is established which is based on integrity and mutual respect
- Collaboration- All parties work in a spirit of collaboration across sectors for the benefit of the care of patients and clients
- Excellence in facilitating learning - Optimal learning occurs when dynamic and evidence based practices are used;
- Learning facilitators- Those who facilitate learning in their various roles are strongly supported as being highly influential in student learning
- Innovation- The changing health environment necessitates flexibility and forward thinking approach to clinical learning all lead to caring, competent & confident graduate nurses

EXPERT OPINION (EO)

Thirty-six (30%) of the total of 121 included items were rated as EO. Five (14%) of the EO items were assessed as having the higher relevance rating of 4, while the remaining 31 (86%) had a relevance rating of 3, the minimum needed to gain inclusion.

Collaboration:

Many of the same themes that emerged in our review of other levels and forms of evidence reappear in this collection of contributions to discussion of policy and practice based on the considered opinions of experts of acknowledged standing in the field. One such is the need for closer collaboration between the higher education and healthcare institutions [e.g. item 103, 105, 108, 114, 116, 117] and the tangible benefits likely to accrue to both sides of the partnership [e.g. item 111]; while item 120, a 2005 South Australian parliamentary committee report, usefully notes the converse, viz. the problems and tensions arising from the different

missions, circumstances and weekly/annual timetables of the not-always-whole-hearted partners.

Status of clinical knowledge:

There was a recurring suggestion that clinical teaching was not given the status that theoretical teaching, undertaken in the university, has [e.g. item 108, 114, 120]. This was seen by some commentators, in effect, as resulting more or less directly from two powerful contemporary forces: first, from the funding-backed, career-driven incentive structures in Australian higher education; and second, from the politically dominant economic 'small state' paradigm with its emphasis on cost-cutting and its tendency to sometimes treat training and other forms of praxis as a cost item rather than an investment. Constructed in this fashion, this universe of discourse is alleged to constitute an obstacle in the way of redirecting attention to overcoming the knowledge – practice gap, specifically in the field of nursing clinical education [e.g. item 90]

There were suggestions that the clinical teaching funding provided to Australian universities, sufficient to support a ratio of one mentor/preceptor to eight students, is inadequate [e.g. item 105, 109, 113, 116]. No evidence or evidence based yardsticks were mentioned in these discussions.

Curriculum:

Item 103, an EO review conducted under the auspices of the Queensland University of Technology and drawing on stakeholder opinion throughout Australia, identifies, *inter alia*, desirable care content for undergraduate nursing curricula. Other contributions to this thread include items 106 and 108.

Preceptors:

Once again, as noted above, many of the findings arrived at by different means and presented earlier find support and sometimes a more extensive presentation in the material considered for this section. One such theme worth noting is the idea of matching students and mentors according to teaching and learning styles, modes of self presentation and leadership capacity [see e.g. item 112]. Another theme equally worth recalling is the finding that students, even relatively experienced later-year students, often find clinical placements stressful and require targeted preparation to combat any distressing or wasteful consequences [items 114, 115]. A third theme concerns the prevalence of the unexamined view that clinical teaching is a relatively simple activity making no special demands on any qualified professional whereas it is more accurately seen as a specialised form of teaching and deserving of special recognition and, possibly, some dedicated reward structure [items 118, 119]

Models of clinical placements in generic settings:

In describing what is needed for models for clinical placement organisation item 106 makes the same kind of points that are made in item 56 (see QE). However, again, there are no models that have been tested and validated. The 'preceptor model', which is considered an Australian model, appears to receive support at the QE and EO level but with no explanation

of the details of this model, only acknowledgement that preceptors/mentors make a crucial difference.

AGED CARE SPECIFIC – FOR ALL LEVELS AND TYPES OF EVIDENCE.

There were 32 items that were aged care specific or gave special, if not exclusive, attention to aged care. Of these, one (3%) was Level IV; 14 (44%) were QE; and 17(53%) were EO.

The approach adopted throughout this review report has been to lay out the material that has been discovered, reviewed, rated and summarised according to the level of the evidence as that has been defined in an earlier part of the report (see Table 4). This has necessitated a degree of repetition of themes and the associated material but this has been accepted as the cost of systematically displaying the nature of inquiry already undertaken in relation to our topic and the strength of the evidence it has produced. The only exception to this approach is the section that begins at this point. Because of the focus on aged care nursing of the larger project of which this review is part, aged care focused material has been consolidated at the end of the document to allow all the relevant evidence to be more easily compared and integrated through being juxtaposed.

Level IV

Only one of the Level IV studies explicitly focused on aged care [item 16]. The approach to the issue was based on the foundation work in this area of Stevens and Crouch (1998) who had earlier explored student attitudes to working with the elderly.

In item 16 the results showed that working with older people was the least preferred work area both pre and post test. The explanations given by students were –

- boring, frustrating or unpleasant work
- fear or discomfort with old people
- issues around death and dying
- depressing environment
- negative character of the residents
- the elderly will not get better
- perceived inability to cope with this care
- less diversity of illness and more negative experiences.

The authors also found that students who had worked as a carer in a nursing home during the course did not want to work in aged care.

Although Happell's study [16] does not directly answer any of our nominated research questions, it may provide pointers to the features which need to be taken into account when building the model of best practice that is the final objective of this study.

Qualitative Studies (QE)

Preparation:

Robinson et al [item 84] advocated careful and detailed planning prior to the occurrence of the placement, where all RACF staff were organised and informed about the placement and encouraged in other ways also to show it is important to them. They recommend that this preparation should include at least the provision to the DON and designated supervisor of the following information: students' visit dates and names; outline of their prior learning and clinical experience; and a detailed outline of their learning objectives for the placement.

Mentors/teachers/preceptors:

The same messages came through in studies in aged care as were found in generic studies. The importance of a mentor/preceptor who was enthusiastic and knowledgeable about aged care and who was prepared to share that knowledge in a generous and objective manner with students was highlighted once again. The significance of training programs directed towards these specialist staff and the desirability of introducing minimum standards related to currency of competencies and recency of practice are topics covered in some depth in item 61.

Attitudes to aged care as work:

A handful of studies [items 54, 60, 65, 74, 84, 85] were particularly important in relation to student attitudes to working in aged care settings. The common finding about students' initial attitude is that it is negative; although studies vary in their judgements as to what might possibly be done to alter that.

Happell's results [item 16 , Level IV] are supported as are recommendations for improved aged care content in the undergraduate curriculum and all the issues surrounding support in the clinical setting.

Fagerberg [item 74] found conditions which could apparently make placements in aged care appealing and Abbey et al [item 85] suggests that the aged care industry needs to make efforts to market the nursing career opportunities it offers in terms that are more positive, and, in particular, to be clear about what is specialised about aged care.

Both Robinson [item 84] and Abbey [item 85] emphasise the importance of preparing students for the 'reality shock' of caring for people with old bodies and minds that are lost, and people that have been 'in care' for months or years. This can be a much greater adjustment for students to make than in the acute settings where often patients are healthy individuals attending hospital for a procedure to part of their body.

Other opinions were expressed by students and staff from personal experience, indicating, either a criticism or defence of the clinical placements in aged care.

Curriculum:

The importance of the aged care component of the undergraduate curriculum to allow adequate academic preparation of students to work in aged care has been emphasised in items 54, 61 and 65.

Curriculum intended to prepare nursing students for work in the sector must focus on aged care issues, not concentrate on acute care with age as a variation or aspect or general nursing. Teachers must be knowledgeable and enthusiastic.

Age/ gender and prior experience of students:

The presence/absence of prior experience in aged care settings (note that many of the students in the various study populations have worked as care assistants in aged care facilities prior to their participation in the study) rarely if ever seems to explain or be correlated with any difference in their reactions to clinical practice or to changes in how it is delivered. If there are exceptions to this it would be that those with substantial experience as care assistants/Assistants in Nursing find it difficult to switch from a task orientation to a more questioning, critical and holistic approach of the kind appropriate to an RN's role; and those with prior casual work experience in the sector are not significantly more likely [item 85], and, according to evidence cited elsewhere, may be less likely [item 16], to see it as a possible future career choice.

Models of clinical placements in aged care settings:

The included items in this review do not have among them what would be termed a model for the mounting of quality of clinical placements. As suggested above, different studies have advanced different suggestions as more or less important considerations when planning quality clinical placements, and the significance of some of these considerations has been tested in practice. However it remains to produce a model which embodies the positive suggestions that emerge from the evidence and anticipates the pitfalls that are revealed in the studies that have been reviewed.

Resources:

The emphasis on adequate resourcing of clinical education that was found in sources not focused on aged care is repeated here. It appears both in relation to the provision of trained supervisors able to dedicate time to teaching and also basic staffing structures adequate to protect students' supernummary status, thus avoiding the 'cheap spare labour' pitfall which is highlighted in literature relating both to Australia and overseas [e.g. items 38, 61]. An aspect of the resources problem specific to aged care is the claim that materials required for normal day-to-day care may be lacking or in short supply, reducing the quality of training available or creating the impression among the students that care standards are second rate [e.g. items 43, 85]. An important research-based insight relating to the impact of poor resourcing on the quality of training that can be offered and sustained is found in item 84. While some sources [at other levels of evidence, e.g. item 99] note the desirability of periodically re-checking the suitability of aged care sites as training venues, the longitudinal dimension of the study by Robinson et al [item 84] allows the research team to document the actual vulnerability of aged care facilities to unforeseeable events which rob them of the capacity to function as demonstration sites.

Expert Opinion (EO)

Preparation

Storey and Adams's findings [item 88] were that imaginative and well-supported clinical placements in nursing homes (NHs) can have a positive impact on the attitudes of nursing students. Storey and Adams describe a process for organising, conducting and reviewing clinical placements in nursing homes which helps overcome the poor initial image/expectation of NH placements. The process featured:

- careful preparation of the cohort prior to their first site visit
- a deliberate orientation process which gives prominence to planning and recording each student's own learning goals stimulated *via* brainstorming of the cohort's learning opportunities
- discussion of both positive and negative expectations
- SWOT analysis of self and the aged care sector
- observation exercises
- four class periods on key setting-specific topics (care planning, pain control, infection control in NHs, pressure sore prevention)
- mid-point formative assessment process
- exit interviews, questionnaires etc.

Attitudes to Aged Care

Item 92 describes the experience of an undergraduate who was disappointed that her clinical placement was in aged care, rather than a children's ward. She was 'scared' of the thought of an aged care placement, but the point of the letter was to encourage other nurses to take the opportunity – as she 'loved' the experience.

Ottanni [item 97] makes the point that students appreciate aged care nursing as more holistic and interesting if they get the chance to visit older people in different settings, not just a clinical placement in a residential care setting. It has been found that if students visit older people in different settings they learn the different ways older people manage health and gain more understanding than can be shared in a classroom setting [item 97].

The items 94 and 95 outline a debate about the different perceptions of aged care found by students on clinical placement. The authors' criticism is of aged care places being organised around 'regimentation and lack of respect which leads to lack of choices for the resident. They note good intentions of most staff and appear to attribute 'staff blindness' to (i) widespread misperception that the elderly don't value 'choice" and (ii) primitive and deficient notion of 'care' unthinkingly judged adequate to 'aged care'. They do report complaining about their placement and being moved to another placement site, but are critical of a regulatory inspection system that is in place. In defence the other authors say that this place was unrepresentative of most aged care. However, this debate makes the need for ensuring that clinical placements for students only take place in facilities that render high quality care and demand an excellent professional attitude. Item 103 indicates that quality aged care environments are hard to find.

A ‘buddy’ system is described in item 100. It is a simple matching -and-visiting program designed to expose students to the lives, thoughts and needs of elderly residents (outside of their direct nursing needs). No care provision is expected; relationship building is the aim. The programme takes a regular commitment of 30-60 min per week. Academic expectations are negligible, by design. A report of an evaluation, where no methodology is described, indicated that students positively rated the experience as attitude-changing and experience-broadening. Clinical staff in NHS report observed benefits to residents. The evaluation also reported a large change-of-attitude as the outcome at pre test showed 75% of students would not work in aged care whereas75% would in post test.

Curriculum

Item 103, based on consultation with key stakeholders, outlines the desirable aged care content for undergraduate curricula in Australia and identifies resources needed to support principles and barriers to future implementation. The authors indicate that teaching and learning of aged care should reflect core values, 'respect personhood at all times' and 'to (ensure) the right to quality care in all settings'. Expertise in aged care is necessary to facilitate the integration of aged care content and for teaching the aged care content in undergraduate nursing curricula
Involvement of industry and clinicians in aged care is important in the teaching of aged care in undergraduate nursing curricula.

THE FIVE RESEARCH QUESTIONS

Having arrayed the findings of all the major included studies by level of evidence we now turn to consider their bearing on the research questions which underlie this systematic review. Information supported by higher levels of evidence, if any such is available, is presented first in addressing each question; but beyond that we have preferred to be guided by the apparent relevance of the information, its concurrence with the body of expert opinion or its suggestive power. The formal quality of the evidence has not been used to limit the material included.

The questions this review was seeking to answer were:

1. What are the attributes of a quality clinical placement for undergraduate students?
2. What factors facilitate or obstruct the creation of quality clinical placements for undergraduate students?
3. What instruments have been developed to measure the presence, absence, or changes in the attributes of a quality clinical placement for undergraduate students?
4. Are there any models for best practice in undergraduate nursing clinical placements that have been tested?
5. Are there any models for best practice in undergraduate nursing clinical placements that have been tested in the aged care setting?

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1. What are the attributes of a quality clinical placement for undergraduate students?

We found no study at any level of evidence which focused directly on that question in that form. However some of the items reviewed can be seen as touching on the question in a partial and tangential fashion and, in so doing, offering clues to where answers might be sought through further research.

Perhaps the most obvious example is the body of work (identified earlier) devoted to identifying the characteristics of 'effective' clinical teachers. Such studies tell us about those aspects of a quality clinical placement experience which students believe can be influenced by the behaviour of their clinical mentor/facilitator/teacher.

We may also glean something of value from considering the findings [e.g. item 9] that both beginning and more advanced students are prone to experience anxiety during their clinical placement experience; and that they believe this is in part at least related to the conduct of the staff member mentoring/teaching them.

Of course there are other factors that contribute to the quality of a clinical placement experience. By interrogating studies of the broader clinical environment and supervisory patterns, and understanding the impact of these, both on the learning activities and personal feelings of students, we may gather some more understanding of 'the attributes of a quality clinical placement for undergraduate students'.

Another source of influences on the student's perception of her or his clinical placement, and one which has received a surprisingly small amount of critical attention from scholars, is the university school of nursing itself. An examination of some of the studies included in this review would lead us to look at the impact of the following:

- the quantity and quality of academic preparation tailored to the situations and clinical conditions likely to be encountered in the placement site
- the general or ambient messages transmitted from nursing academics about the setting or sector in which the placement is to take place, or even about the importance of clinical placements themselves
- the quality of the effort given to the organisation of the placement and the stakeholders' perceptions of the effort and the outcomes of that effort

In turn these issues beg the question: from which standpoint is the value of a clinical placement to be judged? This is a prior question and cannot be avoided, even if it has been more-or-less avoided in the majority of contributions on this general topic.

Here we can do no more than offer as a prelude to that inescapable debate some of the possible answers found in the literature. In doing so we must note however that although answers are evident in the works reviewed, the question was not asked directly by any of them. Item 1, a recent 2001 systematic review by an eminent Australian panel, seems to implicitly reframe the question in this form: What are the attributes of the clinical placement model that has been demonstrated to best prepare undergraduate students to cause an improvement in patient outcomes?

The authors of most of the items reviewed for this project that deal directly with the issue

unquestioningly adopt the student as the arbiter of quality. Some may speak of effective placements, others may speak of enjoyable, stimulating or engaging placements, and some have gathered their data by one means while others have approached the collection of evidence in a different way: but they all focus on what the students thought of their experience.

Other investigators or observers have sought to gather the judgements of one or more of the following groups: clinical teachers, ward staff, academics, ward managers and hospital administrators, usually presenting them as equal but different, united as 'stakeholders'.

This observation is made here not because there is thought to be one correct and many wrong answers; but only because refining the principal objective – the construction of a quality clinical placement experience - presupposes a stance on this issue. A little more is said on this topic in response to research question 4.

2. What factors facilitate or obstruct the creation of quality clinical placements for undergraduate students?

Again, there is no comprehensive, focused answer to this question at any level of evidence in the items reviewed; but, again, a number of studies, usually at lower levels of evidence, indicate what may be components of an answer. These are briefly mentioned below in the form of facilitating and impeding factors.

Significant factors found in the literature under review, some of them positive and some the converse, include but are not limited to the following:

Effective clinical education for undergraduate students is not a task for any one agency: it takes two, bound by a well nurtured and constantly developing commitment to a partnership that is seen as delivering tangible benefits to all parties.

When the nursing school and the healthcare provider:

- see both their roles and their interests as inextricably intertwined
- accord a high priority to grounding the relationship firmly within their operating arrangements and organisational culture

collaboration becomes more embracing and more fruitful for, it seems, all parties.

A hard-nosed appreciation of the potential trouble spots is valuable in directing preparatory efforts and conflict management skills.

Students have been found to respond and perform better when they are given:

- appropriate clinical knowledge geared to the problems and experiences the student is likely to encounter
- a clear and realistic statement about the desired learning objectives [items 24, 38, 84] with, possibly, some opportunity to participate in the micro-planning for their achievement, together with information about assessment arrangements and the allocation of responsibilities
- information relevant to the logistical organisation of the placement including (where possible) transport and parking availability, a thorough site orientation, an introduction to site staff, details of the clinical teaching roles and responsibilities,

arrangements for accessing clinical teacher/academic advisor, schedules for debriefing
- a briefing on and discussion of what is to be expected in working closely with, and often under the delegated supervision of unregulated care workers [item 84]
- timely feedback on performance, offered without malice, condescension or delay in a professional rather than a personal framework
- opportunities to debrief during the experience and to reflect in a disciplined way at its close, individually or collectively, on the meaning of the incidents and experiences arising from the placement.

Preceptors/clinical teachers have been found to exert a very great influence on the quality of the clinical placement experience.

- Preceptors themselves and students tend to agree on what makes a preceptor capable of lifting the quality of the placement experience from the student's standpoint. All rate skill in the management of social interaction very highly among the key traits. Enthusiasm for the task of sharing their well developed clinical skills, sound pedagogic instincts and skills, the ability to provide enough but never too much guidance, and sufficient free time to give to these specialised and demanding tasks: these also are prominent among the highly rated preceptors
- Preceptors are more confident when they have received pre-training about the role
- Some observers anticipate a benefit if the preceptor's leadership styles and student's needs are matched; while others believe the highest possible degree of continuity in the relationship is a more attainable planning goal, involving matching rosters rather than personalities and sometimes settling for a small, experienced and cohesive group rather than an individual to provide the mentoring and teaching.

Clinical sites need to be carefully selected in the light of a knowledge of the vital signs of a learning organisation and the cultural characteristics that identify such places.
- A fresh and radical rethinking of the processes and parameters for managing the supply, the scheduling and, perhaps, the certification, of clinical learning places is now a matter of urgency.
- University clinical facilitators need to be able to allocate students only to very good sites. A brief encounter with a dysfunctional or seriously underperforming clinical site may teach some useful negative lessons; but to spend two or more weeks there during an important stage of one's professional preparation is more likely to blunt one's professional spirit than to hone it.
- Acceptance of a site as a training location must be periodically reviewed in the light of evidence [item 84] of how standards and culture may vary over time as a result of unforeseeable events exhausting the slim buffer that protects most aged care residential facilities from adverse changes.

Schools of nursing, for their part, need to be aware of and seeking to circumvent or rebalance the conflicting incentive structures to which they have been subject as a result of their absorption into the university sector.

A research-oriented institutional funding structure and career structure has left many nurse academics feeling under pressure to produce regular quantities of research to meet an informal quota or be left behind in terms of career advancement, prestige and further research opportunities. At a time when the unity of research and practice has come to be seen as a priority need in nursing, the present research incentives model may tend to separate

researchers from their teaching-oriented colleagues and practitioners. The model's widely perceived tendency, to privilege certain quick-to-complete-and-replicate forms of research over the difficult work of building theory – practice bridges in the company of junior and senior practitioners is seen as counterproductive in many of the items reviewed.

- A number of the studies reviewed raised the question of the appropriate ratio of teachers : students in nursing clinical practice but we are as yet without hard, contestable evidence of what is necessary. Given the place adequate resourcing was found to occupy in studies conducted in Australia and overseas [e.g.item 66], this is important. The recommendations on clinical education funding from the Productivity Commission's report[31]are relevant here.
- Some students reported having gained the impression during their university studies that aged care nursing was not a demanding or attractive career option, not 'real nursing' but more a resting place on the path towards retirement [item 85]. Given the well-known bias in media representations of nursing towards critical and acute care, negative images of aged care held by role models within the university can only raise existing hurdles.
- The shortage of qualified, experienced and enthusiastic aged care nurses in schools of nursing emerges from the literature; as does what may fairly be termed a past neglect of curriculum in this area.

3. What instruments have been developed to measure the presence, absence, or changes in the attributes of a quality clinical placement for undergraduate students?

Listed immediately below are instruments developed to assess factors relevant to providing quality clinical placements for nursing undergraduate students. Each of the instruments has been described more fully in the text of the report and in the matrix at the appropriate item numbers.

The Nursing Clinical Teaching Effectiveness Inventory (NCTEI)[items 10, 8 and 7]

The purpose of the NCTEI is to determine what students and other staff, regard as the characteristics of 'best' and 'worst' clinical teachers. This instrument was used in two studies covered for this review, items 7 and 10 reported in 2005 and 2002 respectively. The reliability and validity of the tool has been tested in various countries [and numerous citations are provided in item 10 at p.413].

Observations of Nursing Teaching in Clinical Settings (ONTICS) [Item 7]

The purpose of the instrument is to observe and record categories of desirable and undesirable teaching behaviours exhibited by clinical instructors while supervising nursing students. The authors' initial psychometric testing found construction validity, internal consistency reliability and test-retest reliability were acceptable.

Beitz and Wieland [item 7] found the correlations between the results obtained by the ONTICS and the NCTEI to be to be reliable at reasonable levels of significance.

Effective Clinical Teaching Behaviours Inventory (ECTB) [item 7]

This tool is also used by Beditz and Wieland [item 7] who comment that 'content validity of the scale is adequately documented, and factor analysis suggests that the tool is measuring one major factor, 'effective clinical teaching behaviors.' Internal consistency and test-retest reliability coefficients achieved satisfactory standards for reliability. Alternate scales reliability coefficient was also satisfactory.'

Clinical Learning Environment and Supervision Scale (CLES)[items 8 and 5]

This instrument collects and analyses student perceptions of the impact of a clinical environment and the quality of supervisory relationships on learning uptake. Five sub-dimensions are considered: ward atmosphere, leadership style, premises of nursing care, premises of learning and supervisory relationships. One international comparative study is included in the review [item 8].

Clinical Teaching Survey (CTS) [item 9]

The CTS is used to measure students' perceptions of personally and professionally inviting behaviours of clinical teaching. Cook [item 9] found it a reliable and valid instrument. Content validity has been reported previously.[32]

Spielbergers' State Anxiety Scale (S-Anxiety Scale) [Item 9]

Spielbergers' State Anxiety Scale (S-Anxiety Scale) is designed to measure both state and trait anxiety in individuals while undergoing their clinical experience. Only state anxiety was measured in Cook's study [item 9, above).

Critical Success Factor ratings [items 13 and 6]

The technical purpose of the study was to identify the critical success factors, including the student's perception of levels of prior knowledge, affecting the transfer of nursing knowledge during clinical practice placements.

4. Are there any models for best practice in undergraduate nursing clinical placements that have been tested?

The answer to this question – no – has already been presented at a number of points in this report. But the one item rated as level II evidence, a systematic review, while not immediately helpful for this particular study, poses a challenge that should not be overlooked.

The authors of this Australian report [item 1] are able to conclude that clinical education in actual settings with either real or role-playing patients is likely to be more effective than, say, undergoing the same lessons in nursing laboratories. Beyond that they feel constrained by the quality of the evidence available and, in particular, by the method employed to let caution reign; and finish by concluding that:

> While there is no evidence to recommend particular models (of nursing education) nor is there any evidence to recommend against the models of nursing education currently

in place in Australia.

The report [item 1] explains that the absence of a focus on linking clinical education to its impact on patient outcomes is one of the shortcomings of the strength of the evidence it had to consider inasmuch as it allows some other more subjective factors to exert an influence on the findings of the studies it had reviewed.. This inclination to see measures of the quality of clinical education and nursing education as a whole linked to its capacity to improve patient outcomes forces a question to the surface: what is the touchstone of quality in appraising clinical education? The objectives for most of the work included in this review are somewhat different: the model of clinical education being sought is one that students report as enjoyable, stimulating and supportive of their professional development and continuing commitment while it makes them competent at an acceptable level as judged by qualified practitioners and mandated by regulators.

This could be described as a less worthy objective or, as the review team would contend, it could be seen as a more proximate, intermediate objective and, in virtue of that, easier to measure and sooner achieved. An enjoyable, stimulating and compelling introduction to professional practice in any sphere of nursing is probably more likely to lead to a career in that milieu and to engender the enthusiasm and commitment likely to fuel life-long, self-initiated, flexible professional development. On this view the lesser, more proximate goal would be seen as a precondition for the achievement of the higher goal – better patient health outcomes - not as a substitute for it. Optimising the goals may provide a third way, as is often the case.

There are risks either way: it is always easy to lose sight of the longer-term objective, but an exclusive focus on the highest standards sometimes delays or deflects the push for mere improvements. As usual, optimising the goals may provide a third way. The issue is raised here only to encourage a deliberate choice based on the evidence that may be available *or need to be gathered*, rather than an inadvertent one based simply on the best values and intentions. The ramifications of this prior choice of benchmarks and yardsticks for the design of clinical education models lifts these considerations directly into the realm of policy design.

5. Are there any models for best practice in undergraduate nursing clinical placements that have been tested in the aged care setting?

There are no models at all for the conduct of undergraduate nursing clinical placements in the aged care setting which, at any level of evidence, could reasonably be described as being evidence based or even best practice based. Indeed, there has been no assembly of materials and practices necessary to establish what best practice is in this area of education. Although, more especially, there has been no attempt to develop a model that takes comprehensive account of the evidence of possibilities and pitfalls that has accumulated in the literature. There has been work on stating underpinning principles and productive mechanisms for such a model [items 54, 58, 59 and 84] and there is enough evidence in the literature from around the world included in the matrix in Appendix 2 to show that such a model would be received with great interest.

REVIEWERS' COMMENTS

As explained at length in the body of the report this is a somewhat unusual use of the systematic review technique to straddle a complex and multi-faceted area of educational policy and practice involving a number of discrete groupings, some of them themselves complex agencies. As such the material has forced the acceptance of a number of variations to the usual systematic review report format. What follows is less conclusive than would be required of 'Conclusions' and more discursive than is suitable for inclusion in our summary review of the 'Five research questions'. The following comments may be worthy of inclusion, or, in some cases, of repetition; but they do not easily fit into other parts of the report where comment is offered.

The systematic review revealed that aged care has attracted a relatively small share of the research and writing effort that has been devoted to the problems of clinical education conducted in healthcare sites. General nursing clinical education has been the subject of some larger scale studies in other countries, but the rigour of the methods employed has not been of the order required to yield dependable findings that could be safely applied to Australian conditions. None of the studies reviewed has displayed a very high level of 'scientific rigour' as that is conventionally understood in the literature, with only one item rated Level II and a total of only 13% of all the evidence being rated in the level II – Level IV band. None contained/explicitly proposed a validated general model of how to conduct clinical placements in any sphere, let alone aged care. Instead, the scope of all the included studies has been narrow, certainly when compared to the variety of facets that make up the clinical education package or process. That is to say, distinct aspects of the clinical teaching process or experience have been examined; but no effort has been given to conceptualising the phenomenon as an integrated whole or examining the interactions of the component parts.

Even within Australia, where a publicly funded aged care residential system has operated with nursing input for more than half a century, the quantity and quality of the research effort has left us with little in the way of firm foundations for future workforce planning and preparation as we confront the rapid swelling of the client cohort and the shrinking of the workforce, all in a time of rising expectations and sensitivity to costs. The signs are, if we may judge from the number and magnitude of government-sponsored inquiries reviewed, that Australian governments, at least at the national level, are beginning to piece together the big-picture plans that will be required to cope. The focus must now shift to expanding the capacity of nurse researchers to respond collaboratively with industry, and the capacity of service providers to realise the part that training and research will play in their future capacity to remain successful in their business and to service the expressed needs of the next generation of clients'.

It is clear that adequate coordination and collaboration between the education institution and the training site has been relatively rare and that even rarer has been an appropriately broad and ambitious vision of what might be achieved by and for the partners working together, a serious oversight given the great importance that studies at all levels have found attaches to this relationship working well.

It would be fair to say that, apart from the stress placed on the personal and professional capacities required of the clinical facilitator/preceptor and the importance of the role, no other

finding emerges with a force comparable to this repeated insistence on the need for a new approach to institutional university - industry partnerships.

An adequate preparation was found to entail some documentation of roles and responsibilities; some training of key individuals; some analysis designed to ensure that adequate resources, including free time, was available for the supervisory/teaching/preceptor role; the cultivation of an understanding of what constitutes a stimulating and supportive learning environment; the dissemination of an understanding of the benefits accruing to the site staff from their involvement with the students and the training institution.

As suggested earlier, a welcoming atmosphere in the workplace where the student is actively integrated and treated as a valued team member is seen as vital, but, as shown in a number of studies, is often notably absent. The evidence shows the need for teachers, especially the clinical staff preceptor(s) to be supportive, friendly and accessible, while also being highly experienced, professionally competent, impressive as role models and good at imparting information. The fundamental importance of a capacity to form and manage interpersonal relations is one of the findings that emerges most strongly from all the levels of evidence that have been surveyed. Knowledge and understanding of students' specified learning objectives and requirements are also an essential prerequisite if staff are to play their roles effectively.

Anxiety has been shown to be an important variable in the student experience. Preceptor conduct towards the student is one source of this distracting unease; but there are others revealed in the research. For example, students need to be prepared for the 'reality shock' of a clinical setting, in particular in aged care, where they must understand and learn to relate to people with dementia, cope with people dying, sometimes slowly and horribly; and must confront and overcome any ageist attitudes they may have imbibed.

Of great importance generally, and underpinning several of the points outlined above, is a workplace culture that provides for and values respectful, constructive and effective communication, including vigorous debate and thoughtful reflection, involving all parties.

Resourcing issues are somewhat marginalised in the literature, although the information and analysis available indicates that adequate numbers of well trained staff is a fundamental requirement for the successful induction, education and development of undergraduate students in the healthcare site. Students, the literature reminds us, are not to be regarded as cheap labour and staff cannot both teach and carry a full load of normal duties. There appears to be a case for suggesting that research into the adequacy of support levels for clinical education in aged care settings be undertaken in the light of information gathered within Australia and overseas. This suggestion, flowing from the emphasis placed on adequate resourcing in the literature, would appear to be in accord with the recommendations on the funding of clinical education in the Productivity Commission's 2005 Position Paper on *Australia's Health Workforce*.[33]

The review demonstrates the value of longitudinal studies in this area. Clinical education is a process extending over time, inescapably subject to the vagaries of time and the pitfalls and special opportunities which these bring. Processes require habits of mind, which in institutional terms need to take the form of an organisational culture. Appropriate cultures are not created overnight and they are never static. Appropriate at one time, they may become what an item [26] reviewed for this study would term, with great colour but no loss of accuracy, 'toxic'. Other illustrations of the importance of this temporal dimension will be

found in this review. One such is that time is available for the researchers to engage with the parties and understand them as they play out their many roles in changing circumstances. Most of the studies use some form of qualitative study, a method with its origins in anthropology, a discipline where even now it is common for the researcher to live among his or her subjects for extended periods of time, gaining a grasp of how the actors think about and respond to changes in their environment.

The importance of extending studies over time may be seen in a variety of manifestations in item 84. The successive reports show the development of understanding allowed by the passage of time among those living with the problems of clinical education. The review team, none of whom was involved in the work resulting in item 84, found this study to be the most comprehensive and fertile of those reviewed in the course of this project. The unanimity of opinion on this score among the members of the review team is encouraging inasmuch as it indicates that the larger project now beginning is starting from a research base of considerable relative strength.

APPENDICES

Appendix 1 - Data rating and extraction sheets

Level of evidence

1.1 For Experimental papers this is rated 1 – IV
1.2 For Qualitative papers they are assigned the value QE
1.3 For Expert Opinion papers they are assigned the value EO

Quality of methods used

1.1 For Experimental papers this is rated by using the scale

4 excellent level of scientific merit and rigor
3 good level of scientific merit and rigor
2 fair level of scientific merit and rigor
1 poor level of scientific merit and rigor

1.2 For Qualitative papers this is rated by answering the following 8 questions. For articles to be considered for inclusion they must score at least 6 Yes responses to these 8 questions. For those that do not, final decision on inclusion will depend on the strength of the evidence and the relevance to the study questions and project.

		Yes = 1	**No = 0**
1	Aim of the study Is the aim clear?		
2	Paradigm: Is the paradigm appropriate for the aim:		
3	Methodology: Is the methodology appropriate for the paradigm?		
4	Methods: Are the methods used appropriate for the methodology		
5	Checking methods: Did checking methods establish rigor?		
6	Sample: Did the sampling strategy address the aim?		
7	Data Analysis: Was the data analysis appropriately rigorous?		
8	Findings: Are the findings clearly stated and relevant to the aim		
	Total out of a possible of 8	/8	

1.3 For Expert Opinion papers no rating is made

Strength of evidence

This is determined by a combination of study design (level), methodological quality and statistical precision; magnitude of the measured effects; and relevance of the measured effects to the context in which the intervention is to be implemented. For all papers this is rated by using the scale

4 very high
3 high
2 low
1 very low

Relevance

This is determined by judging the relevance of the outcome measures and the applicability of the study results to the review questions. For all papers this is rated by using the scale

4 very relevant
3 relevant
2 of some relevance
1 of little or no relevance

Evidence Evaluation Form for Experimental Studies

Article No. _____ Include Yes/No

***Section 1 - Level* of evidence:** _____

I	systematic review of all relevant RCTs
II	at least one properly designed RCT
III-1	well-designed pseudo-RCTs
III-2	comparative studies with concurrent controls and allocation not randomised, case-control studies or interrupted time series with a control group
III-3	comparative studies with historical control, two or more single-arm studies, or interrupted time series without a parallel control group
IV	case series, either post-test or pre-test and post-test

Study design:

	Yes	No	Not clear
Were the participants randomised to study groups			
Other than the research intervention, were participants in each groups treated the same			
Were the outcomes measured in the same manner for all participants			
Were groups comparable at entry			
Was there adequate follow up of participants			
Was allocation to treatment groups concealed from the allocator			
Were those assessing outcome blinded to treatment allocation (if outcome not objective)			

Section 2 - Quality* of methods used*:

4 excellent level of scientific merit and rigor
3 good level of scientific merit and rigor
2 fair level of scientific merit and rigor
1 poor level of scientific merit and rigor

***Section 3 - Strength* of evidence:**

4 very high
3 high
2 low
1 very low

***Section 4 - Relevance* to the project:**

4 very relevant
3 relevant
2 of some relevance
1 of little or no relevance

Aged Care specific – Yes/No

Evaluator/s:

Data Extraction Form for Experimental Studies

Author **Article No**

Journal **Year**

Aim of the study

Setting

Participants

Participants	Treatment group Number/total number	Control group Number/total number
Total approached		
No consented		
Complete data		

Description of Intervention (s)

Results

Dichotomous Data

Outcome	Treatment group Number/total number	Control group Number/total number

Continuous Data

Outcome	Treatment group Mean and SD (number	Control group Mean and SD (number)

Evidence evaluation form for Qualitative Evidence

Article No. _____ **Include Yes/No**

Section 1 - Quality of evidence:

(Answer yes or no to the following 8 questions. For articles that score more than 6 out of a possible 8 these are considered for inclusion in the review. Final decision will depend on ratings in the section 2 and 3 being 3 or above.)

		Yes = 1	**No = 0**
1	Aim of the study Is the aim clear?		
2	Paradigm: Is the paradigm appropriate for the aim:		
3	Methodology: Is the methodology appropriate for the paradigm?		
4	Methods: Are the methods used appropriate for the methodology		
5	Checking methods: Did checking methods establish rigor?		
6	Sample: Did the sampling strategy address the aim?		
7	Data Analysis: Was the data analysis appropriately rigorous? …….		
8	Findings: Are the findings clearly stated and relevant to the aim?		
	Total out of a possible of 8	/8	

***Section 2 - Strength* of evidence*:* (Must be 3 or 4 to be included in review)**

4 very high
3 high
2 low
1 very low

***Section 3 - Relevance* to the project: (Must be 3 or 4 to be included in review)**

4 very relevant
3 relevant
2 of some relevance
1 of little or no relevance

Aged Care specific – Yes/No

Evaluator/s:

Data extraction form for Qualitative Evidence

Author **Article No**

Journal **Year**

Method

Methodology

Data Analysis

Setting and Context

Participants

Interventions

Narrative Summary of Findings

Evidence evaluation form for Expert Opinion

Article No. _____ **Include Yes/No**

Strength* of evidence*: **(Must be 3 or 4 to be included in review)**

4 very high
3 high
2 low
1 very low

Relevance* to the project: *(Must be 3 or 4 to be included in review)

4 very relevant
3 relevant
2 of some relevance
1 of little or no relevance

Aged Care specific – Yes/No

Evaluator/s:

_____

Data extraction form for Expert Opinion

Main findings

Recommendations

Appendix 2 –Included items listed by descending levels of evidence

No	Author(s)	Title	Evidence	Quality	Strength	Relevance	Method	Summary
1	McKinley 2001	Models of nursing education and training- a systematic review of the literature	II	4	4	4	Systematic literature review to provide a summary of research evidence about the effectiveness of models of nursing education and training. Using electronic searches 764 potential articles but following rigorous review 89 retained predominantly comparative studies of educational methods.	The researchers conclude that no recommendation for the model of best practice in nursing education can be made as the link between better patient outcomes and nurses with higher levels of education has not been adequately investigated. Evidence from small RCT or observational studies provide some evidence of potentially valuable approaches to the learning of clinical skills such as the value of learning in actual clinical practice, use of actors as patients in clinical practice techniques. Computer assisted learning in combination with traditional teaching may be of some benefit. This report says that whilst there is no evidence to recommend particular models, nor is there evidence to recommend against the models of nursing education in Australia at the time of writing.
2	Drennan 2002	An evaluation of the role of the Clinical Placement Coordinator in student nurse support in the clinical area	IV	4	3	3	Mixed methods Individual interviews, focus groups and then Questionnaire used, thematic content analysis, descriptive and inferential stats. Directors of nursing, Nurse practice development coordinators and principal nurse tutors, students and clinical nurses participated interviews conducted 8 to 12 months after clinical placement. Thematic analysis from taped interviews. Students who undertook clinical experience on a nursing unit undergoing a major change n=6.	Irish study to evaluate the role of the clinical placements coordinator (CPC) and continued role development in the context of provision of student support in the clinical area. CPCs provided individual support to students throughout their placement. As a new role there was role confusion for CPCs however over time consensus and clarification has emerged as support, coordinator, facilitator and link person with individual student support as core. CPCs help students make sense of their clinical placement. Good mentors (as also found in this study of CPCs) are those who are aware of the student's stage of program, made students feel part of ward team and aware of professional needs. Definition of CPC p482; what makes for good learning environments? support, capacity issues, enhancing learning; n=12
3	Lloyd-Jones 2001	The implications of contact with the mentor for pre-registration nursing and midwifery students	IV	3	3	3	Drawn from a cost benefit study using activity data collected in an activity diary for 1 week for mentor and students. This is known as the ScHARR study. Of 125 students and 117 mentors given diaries, 81 student-mentor pairs were collated. 46% RR SPSS for analysis proportion of time.	The extent to which mentors were available to students at Uni of Sheffield School of Nursing and implications of this are discussed. Part of a cost benefit study. Mentor allocation was possible across all shifts and weekends. Consistent mentorship was important earlier in the course. When a mentor was present more student time was given to education related activities; at other times students spent more time on unsupervised auxiliary staff type role. Mentorship fails when staff are busy and students may not like to ask. Effective sponsorship enhances learning objective achievement. One student per mentor is preferred by students. When a mentor is not present ward staff will cover mostly for direct supervision activity.

No	Author(s)	Title	Evidence	Quality	Strength	Relevance	Method	Summary
4	Lofmark 2001	Student nurses' perception of independence of supervision during clinical nursing practice.	IV	2	3	3	Weekly self assessment forms in first and final clinical courses of 3yr Swedish nursing programme n=60 yr 1 n=48 yr 3 using self assessment of perceived competence on visual analogue scales. Pre and post tests.	This longitudinal study examined Swedish student nurses' perceptions of independence and explored to what extent the students had opportunities to practice different tasks during clinical practice. Clinical practice should be carefully planned and individualised to facilitate students' opportunities to practice tasks. Placement could include elder care wards. Students perceived level of independence of supervision is high at the start of their clinical Placement. Fellow students could be an under utilised resource for peer cooperation and support. Prior experience in clinical care could influence perception of independence.
5	Saarikoski 2002	The clinical learning environment and supervision by staff nurses: developing the instrument.	IV	4	4	3	Descriptive statistics supported by correlation tests of sub-categories of construct validity of instrument and reliability testing using Cronbach's alpha. n= 416 2nd and 3rd yr students from 4 Finnish nursing colleges undertaking one-month long clinical placements in hospitals. n= 416 2nd and 3rd yr Finnish students	Study aims 1. To describe and understand student perceptions of clinical learning environment and clinical supervision. 2. To develop learning instruments to evaluate those factors. Findings re 1.: • the supervisory relationship's quality (see criteria p.263 and details p263) correlated best with overall measurement of satisfaction of students • the leadership style of ward managers (and ward nurses) correlated 2nd best • 3 other sub categories 9 (ward atmosphere, premises of learning style on the ward (see p 262) correlated as well as one another, at lower levels. Findings re 2: the instrument was reliable and valid.
6	Tang 2005	Students' perceptions of effective and ineffective clinical instructors.	IV	3	4	4	40 item questionnaire with 5 point Likert scale. n=214 Taiwanese u/grad nursing students from 2 nursing schools.	This study identified clear (by magnitude of difference) and consistent (between 2 schools) differences between effective and ineffective clinical teachers (as assessed by students). Comparisons under four categories: professional competence, teaching ability, interpersonal relationships and personality characteristics. The greatest difference was in 'interpersonal relationships'. Both effective and ineffective groups scored reasonably well on professional competence (greatest similarity) with the greatest difference being in 'personal relationships', encompassing attributes such as 'treats students sincerely and objectively', treats students as 'people with thought and wisdom' and 'avoids subjectively judging students'.
7	Beitz 2005	Analysing the teaching effectiveness of clinical nursing faculty of full- and part-time generic BSN, LPN-BSN, and RN-BSN nursing students.	IV	4	3	4	Comparative study to examine full and part time nursing degree students (BSN, LPN-BSN and RN-BSN) ratings of effective clinical teaching behaviours. (n=198) Two measuring instruments used; includes open responses. Both used Likert. Administered in class time or immediate post clinical. SPSS and thematic analysis used to analyse data.	Part time students rated their clinical instructors higher in effective clinical teaching by a statistically significantly margin. Type of student or program did affect ratings but not to significant level overall. Pre-reg students can evaluate clinical teaching behaviours. The question of whether casual or part time teacher status influences efficacy or perceived 'hardness of staff' is raised. Staff need adequate preparation to provide clinical education. Three main themes of clinical teaching behaviours are supported from qualitative data: evaluative behaviours; instructive/assistive behaviours; personal (teacher) behaviours. Suggestions for future include: Academic organisations must provide good orientation for clinical faculty; use literature to guide faculty development; provide useful educational tools to assist faculty providing effective clinical instruction. Also need to act quickly on negative feedback from students; review differences between clinical teaching and clinical evaluation; and use clinical warnings through a continuous improvement model to develop practice over time.

No	Author(s)	Title	Evidence	Quality	Strength	Relevance	Method	Summary
8	Saarikoski 2002	Clinical learning environment and supervision: testing a research instrument in an international comparative study.	IV	4	4	4	Clinical Learning Environment & Supervision Scale (CLES). Likert scale and 27 statements to evaluate the learning environment & supervisory relationship n=558 (Finland n=416; S.Eng n=142) 2&3rd yrs ungergrad placement.	CLES instrument measures differences between groups. No significant difference in how students worked with mentors but Finnish students met more frequently with nurse teachers than English students. Finnish students rated their clinical placement and clinical supervision higher than UK students. Individual supervision models were used.
9	Cook 2000	The relationships among nursing students' perceptions of inviting teaching behaviours of clinical faculty and students' anxiety during clinical experiences.	IV	3	3	3	Comparative study using self report questionnaire using 3 instruments to measure state anxiety and links to positive and negative teaching behaviours of clinical nursing faculty. Descriptive correlation & comparative design n=229 undergrad B.Nsg students n=106 Senior, n= 123 junior across 10 programs in US.	Faculty should be aware of how their teaching behaviours are perceived by students and may influence student anxiety during clinical placements. Junior students perceived faculty to be more 'inviting' than senior students. Students' perceptions of faculty do influence anxiety. Statistically significant $p<0.01$. Both personally and professionally perceived inviting teaching behaviours are important. State anxiety measure was no different between juniors and seniors therefore seniors may need just as much or more emotional support than juniors. Content validity of the CTS (instrument) established and faculty may wish to use this tool to gauge student's perceptions of their teaching behaviours.
10	Lee 2002	Nursing students' and clinical educators' perceptions of characteristics of effective clinical educators in an Australian university school of nursing	IV	4	4	4	Comparative study - SPSS descriptive statistical analysis and tests for differences between groups. University school of nursing n=104 undergrad students n=17 clinical educators	Identified the 10 highest ranked characteristics of effective clinical educators, finding substantial agreement between staff and student group with slight differences in ranking among items; confirming the findings of Mogan and Knox (1987), originators of the instrument. (See Table for top ten characteristics) Strong performance in the ' Interpersonal relations' category of items was highly valued.
11	Suen and Chow 2001	Students' perceptions of the effectiveness of mentors in an undergraduate nursing programme in Hong Kong.	IV	3	3	3	4 phase study; preparation of mentors; identifying student requirements; development of questionnaire (based on interview results); application of questionnaire; improvements to mentoring programme; reapplication of questionnaire. Thematic analysis; modified delphi, pre-post intervention/SPSS.	During phase 4 improvements to mentoring programme (particularly training of mentors) between pre and post intervention training. 1. Students endorse the importance of 5 aspects of the mentor's role specified in the English National Board for Nursing and Midwifery guidelines. 2. Production of a survey instrument able to measure student satisfaction with mentoring program and mentors. 3. Discovery of steps which improve the training of mentors and the implementation of the mentoring program.

No	Author(s)	Title	Evidence	Quality	Strength	Relevance	Method	Summary
12	Andrews 2000	Appraisal of clinical teaching behaviours by diploma nursing students and their instructors.	IV	2	3	3	Aim of the study Appraise clinical teaching behaviours by diploma nursing students and clinical instructors. Nursing students and clinical instructors in New Foundland 441 diploma nursing students 58 clinical instructors from 3 hospitals Description of Intervention (s) Nursing Clinical teaching Effectiveness Inventory (NCTEI) measured clinical teaching characteristics.	All 48 items on NCTEI were rated highly by students and teachers. Students had significant differences in 19 of the 48 items and 4 categories – teaching ability, interpersonal relationships, personality traits and nursing competency.
13	Tsai 2005	The critical success factors and impact of prior knowledge to nursing students when transferring nursing knowledge during nursing clinical practise	IV	4	3	3	Nursing colleges in southern Taiwan Description of Intervention (s) Group 1 - Prior knowledge before clinical practice – 219 students The treatment group is considered to have engaged in prior knowledge – this was defined as those who had graduated from a vocational high school of nursing (hard to quantify how this translate into Australian practice – no explanation given) Group 2 – No prior knowledge before clinical practice. - 203 students Students asked to rank 78 items of Critical Success Factors for transferring nursing knowledge. Likert scale.	Aim of the study To explore the critical success factors in transferring nursing knowledge and the impact of prior knowledge when evaluating the success factors for transferring nursing knowledge. Results Item scores for Likert scale were summed and divided by the number of items to produce the item average scores for the scale. The higher the item the more the student agreed with the statement. Success factors that were rated about 5.20 were reported for each group – group 1 – 21 items, group 2 – 22 items. The two groups' factors were then rated to produce 17 items that were Critical Success Factors. Testing between the two groups was conducted on these 17 items. On 12 of the items nursing students with prior knowledge had more confidence than nursing students without prior knowledge. Prior learning students adopted more self-directed learning, more confident in trying nursing skills although they may fail. Students with no prior knowledge were dependent on hospital nurses and clinical instructors. However, they more readily transferred new knowledge. Rating of different success factors (12 items – see study)
14	Mamchur 2002	Preceptorship and interpersonal conflict: a Multidisciplinary study	IV	2	3	3	Questionnaires n=234 of students and preceptors in final clinical placement of UG programs in 4 disciplines - nursing included. Nursing students n=34, preceptors n=35.	Prevalence of conflict - nursing students (24%), nursing preceptors (17%); the degree to which this affected the relationships - not specifically reported by discipline but students felt more affected than preceptors. Students and preceptors view conflict differently. Factors occurring in practicum, which contribute to conflict - not discipline specific - expectations of the preceptor, personality issues and institutional issues. Outcomes of conflict - not reported by discipline - 31% students and 61% of preceptors reported conflict resolved, but 20% of students and 3% of preceptors felt conflict was not acknowledged or resolved. Authors conclude preceptors need to be prepared for the role.

No	Author(s)	Title	Evidence	Quality	Strength	Relevance	Method	Summary
15	Lindgren, Brulin, Holmlund, Athlin 2005	Nursing students perception of group supervision during clinical training	IV	3	3	3	Questionnaire – time 1 and time 2. Nursing students enrolled in a 3 year nursing course (n=49) – 1st data point, (n=43) – 2nd data point. Placements in acute hospitals in Sweden	Investigation of nursing student's perceptions of and satisfaction with clinical group supervision using a model of group training. Research applies to experience in-group supervision during clinical training in 4th and 6th semesters. Supervision occurred once a month (1.5 hour session x 9 sessions). Eight nurse teachers trained in-group supervision were the supervisors. Model – Theoretical basis is that people are unique individuals with strengths and resources who are willing to learn and be responsible for their own development. Feelings about our perceptions of what happens in the environment also affect how we react and growth will be achieved by reflecting about our feelings. Group supervision has a systematic approach based on rules in a contract between the supervisor and students – voluntariness, continuity, confidentiality, responsibility and willingness for self development. Nurses are asked to bring to the group situations about daily work. One nurse is chosen to be the focus of each session and the others are encouraged to ask questions aimed at helping the focus nurse to reflect on the situation. This model has 3 parts – formative, restorative and normative. That is to increase the nurses' knowledge, understanding and insights into professional nurses and support them in emotional needs. Ratings of structure factors – accessible room, external disturbances, presence, intact group, confidentiality, responsibility Ratings of climate factors – genuineness, acceptance, support, challenge, empathy Expectations of clinical-group supervision: 98% reported some kind of positive expectations, but 25% also reported fears and 2% had only negative expectations. Number of sessions: - 91% felt it was about right. Findings showed that structure and climate affect student's satisfaction with the supervision as a whole, with their group members' activities and their feelings of confidence in their supervisor. To create effective learning-in-group supervision both support and challenge are considered necessary for reflection – support is not enough, need to have challenges as well.
16	Happell 2002	Nursing home employment for nursing students: valuable experience or a harsh deterrent?	IV	3	3	3	Pre and post survey to examine undergraduates' attitudes to working in aged care at the beginning of their training and at the end of their training. Methodology based on Stevens and Crouch (1998). Response rate pre - 95% (n=793), post 92% (n=524).	Working with older people was the least preferred work area pre and posttest. Reasons were - boring work, frustrating or unpleasant, fear or discomfort with old people, issues around death and dying, depressing environment, negative character of the residents, the elderly patients will not get better, perceived inability to cope with this, less diversity of illness (limited experience gained) and negative experiences. Impact of previous experience: the authors also found that students who had worked as a carer in a nursing home during the course did not want to work in aged care. Authors conclude that curriculum focused on acute care will highlight that aged care is not a desirable
17	Edwards, Smith, Courtney, Finlayson, Chapman	The impact of clinical placement location on nursing students' competence and preparedness for practice	IV	3	4	4	Quasi-experimental design with pre/post test survey of nursing students. Pre-test n=137, posttest n= 121.Ratings out of 5 higher score positive.	Aim was to look at the relationship between location of clinical placements and competence and preparedness for practice from the nursing students' perspective. Pre test - Moderately confident - mean 3.65, sd - 0.93, competent - mean - 3.54, sd 0.86, Organised - mean 3.65, sd 0.93. Two way ANOVA was done to look at changes over time and metro vs. rural results. No significant interaction was found for location and time for confidence, competence and organisation. However students' ratings of competence were significantly different between pre and posttest with more positive scores posttest. Also rural groups had higher scores both pre and post test indicating these students were

No	Author(s)	Title	Evidence	Quality	Strength	Relevance	Method	Summary
								more confident both pre and post test than metro students.
18	Adams 2002	Consistent Clinical Assignment for Nursing Students Compared to Multiple Placements	IV	3	3	3	Evaluation of student experiences in a consistent clinical setting versus multiple placements. Random groups assigned to each setting. 4 quantitative instruments used to compare and qualitative method also - interviews and open ended questionnaires n+36	4 scales detected no difference between the groups' learning outcomes. Consistent clinical experiences were perceived more positively but students also wanted multiple experiences. Authors suggest that consistent clinical placements be the norm with specialty areas added in other ways - not outlined
19	Lee 2004	The impact of international experience on student nurses' personal and professional development	QE	7	3	3	Case study - Triangulation between analysis of interviews between 3 groups Students n=18, individual interviews N=7, module facilitators=4	Students face many challenges with international placements, homesickness, racism, demanding work, language difficulties, but all felt it broadened their minds and increased their confidence.
20	Arnold, Deans and Munday 2004	University and service sector collaboration for undergraduate psychiatric nursing education.	QE	6	3	4	Descriptive study	Re-design of undergrad curriculum; change to integration of education-clinical service relationship, involvement of all practitioners in clinical supervision after special education and training program resulted in high (84%) rating for possible career in mental health nursing and high positive rating for quality of placement and teaching supervision.
21	Grant and McKenna 2003	International clinical placements for undergraduate students.	QE	6	4	3	Thematic content analysis from discussions and reflective journals. n=9 from students after 4 week placement	Aware of previously demonstrated personal development benefits of O/S placements, this study focused on general clinical benefits. Findings were that the experience facilitated broadening of understanding of nursing practice and nursing culture; and generally enhanced sense of nursing competence (provided the supports on site and preparation beforehand were appropriate).
22	Dolan 2003	Assessing student nurse clinical competency: will we ever get it right?	QE	6	3	3	Focus groups (n=8), content analysis of student submissions (n=8) and other institutions guidelines/benchmarks.	Given uncertainty about nursing competency a Welsh institution revised its assessment process for competency at graduation. This was a subsequent evaluation of new system. Many inconsistencies in approaches to testing competencies, mainly due to idiosyncrasies of students, tutors and preceptors; excessive time pressures on some groups; too much reliance on one group or preceptor; all welcomed written evidence requirement but queried amount produced.
23	Draper and Watson 2002	Cadets and nursing students: same destination – different route.	QE	6	3	3	Questionnaire followed by focus groups-thematic analysis and informal discussion with academics. Brief document analysis N=10 u/grads	A study of the usefulness/adequacy of non-standard entry to nursing undergrad studies. Entrants to university undergrad nursing course after non-standard preparation (cadetships) felt comfortable during clinical placements but had trouble in seeing the significance to their nursing of the academic/classroom component of their u/grad course. At least half had difficulty in meeting academic standards. Recommendations: closer collaboration between uni and cadetship trainers; stronger academic component to cadetship course.

No	Author(s)	Title	Evidence	Quality	Strength	Relevance	Method	Summary
24	Mullen and Murray 2002	Clinical placements in mental health: Are clinicians doing enough for undergraduate nursing students?	QE	7	3	3	This paper describes a program evaluation using a sample of 10 2nd yr undergraduate nursing students from Sydney on 3 week placement in mental health. Uses broad qualitative questionnaire produced specifically for this study. Thematic analysis of survey data.	Evaluation of a program to prepare students for placements and adequately orient students to their placement. It produced positive experience for students in placement. Key principles of the program included: discussion of own experience of what aspects of nursing interested them; what to expect from placements, such as: not running errands, emphasis on professional image of mental health (MH) nursing; and commitment to student learning. A student package was developed to give structure to the placement. Interactive workshops with clinician facilitators and group reflection were strategies that made placements positive for students and staff. Findings include that: clinicians with a commitment to student learning are pivotal to overall impression of placement; students need to be well prepared so they can have a swift transition in the pursuit of learning experiences; and there is a potential connection, though no direct tested relationship, between good clinical placement in MH and an interest in MH as a place to work. Focus on overall experience of what MH nursing is about is more important than procedural task/skill development.
25	Spouse 2001	Bridging theory and practice in the supervisory relationship: a sociocultural perspective	QE	6	3	3	Multimethod longitudinal Constructivist/naturalistic study with n=8 pre-reg nursing students from 4 year BSc program. Interviews, observation, documentary analysis (critical incident), and illustrative work. Constant comparative and interpretive textual analysis used.	This paper evaluates the various theoretical frameworks for conceptualising supervisory relationships in clinical settings. It explored factors influencing the professional development of 8 pre reg students. Most significant influence was effective mentorship. Themes to consider are: the quality of sponsorship to the clinical setting; the nature of the student-mentor relationship; assessment and planning of educational experiences. Provision of opportunities to participate in legitimate peripheral activities and assessment and coaching activities of mentor. Available resources and social environments in which students work and learn, and the mentor's capacity to think out loud influence knowledge and development potential. A theory of this relationship is articulated.
26	Gray and Smith 2000	The qualities of an effective mentor from the student nurse's perspective: findings from a longitudinal qualitative study	QE	6	3	3	Grounded theory study of Scottish students in the adult branch of pre-reg program. Students were interviewed 5 times over 3 years for perceptions of mentorship experience and qualities of a mentor. n=10 interviews and diary; n=7 diary only. Constant comparative analysis.	This paper provides some generic insights into a preceptor-type role. Findings are that these Diploma students quickly lost their idealized view of what a mentor is and should be. Over time they developed insights into qualities of an effective mentor. Students soon recognised the importance of choosing a good role model. By learning their mentors' likes and dislikes students realise it affects their overall assessments. A mentor is a staff nurse who facilitates learning and assesses student progress. Having a good mentor and reporting a good placement usually coincide. Identified themes: fear of unknown; reality hits home; becoming a branch student (adult); total surrender of supernumerary status. 'Toxic mentoring' is mentor-as-gatekeeper of learning: these mentors are avoiders/dumpers/blockers/destroyers/criticizers. An effective mentor guides, supports, assesses, and supervises students. This role is potentially a source of great comfort to students, as mentors remain a linchpin of their learning throughout practice.

No	Author(s)	Title	Evidence	Quality	Strength	Relevance	Method	Summary
27	Langan 2003	Faculty Practice and Roles of Staff Nurses and Clinical Faculty in Nursing Student Learning.	QE	7	3	3	Questionnaires and focus groups - thematic analysis. Convenience sample from 2 nursing schools, one that insisted on faculty taking part in clinical placements with students and one that did not. Faculty-practice-expected sample = 6 academics and 10 staff nurses. Non-faculty-practice sample = 9 academics and 12 staff nurses	Uses the role episode model as ongoing construct. Defined as a role episode is a complete cycle of role sending, response by the focal person and the effects of that response on the role senders. Inter-rater reliability was 85%. Main themes from staff nurses were: Staff Nurse Overload: Staff nurses felt more overloaded when working with faculty who maintained clinical practice than those who did not. Staff Nurse Role Conflict: Conflict occurred when non practising faculty members could not meet the expectations staff nurses perceived. Staff Nurse Role Ambiguity: Lack of information about student performance parameters. Lack of instructor available to share information, Role Expectations: Disagreement about teaching and supervision of students. For example, first time performance of technologies on patients. Nursing education administration saw this as a faculty responsibility. Nursing service admin thought it could be a shared responsibility. Staff nurses wanted to make clear they retain responsibility for patient care. Staff nurse were also expected to invite students to participate. Main themes from faculty members were: Faculty overload: All felt that there was lack of time to accomplish all the course objectives or activities the faculty would like to accomplish. Faculty role conflict: Generally not a problem between faculty staff and nurse. Some faculty commented staff were too task orientated. Practising faculty staff had role conflict with fitting in other academic tasks as well as clinical. Faculty role ambiguity: Minimal Conclusions: Schools of nursing should have a formal system of tracking faculty competence. Written guidelines/explanations for clinical faculty should be available in a resource book or on computer file. Guidelines for clinical faculty duties and responsibilities and staff nurse duties and responsibilities in regard to student learning should be distributed to staff nurses and faculty staff. Staff nurses should have in their job descriptions a responsibility to work with students. Staff nurses should receive a list of nursing student's goals, objectives for the day, skills and technologies they can perform and skills and technologies on which the faculty member must accompany a student. Other recommended changes: There is a need to reward and motivate staff to participate in clinical practice; and a need to develop other career structures that encourage people to stay as expert clinicians while providing support for research and teaching.
28	Grindel, Bateman, Patsdaughter, Babington and Medici 2001	Student Contributions to Clinical Agencies: A Comparison of Adult Health and Psychiatric Staff Nurses' Perceptions.	QE	7	3	3	Survey - mail back. A 54 item survey, Nursing Student's Contribution to Clinical Agencies (NSCCA), was developed by the authors for use in the study. Survey focused on effects undergraduate nursing students have on staff time, staff development, quality of care, staff's personal satisfaction and	Staff nurses recognise that nursing students make contributions to the unit during their clinical rotations. There was no significant difference between nurses in the two different setting types (AHMS and MHP) on the total survey scores measuring student contribution to clinical practice. However, on a global indicator AHMS nurses rated student contributions higher than MHP nurses. Both groups agreed that students enhance the clinical setting as a learning environment and allow opportunity for mentoring. • AHMS nurses also felt that students interact with patients and families; become a source of recruitment; and provide individualised support and care for patients. • MHP nurses enjoyed teaching students; felt that students allowed nurses to participate in their professional development and to assist with patient care. • Student presence in the units did not impede sharing of ideas, make staff feel

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							unit standards and practices. Used a 5 point Likert scale. Staff in two different types of setting (acute medical and psychiatric inpatient facilities) were surveyed – adult medical/surgical nurses (AHMS) and mental health/psych nurses (MHP). 250 surveys distributed, 43% response rate (54 AMHS and 54 MHP nurses). Internal consistency, reliability, descriptive statistics and independent t-test for comparisons between AHMS and MHP staff nurses.	insecure, threaten assistive personnel or threaten role development. • Differences between the two areas may be a factor of the patient populations and work environments. AHMS nurse spent time demonstrating equipment, procedures and explaining how to obtain supplies. MHP nurses do less of this. • Clinical rotations benefit both the student and nursing staff. Staff gain satisfaction from participating in student learning and academic institutions; and clinical agencies should recognise the mutual advantages of collaboration and explore opportunities for reciprocal educational partnerships.
29	Duffy and Watson 2001	An Interpretive Study of the Nurse Teacher's Role in Practice Placement Areas.	QE	6	3	3	Focus groups: purposive sample; interview guide provided. Groups taped, verbatim transcript. Group consensus on themes. n=18 nurse leaders from 3 different nursing departments in Scotland.	Five main themes apparent in data: Being an advisor. Being a supporter; Being a regulator; Being an interpreter; Being a net worker. Nurse teachers have a multifaceted role: • advice and support to trained staff and students • regulating professional standards • interpreting assessment documentation • networking. Small sample means this is not generalisable. Good overall summary in 'Conclusions' p557.
30	Andrews, Brodie, Andrews, Wong and Thomas 2005	Placement matters: students' clinical experiences and their preferences for first employers	QE	8	4	4	Mixed method: questionnaires n=650; interview n=30. Focus groups n=7 approx 100 Higher Education nursing students in NHS hospitals.	1.That the clinical placement experiences (CPEs) are 'complexly structured experiences' (p.151) which: • strongly influence employment preferences • are usually accepted by the students, in fact if not explicitly, as representative of the whole institution, not just the ward(s) actually experienced. 2. That CPEs depend heavily on the presence/absence of a: • supportive nursing environment • adequate or inadequate mentorship • effective ward management (esp. as reflected in tone of group culture, elements of racism, etc). 3. Some key influencing factors include: • staffing capacity to mentor learners • attitudes to academic side of nursing • student's own personal qualities i.e. self assertiveness / not, self directed/not etc.

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31	Begley and Brady 2002	Irish Diploma in Nursing students' first clinical allocation: the views of nurse managers	QE	6	3	3	Grounded theory; unstructured interviews n=10; experienced ward managers in acute wards hosting trainee nurses from academic institutions	Aim: to ascertain views of Irish general nurse managers of the Dip in Nsg student's first clin prac allocation. Findings: • the accommodation of student nurses with greater theoretical and intellectual preparation posed few problems • role of well-trained Clinical Practice Coordinators (CPCs) was vital • students' questioning, articulate approach helped staff (despite early apprehension) • supernumerary - yes, but learning also needs supervised practice, not just observation. • CPCs may benefit from some incentives.
32	Hutchings, Williamson and Humphreys 2005	Supporting learners in clinical practice: capacity issues.	QE	6	3	3	3 focus groups (nurse managers; nurse mentors; matrons/DONs). Content/thematic analysis	Aim: to discover the issues which determine capacity to accommodate clinical practice students. Results: it is complex. Obviously case-by-case basis. But the factors to which the decision makers paid attention were: What makes for good learning environments? - support, capacity issues, enhancing learning.
33	Calman, Watson, Norman, Redfern and Murrells 2002	Assessing practice of student nurses: methods, preparation of assessors and student views.	QE	7	3	3	Questionnaire, documentation review, interviews with 13 programme directors, 12 group interviews (N=72 students from 7 institutions)	A scoping study of clinical competence assessment (i) methods & (ii) philosophies in all of Scotland's nurse training institutions. Results: Students had little confidence in methods to assess competence Complaints of inconsistency in procedures and personal bias influencing grades Institutions had no validity checks in place clinical assessors poorly trained, behind the times , academics not often seen.
34	Tuohy 2003	Student nurse-older person communication	QE	6	3	3	Mini ethnography participant observation - semi structured interviews n=8	Aim: to determine how nurses communicate with older persons. Findings organised under four headings: types of communication; modes of communication; factors hindering/enhancing; students' approaches. Recommendations. 1. Promote person-centred care to aid role modelling for students. Increase students' theoretical education re inter-personal skills 2. Need preceptors in clinical environment that can promote better nurse-older person communication 3. Need regular auditing of clinical placement sites as suitable learning environment since suitability waxes & wanes. 4. Increased facilitation of effective practice whilst students are on placement
35	Corlett 2000	The Perceptions of Nurse Teachers, Student Nurses and Preceptors of the Theory-Practice Gap in Nurse Education.	QE	7	3	3	Group interviews n= 23. Semi structured interviews n=22 Thematic analysis	Themes identified were: Theory practice gap does exist: large for students, smaller for staff. Clinical placements too short for meaningful learning. Problems with sequencing of theory and practice. Lack of collaboration between clinical areas and educational institutions. Lack of clarity regarding link teacher's role.
36	Chow and Suen 2001	Clinical Staff as Mentors in Pre-Registration Undergraduate Nursing Education: Students' Perceptions of the	QE	6	3	3	Semi-structured interviews. Chinese students, n=22.	Mentors' roles need to be: • assisting • befriending • guiding • advising • counselling.

No	Author(s)	Title	Evidence	Quality	Strength	Relevance	Method	Summary
		Mentors' Roles and Responsibilities.						
37	Davies, Gell, Tetley and Aveyard 2002	Learning to nurse in care homes: student support	QE	6	3	3	Survey and evaluation of DONS n=40	Working group established to find strategies to improve clinical placement experience in care homes. Identification of liaison role as important. Usefulness of a dedicated study day for DONs; Development of guidance notes for students; link teacher support in Nursing Homes DONs felt valued due to shared information and good liason with University
38	Wade and Skinner 2001	Student placements in nursing homes.	QE	7	3	4	Semi-structured interviews of two groups. n=17 undergrad nursing students who had/had not undertaken aged care clinical placements; n= 7 DONS	The study's aims: 'gain an understanding of the view of a range of staff and students about placements in nursing homes'. Three themes are used to organise findings 1. Expectations of placements by students and homes 2. The theory practice-fit 3. Roles in nursing homes Box on p 16 clarifies roles: manage supernumerary status; discuss competencies; explore what is expert about care; add mentor day; orientate students & know what they have to achieve; give students specific aged care information eg about dementia and Parkinson's.
39	Lopez 2003	Clinical teachers as caring mothers from the perspectives of Jordanian nursing students.	QE	7	3	3	Ethnographic ethno-nursing semi-structured interviews conducted in Arabic and English. Thematic and pattern analysis n=19. Jordanian undergrads in 4yr program; purposive sample; 8 male and 11 female participants.	Cultural awareness needed in clinical education. In Jordan mothering is a role of clinical teachers in the orm of being supportive and understanding, blending into clinical, working side by side with students and easing the way. This need arises from Jordanian religious and family structures (family major unit of social organisation). Useful insights into clinical teacher relationships in Jordan or with students from different cultures, and nurturing to independence generally.
40	Addis and Karadag 2003	An evaluation of nurses' clinical teaching role in Turkey	QE	7	3	3	Questionnaires to n=91. Turkish nurses who had worked at least one semester with students. Study using questionnaires about patient care, management, and research and teaching roles. A pilot was done with 15 nurses and tool developed by authors. Descriptive statistics.	The study found that nurses were: • good at providing materials and equipment requested by students • least effective at discussing patients with students and evaluating student-provided care. Reasons given by nurses for this were: overloaded with work i.e. teaching is not a nursing role: lack of equipment: and student's work slowly and hence waste the nurse's time. Improvements suggested: increase collaboration between uni and clinical placement site; introduce clinical nurse specialists; increase emphasis on clinical teaching in nurse education; and provide training courses on clinical teaching.
41	Chien, Chan and Morrissey 2002	The use of learning contracts in mental health nursing clinical placement: an action research	QE	8	3	3	Questionnaire and semi-structured interviews. Action research, action learning n=38 3rd yr students and n=7 clinical teachers; in Hong Kong.	Student autonomy and motivation in clinical learning increased through use of learning contracts (LCs). LCs increase control over learning and balance between student and teacher. Time and lack of experience impacted on LCs. some students did not know what their learning needs were Students also learn from peers. For LCs to work, need a ratio of 1 to 12 students.

No	Author(s)	Title	Evidence	Quality	Strength	Relevance	Method	Summary
42	Rogan and Wyllie 2003	Engaging undergraduate nursing students in the care of elderly residents in Australian nursing homes	QE	7	3	4	Questionnaires (9 open ended Qs) and focus groups to explore student perceptions of the program on knowledge, skills and attitudes to the elderly. N= 122 out of 160 undergrad students in structured educational program at UTS `Sydney 70% response rate; n=18 students participated in a total of five focus group each with between 2 - 5 people. Structured education program with attendance at nursing home for 1 day per week for 6 weeks, then for 4 days continuous. Descriptive interpretive theme analysis.	Findings: With educational support and structures, beginning nursing students can engage in early positive learning experiences with the elderly. Strategies that helped: • preparation tutorials to discuss ageing and expectations • student assigned to same resident (person-cantered approach) • clinical learning activities (p97) • debriefing weekly & at tutorials. Advocates reflective practice. Single descriptive study but shows good positive evidence for clinical preparation for care of the elderly.
43	Evans 2003	Problems and promises in clinical teaching	QE	6	3	3	Case study of n=1 nurse educator in Washington DC involving 11 week non-participant observation of classroom & clinical practice, semi-structured interviews and journaling. Themes & coding against existing conceptual framework for patterns & exemplars	This study explored a 'best possible case' of effective and caring educator in a long term care setting. Students identified the model clinical educator as one who is: • a caring nurse educator • actively encourages questions and discussion • has an acceptance of imperfect performance • displays accessibility • has knowledge and competence in nursing and teaching • shows respect for the students • alleviates student anxiety by giving prompt supportive feedback • has a willingness to let students work independently when ready. Onsite issues such as missing equipment or lack of access to keys hinders learning and the facilitation process. Advocates showing the value put on the students' presence by having parking for the student; and staff giving a special handover on students' residents made a difference. The 'educator as best practice' shapes the environment & relationships as a facilitator of learning'.
44	Lo and Brown	A clinical teaching project: evaluation of the Mentor-Arranged Clinical Practice by RN mentors	QE	6	3	4	Method: Questionnaire – developed by the researchers. Consisted of 4 sections 1. Evaluation of RN mentor guidebook 2. Evolution of mentor's role 3. Evaluation of students' clinical performance 4. Open ended questions related to positive and negative aspects of the Mentor Arranged Clinical Practice (MACP) and reasons for being mentors.	Evaluation of mentor's role: RNs positive about the mentoring role. • 53.8% agree or strongly agree that they were well informed about the mentoring role. • 88% stated this role was accepted by peers • 89.2% felt adequately experienced for the role • 95.4% stated it gave them job satisfaction • 98.4% indicated they would take on this role again. . When asked to rate the mentor/student partnership: • 3.1% satisfactory, 18.5% good, 47.7% very good and 30.8% excellent. Evaluation of student's performance: • 97% agreed or strongly agreed that students were professional in their approach • 95.4% felt they were able to perform competent basic care

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							Responses were rated using Likert scale. 65/68 (95.6%) return rate for 26 hospitals in northern New South Wales providing clinical placements to 2nd year nursing students.	• 96.9% stated they felt students communicated with patients • 96.9% felt that they were willing to learn • 90.7% felt that they were well prepared for basic care. Overall rating of student's performance: • 3.1% less than satisfactory • 13.8% satisfactory • 35.4% good • 44.6% excellent. Open ended questions – themes 1. Befriending 2. Realistic view of nursing 3. Valuable practicum time 4. Integration to the hospital environment . Narrative Summary of Findings Reviews the literature on the mentoring role (cites work by Vance 1993 – not sure of the evidence of these claims, possibly expert opinion)– claims that mentoring in nursing contributes to career success and advancement, increased professional satisfaction, improved preparation for leadership roles and strengthens the profession. Also argue that it empowers and inspires individuals to take risks, to reach full potential, and make contributions to their workplaces. In acknowledgement of the economic cost saving to the university from using RN mentors the university provided free educational incentives and support for the RNs in their own workplaces. Findings support the need for mentor relationships within nursing. Support for mentors vital as well as from hospital administration.
45	Remshardt 2002	Student perceptions of effective and ineffective clinical faculty teaching behaviors in nursing	QE	8	3	3	PhD thesis - phenomenology - thematic analysis. Critical incident technique. Questionnaires, focus group.	Findings reaffirm the necessity of positive faculty/student faculty/patient and faculty/student/patient interaction. Students seek out teachers who are: approachable; supportive; affirm the student's right to continue learning in the clinical setting. Effective clinical teachers were those who: enjoy teaching; are well prepared; are skilled clinicians are confident and demonstrate professional integrity and accountability. Students admire faculty who are: well informed; able to communicate; objective; willing to enter relationships based on mutual respect. Students did not want: a clinical teacher who was too dominant, who did not leave students wanted room to grow; teachers who were not available or supportive or were unapproachable.
46	Wotton and Gonda	Clinician and student evaluation of a collaborative clinical teaching model.	QE	8	4	3	Questionnaire, descriptive stats. Hospital settings, 1st, 2nd and 3rd yr undergraduate students, n=127 clinicians n=7 RNs and Ens. Testing reception of new clinical placement model	A new clinical placements model, Dedicated Clinical Units, (DCUs) was developed to meet perceived shortcomings in previous approach (see p.122). DCUs hosted/fostered' more extended/regular/frequent periods of clinical practice; closer liaison academic-clinical staff; improved information to prepare clinical staff; General positive findings on DCU's impact on (1) ward (2) student knowledge and skills (3) staff teaching and learning (4) academic role (5) student relationships (details pp123-125). Main general benefit: improved collaboration, better theory/practice links.

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47	Kelly, Simpson and Brown 2002	An action research project to evaluate the clinical practice facilitator role for junior nurses in an acute hospital setting	QE	7	3	3	Action research 1.Collection of base line /problem identification data using survey and staffing records • Implementation of role of Clinical Practice Facilitators (CPFs). • Recruitment and retention data examined • Educational audits 2. Results provided to Clinical Practice Facilitators (CPFs). 3. After 8 months, qualitative evaluation using both closed and open-ended questions. n=120 ward staff in stage 1, n=80 in stage 4.	The creation of supernumary Clinical Practice Facilitators (equipped with detailed analysis of ward problems as perceived by participants and analysis of records) proved useful in the eyes of a large majority of participants.
48	Fisher 2002	Fear and learning in mental health settings.	QE	8	4	3	Students asked to provide examples of critical incidents whilst on prac; to comment under 5 headings (see p.129) N=130 2nd yr metropolitan Aust nursing students in mental health placements in wide range of clinical settings.	1. Identification of most commonly occurring positive and negative critical incidents; record of immediate student reaction, and record of reaction/conclusions reached after period of reflection. 2. Reflection (prompted by study) illuminates and resolves the distress recorded at the time, yielding new learning, deeper/broader perspectives and raised confidence.
49	Billay and Yonge 2004	Contributing to the theory development of preceptor ship.	QE	6	3	3	Extensive lit review across professional education in numerous fields and concept analysis.	1. The relationship between preceptor and preceptee is 'pivotal'. 2. Evaluation is a challenge. 3. Preceptorship is distinct from mentorship 'inasmuch as the former is a teacher- learning relationship predominantly whereas the latter should be reserved for a senior peer to junior peer relationship'.

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50	Jackson and Mannix 2001	Clinical nurses as teachers: insights from students of nursing in their first semester of study	QE	8	3	3	Story telling -using a guided statement to gain insights about the role of clinical nursing staff in the planned clinical experience of undergrad nursing students from 1st year BN students themselves n=49 who had experienced 50hs clinical (Metro Australian Univ). Broad themes of positive and negative experiences were analysed.	Students desperately wanted to perform well and be accepted by hospital staff. Findings: • Great importance of attitudes and behaviours of staff to student clinical learning experience • Being friendly, showing interest and explaining was helpful • Passive negative behaviour of staff can make students feel unwelcomed, intrusive, and uncomfortable • Clinical competence of hospital staff is presumed by students • Being recognised as a newcomer is important • Stories showed that as 1st years many students were not proactive in seeking learning opportunities and hung back from activities. • Empowering students by showing them how to locate information and introducing them to doctors as part of the team were important positives.
51	Emberley-Burke 2000	The lived experience of the nurse educator during clinical practicum: A phenomenological study. Thesis	QE	7	3	3	Method: phenomenology Methodology: unstructured audio taped interviews – transcribed. Data Analysis: thematic analysis guided by van Manen's interpretative approach. 5 nurse educators from different nursing schools in Newfoundland – purposive sample	To explore and describe the perceptions of nurse educators regarding clinical teaching. The first two themes related to the importance of participants being guided and assisted 'at all costs'. The third theme emerged from stories of the educators being uncertain in a new situation, learning by 'trial and error'. The fourth theme reflected the educator's feeling of 'not belonging' to the clinical environment- with some clinical staff seeing their presence as threatening. This could be resolved if educators formed relationships with clinical staff at a personal level The fifth theme revolved around the notion of a clinical educator. Having to be all things to all people- with many and varied roles. Finally, the sixth theme 'guardian of safety' was the role the educators felt they must take in ensuring patient safety, while being cared for by students. Ethical and moral dilemmas arose which were often confronting.
52	Hsu 2000	A curriculum module for the improvement of clinical teaching in nursing education. United States thesis	QE	7	3	3	Design and evaluation of a curriculum module for nurse educators to improve skills in clinical teaching in nursing education. Nursing schools in Taiwan Participants Nursing instructors of a 2 year nursing program provided at a nursing college in Taiwan. Each instructor teaches 8-10 students in the hospital. This study was conducted in Nursing Practicum 1.	Development of a curriculum module – 9 days (50 hours) instruction for nursing instructors. 6 components: 1. Critical thinking 2. Communication 3. Clinical conference 4. Student assignment 5. Counselling 6. Student evaluation Nurse's knowledge base improved after taking the 9 day course. Nurse educators' teaching was skill orientated or task orientated, but not patient centred. This course taught educators these skills and the need to assist students in applying knowledge to practice, discussing professional values and enhancing affective and psychomotor skills.
53	Dyson 2000	The role of the lecturer in the preceptor model of clinical teaching	QE	7	4	4	Exploratory/descriptive qualitative approach. Data collected through 4 focus group interviews. Groups taped and transcribed. Constant comparative method associated with a grounded	Study explored how lecturers perceived their role working in the clinical area within the preceptor model of clinical teaching. Focus group interviews yielded these themes: 1. Being negotiable – Reflects the reality of the lecturer working in the clinical area and university. Access to students and preceptors may mean discussion in corridors rather than structured feedback times. Lecturers sometimes felt they were outsiders as they were not considered as colleagues by clinical staff.

No	Author(s)	Title	Evidence	Quality	Strength	Relevance	Method	Summary
							theory approach New Zealand undergraduate nursing program Convenience sample of 12 lecturers	2. Evaluating students – while primary role was educational, evaluating students was dominant theme. Interacted and worked with students to assess their performance and knowledge. Lecturers sought feedback from preceptors regarding students but this information was often filtered and selectively used or discarded. 3. Teaching students – this was contextually driven with lecturers using the context of learning for teaching opportunities. Preceptors focused on teaching practical skills of nursing and routines while lecturers focused on teaching the thinking of nursing. 4. Working with preceptors – Lecturers tried to build a relationship with the preceptors. Lecturers felt it was their job to support the preceptors in this new role particularly interpreting student outcomes, understanding school documentation, giving feedback and teaching students. Lecturers acknowledged they did not always know how to support preceptors. 5. Creating a positive learning environment – wanted to improve communication between education and clinical areas. This meant being assigned to same clinical areas and keeping staff informed and involved with student matters. Lecturers sought credibility and visibility. Four steps taken in pursuit of improvements: staff development sessions have addressed some of the issues raised: 1. Strategies to support preceptors 2. Improving the ability of the lecturers to gain constructive feedback from the preceptors 3. Preceptor workshops in the clinical settings 4. School documentation improved to be more user friendly to preceptors including descriptive student learning outcomes
54	Pearson, Nay, Koch, Ward, Andrews, Tucker 2001	Australian Aged Care Nursing - A critical review of Education, Training and Recruitment and Retention in Residential and Community Settings	QE	8	4	4	Systematic review - critical review of best available evidence	Student nurses do not hold favourable views of aged care; educators can positively or negatively influence student interest in aged care p4. Gerontology curriculum can influence students' like/dislike of aged care. Supporting current RNs in CPD can positively influence student placement experience. Course content needs to be relevant to current practice and care delivery standards. Need more gerontology specialists. Collaborative education and teaching nursing homes to support and develop learning environments with universities. Cites Warabrook Centre for Aged Care as an Australian model p7. Interdisciplinary approach to education and training helps collaborative knowledge development, whilst education and training also helps to motivate nurses. Synopsis of what is needed: • increased exposure to aged care topics and experience • more positive experiences in aged care environment and issues surrounding healthy ageing • use of appropriately qualified teachers (with aged care experience) • advanced education for staff and education for unregulated workers reduces stress and can impact on capacity to support students in aged care.
55	Fitzgerald, Pincombe, McCutcheon, Evans, Wiechula, Jordon 2001	QNC Integrative systematic review of nursing curricula undergraduate clinical education & transition support for new	QE	8	4	4	Described as an integrative review it consists of 3 discrete systematic reviews	Results of the systematic review indicated that there is insufficient robust evidence to change practice but the following key points arise • There is a symbiotic relationship between curricula, clinical education and transition (p12 & 13). • There should be collaboration between education and health care organisations to determine the priorities for undergrad placement.

No	Author(s)	Title	Evidence	Quality	Strength	Relevance	Method	Summary
		graduates						• Experience in either actual or simulated settings is supported. • Student trajectory, moving from 'intruder' to nurse, a is experienced as stressful. • Experiences of last clinical can impact or impair student learning. • Need instructors who are appropriate to the clinical placement or clinical education. • Clinical instructors need to be prepared for their role (p12) in terms of: o role definition; who performs supervision - faculty or clinical? o role confusion - supporter vs. as assessor? o what constitutes optimal supervision and learning styles? Common themes (p17): Student satisfaction- eclectic approach using different learning styles to accommodate and adapt; lack of consensus re desirable exit standards from their course; separate agendas of stakeholders; evaluation in isolation related to curricula (within current framework); lots of innovative research but little evidence of efficacy; systematic review of clinical education includes allied health workers which adds little to nursing. (p81) Clinical education review) What should be learnt? There is little evidence; pre-clinical and practice simulation is positive but little evidence; duration and timing- no evidence related to optimal; perceptions and reactions of UGs to placement. First placement produces much anxiety. Interdisciplinary education - no rigorous evidence; Peer teaching occurs commonly producing a positive experience for students but has not been evaluated; Patient participation in clinical education- there is limited evaluation but patients are effective at teaching about living and managing their chronic illness. There has been little work in nursing. Facilitating learning in clinical environment- characteristics, competence, feedback, the learning environment, good communication and non-threatening RN. Role models- a good role model has positive impact as would a clinical teacher but is not well evaluated yet. Preceptors/mentors- there is a lack of clarity between the terms can produce positive role socialization; recording clinical- there is little evidence for the benefit of clinical logs or portfolios. Computers can be used productively in clinical education. Partnerships-limited information but considered great potential between stakeholders.
56	Nurses Board of WA n.d	Clinical education for the future discussion paper (CEFF)	QE		3	3	2 phase project, literature review, workshops, stakeholder interviews	This paper outlines the inception of the CEFF project, the conceptual background of the project, the methods utilised in phase one, the findings to date (2003-2006 project life) and the planned continuation of the project in phase two. A literature review and stakeholder consultation has been conducted. Key elements of an optimal clinical learning experience for nurses and midwives are expressed in a fig p5. A research support table has been included for each of the model concepts. • Professional competency is maintained and promoted throughout the career • Environment- a learning culture is established which is based on integrity and mutual respect • Collaboration- All parties work in a spirit of collaboration across sectors for the benefit of the care of patients and clients • Excellence in facilitating learning- Optimal learning occurs when dynamic and evidence based practices are used • Learning facilitators- Those who facilitate learning in their various roles are strongly supported as being highly influential in student learning • Innovation- The changing health environment necessitates flexibility and forward thinking approach to clinical learning all lead to caring, competent & confident

No	Author(s)	Title	Evidence	Quality	Strength	Relevance	Method	Summary
								graduate nurse.
57	Saltmarsh, North, Koop 2001	Student expectations of nursing education, National Review of Nursing Education 2002 Education & Training Vol 1	QE		3	3	10 Focus groups across 5 universities in Vic, NSW, Qld n=78 students of nursing, 22 of which had cert IV or equiv experience. Theme analysis	Students, of whom 35% were ENs or had other health experience, identified that: • health care experience is a powerful motivator/incentive to go on to be an RN • nursing is demanding which is opposite to the public image and was experienced as far more complex than first thought • community at large has very poor understanding of what nurses do. The question of nursing identity was raised (p14). Nursing identities are constantly being revised by students and updated as new experiences and information is gained. First hand experience is a crucial factor in students' capacity to conceptualise self. There is a disjuncture between uni and hospital trained nursing identities.
58	Clare, Brown, Edwards, van Loon 2003	AUTC Phase 2 report. Evaluating clinical learning environments: creating education-practice partnerships and benchmarks for nursing	QE		4	4	Participatory action research (PAR) used to study 3 university/hospital partnerships (Flinders/FMC; UTS/Royal North Shore; QUT/RBH) to: • uncover social reality and shared meaning regarding partnerships • develop and implement action plans that would create the basis for quality partnerships.	Phase one of the study (Clare et al 2001) found that quality clinical education is profoundly affected by the state of the partnership between the health service and university. This phase used the PAR process to study 3 university/hospital partnerships, attempting to identify specific elements of those alliances that optimise clinical learning. Results: the best practice benchmarks for partnerships that facilitate clinical learning are: 1. Partners will develop a shared formal agreement between university and a health service regarding clinical education of undergraduate nurses; 2. There is effective and timely communication between partners; 3.The rights, roles and responsibilities of persons at every level of the clinical learning environment are clearly defined; 4 Scholarly teaching by both partners occurs in the clinical learning environment; 5. The partnership elements that promote high quality clinical learning for students are provided within the clinical learning environment; 6. There is regular monitoring of agreed partnership elements that affect learning, teaching and progress of students. Three major concerns were identified: • lack of perceived benefit at the clinical interface of the partnership • dependence on the culture and climate of the Clinical Learning Environments • unwillingness to share/disseminate innovation and best practice benchmarks. Recommendations for creating partnerships that optimise clinical learning for nursing

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								students include: • right reasons-development of a shared vision for student education and commitment to student learning; • raise the stakes-need to increase the stakes for health facilities • involve right people-choose the best people to empower and support students and support them in turn • create strong balanced relationship that is adequately resourced • trust and respect your partner and your staff • continuity of personnel • ensure good communication at all levels • formalise the relationship- e.g. via a MOU • involve all partners in planning curricula and clinical education component of curriculum review. At the clinical learning environment level of the partnership ensure (pxviii): • strong partnerships are developed between uni academics and clinicians • a positive learning climate prevails in the CLE • clinicians working with students are recognised, acknowledged and rewarded for their increases in workload • open and transparent communication between partners practised • flawless preparation of students and clinicians for each clinical placement • establish and routinely monitor good administrative structures • accept difference in partnership needs, aspirations, structures and processes and be flexible and responsive to one another's needs.
59	Clare et al 2002	AUTC phase one report- national study	QE		4	4	Identified best practices in teaching and learning for undergraduate (UG) nurses in the clinical environment from the perspectives of a range of key stakeholders.	Best practices for undergraduate clinical education: • open and accurate communication between all parties involved in teaching and learning; • quality preceptorship of students for each placement; • quality mentoring and role-modelling by experienced registered nurses • adequate orientation to each new area of practice • an environment of practical realism linking theory to practice by: o clear delineation of graduate requirements using ANCI competencies o articulation of specific learning goals by the university and the nursing student o development of opportunities to achieve practical and cognitive competence in varied skills o consolidated clinical learning experiences for continuity of process learning o appropriate collaborative assessment of students' clinical learning o continuing development and use of innovative clinical education models that promote teaching and facilitate learning; o responsive evaluation of the clinical learning environment to ensure its adequacy to teach students.

No	Author(s)	Title	Evidence	Quality	Strength	Relevance	Method	Summary
60	Commonwealth of Australia	Recruitment & retention of nurses in residential aged care final report	QE		3	3	Lit search and appraisal, survey of nurses (rego lapse). Registration data from boards and AIHW, submissions and stakeholder meetings.	This paper is not directly linked to clinical prep of UG students of nursing or clinical placement models. However, importance of supportive work environment to improve the retention of nurses by reducing stress and burnout and improve morale is noted. Recommendations/observations include: • increase undergraduate and post grad opportunities to study aged care;p16 • students perceptions of aged care- Fagerberg et al ref 27 shows positive clinical experience positive experience with preceptor • meeting residents with different conditions and increased opportunities to learn are possible in aged care. Negatives were same resident too long; same care over weeks too long, pace too slow; working alone with no support and poor resources/staffing levels. Workload has a significant impact on nurses and on student experiences.
61	Nurses Board of Victoria 2002	Review of aged care nursing component of undergraduate nursing program	QE		4	4	Survey of curricula, focus groups with Stakeholders, literature review.	Recommendations/observations: • all nurses need to graduate with competencies in the care of older people p4 • discrete topic aged care in year 3 taught by aged care nursing experts • P5 describes minimum content to be included • aged care nursing experts should be used as role models • a cultural and indigenous perspective should be employed. • develop and maintain strong partnerships between academia and industry, • all aged care placements should have adequate staffing in order to take students • suggested mechanisms must be in place when casual staff are employed to support students in aged care,. • aged care is not just basic skills it is so much more. Aged care needs to be offered in settings beyond residential aged care with education and support programs for clinical preceptors/teachers in the area of aged care nursing (including current competency and recency of practice requirements for those teachers). • need to foster positive learning environments within aged care settings.
62	de la Rue 2003	Preventing ageism in nursing students: An action theory approach	QE	6	3	4	Use of focus groups and clinical diaries over six months with N = 9 at Australian regional university. Transcribed data subjected to 'reframing' method.	Survey of undergraduate nursing students' perceptions of and manifestations of ageism. . Data is not related to actual clinical placement in an aged care setting; but seeks to understand the process of raising awareness among trainee health professionals of their own ageist attitudes in order to reduce prejudice later in their practice. Useful for the team to consider given paucity of emancipatory writing on this topic; but small sample size prevents generalisation of this knowledge as is.

No	Author(s)	Title	Evidence	Quality	Strength	Relevance	Method	Summary
63	Aston, Molassiotis 2003	Supervising and supporting student nurses in clinical placements: the peer support initiative	QE	7	3	3	Trial and evaluation of a peer support initiative. Survey design.	Peer support model where 1st year students were supported by 3rd year students in the same placement. Both students supervised by a mentor (clinical facilitator). Only preliminary evaluation available but suggests 3 themes. Issues of preparation - the 3rd year students needed more work on role expectations and boundaries. Support and feedback - Ist year students felt supported, for 3rd years it was variable depending on the mentor, 45.1% no support, 16.1% - some support, 38.7% - excellent support. Personal development - clinical skills taught were clearly identified by all students. For 3rd years it provided a trigger for them to learn, increased attention to their own practice and made them aware of being good role models. Reflective practice was not as wide as the authors would have hoped but probably needed more supervision for this. This pilot program shows some promise as a model of peer student support.
64	McCarty, Higgins 2003	Moving to an all graduate profession: preparing preceptors for their role	QE	6	4	4	Literature review	Conclusions and recommendations were that mentors/preceptors/supervisors (names used interchangeably) should be identified as a particular person and only undertaking that role. Role modelling and sharing of clinical expertise identified as the main features for successful preceptors.
65	Moyle 2003	Nursing students' perceptions of older people: continuing society's myths	QE	8	4	4	Structured questionnaire nursing students n=103	Recommendation: need improvement and increase of aged care content in the curriculum. Question: 'what would change your mind about working in aged care?' Answers Better view of aged care Better understanding of working conditions Reduce heavy lifting and repetitive work
66	McLeland, Wiliams 2002	An emancipatory praxis study of nursing students on clinical practicum in NZ: Pushed to the peripheries	QE	7	3	3	Habermasian Critical theory. Interviews n=9	Clinical debriefing withdrawn due to financial constraints. Workload of preceptors high leaving students feel powerless and marginalized although, on the whole their clinical placement experiences were positive. Article discusses the fact that the link between theory and practice disappears when time pressures and other constraint impinge on workloads. Indigenous students (Maori) were exploited during clinical placements - used as translators and giving explanations to Maori patients at the detriment to their learning
67	Lofmark, Wikbald 2001	Facilitating and obstructing factors for the development of learning in clinical practice: a student perspective	QE	7	3	3	Swedish students' diaries relating their experiences in final year and last clinical placement were sent in to researchers.	Factors which helped learning were when: students were allowed to take responsibility and work independently; practice skills; receive feedback when they did well; felt safe; had a sense of control; understood the processes in which they were involved; and cared for the patients they were looking after. Factors which obstructed learning were: staff taking over rather than showing and helping the student to undertake the task; staff who were condescending; lacked interest and would not answer questions; lack of continuity and time. When students feel unsure and unsafe they will not take initiatives, fear losing control and doubt the choice of their profession, lack self-esteem and feel inadequate.

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68	Lockwood-Rayermann, 2003	Preceptorship Leadership Style and the Nursing Practicum	QE	8	3	3	Literature review	Preceptorship is time consuming and stressful. Preceptor –student matching can be useful. Leadership styles – range from autocratic; democratic; to laissez faire and bureaucratic. Administer the LBA (Leader behaviour analysis) to preceptors to identify their styles before commencing the roles is useful.
69	Lambert, Glacken 2005	Clinical education facilitators: a literature review	QE	8	3	3	Literature review	Supports the use of ward based facilitators/preceptors. Often there is lack of clarity of objectives and role. Important for preceptor's role to be separate so that they can concentrate only on education. A positive preceptor's role may promote recruitment and retention of nurses. There is a need to link university work and the reality of everyday clinical practice.
70	Landmrak, Hansen, Bjones, Bohler 2003	Clinical supervision - factors defined by nurses as influential upon the development of competence and skills in supervision	QE	8	3	3	Focus groups. Sweden	Supplementary education needed to enhance competency in clinical supervision. Preceptors are uncertain of their responsibilities. Need to develop a post-graduate programme for clinical supervision
71	Grealish 2000	The skills of life coach are an Essential Element in Clinical Learning	QE	6	3	3	Literature review. Australia	Skilled coaches are needed to help finds ways to develop psychomotor skills together with a caring attitude. It is essential that students understand the reasoning and theory behind nursing actions as well as the need to develop clinical and psychomotor skills
72	Gassner, Wotton, Clare, Hofmeyer, Buckman 1999	Theory meets practice - Evaluation of a model of collaboration, academic and clinician partnership in the development and implementation of undergraduate teaching	QE	8	4	4	Qualitative. Questionnaires and interviews. academics n=4, clinicians n= 6 and students n=104	Describes a model of collaborative teaching and evaluation. Clinicians take part in curriculum development and teaching. Given access to computer facilities, telephone with answering machine and pigeon hole together with library and photocopying facilities. Managing the 'ideal' world (academic) with 'real (clinical) means a lot of team building – learning and shared understanding - takes time and tolerance.
73	Freiburger 2002	Preceptor Programs - Increasing Student Self Confidence and Competency	QE	8	3	3	Description of introduction of preceptor programme in Indiana. Data drawn from Preceptors evaluations of students performance, student self evaluation student journals, reports from faculty and feedback from operating agencies	Results showed that the introduction of a preceptorship programme was of overwhelming benefit to students. The students' personal self-concept, self confidence and professional self-concept are directly related to the nurses' view of the profession + feeling themselves to be professional directly influences their thinking and actions.

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74	Fagerberg, Winbald, Ekman 2000	Influencing aspects in Nursing Education on Swedish Nursing Students' Choices of First Work Area as Graduated Nurses	QE	8	3	3	Swedish study where nurses kept diaries in 2nd and 3rd year. Phenomenological approach. Interviews at end of each of their three years to understand what effect clinical placement would have on their desire to work in aged care.	Aged care theory not clearly defined - teachers did not appear competent. Students found work in aged care routine and not holistic. Clinical preceptors were regarded as weak - contrasting to acute care where they seemed competent and experienced. Nurses felt very scared of working alone with no support, financial cutbacks left little services for residents. The students did not express negative attitudes about the elderly residents, but the poor experience in clinical placement left them not wanting to work in aged care on graduation.
75	Cope, Cuthbertson, Stoddart 2000	Situated learning in the practice placement	QE	8	3	3	Interviews with students	Placements are a complex social and cognitive experience. Use of mentoring techniques derived from situated learning and cognitive apprenticeship may be useful.
76	Brown, Herd, Humphries, Paton 2005	The role of the lecturer in practice placements: what do students think?	QE	6	3	3	N=65 focus groups. Thematic analysis	Retrospective analysis of the opinions of students who had been involved in preceptored clinical learning. Results showed that support in the clinical environment was often poor and inconsistent - to make the experience productive students need to be supported.
77	Ohrling, Halberg 2001	The meaning of preceptorship: nurses' lived experience of being a preceptor	QE	7	3	3	Phenomenology. Sweden. Described lived experience of being a preceptor	Study highlighted the need for preceptors to have support - that important in the role was 'sheltering the students when learning' and facilitating that learning. Suggest that one form of support would be a 'network of preceptors'
78	Ohrling, Halberg 2000	Student nurses' lived experience of preceptorship. Part 1 - in relation to learning	QE	8	3	3	Phenomenology Sweden Described lived experience of students in clinic placements	Ultimate goal of nurses in clinical placements is to allow them to be genuine nurses. Dynamic process is characterised by desire of the students to do well. When urgent learning needs had been met - other learning took place
79	Ohrling, Halberg 2000	Student nurses' lived experience of preceptorship. Part 2 - the preceptor-preceptee relationship	QE	8	3	3	Phenomenological study examining preceptor - preceptor relationship	Themes that emerged were the need to 'create a space for learning' which underpinned all others, providing concrete illustrations, exercising control and seeking reflection. Students put high value on the need for reflection.
80	Papp, Markkanen, Bonsdorff 2003	Clinical environment as a learning environment: student nurses' perceptions concerning clinical learning experiences	QE	7	3	3	Phenomenological study Finland. Aim: To describe student nurses perception of clinical learning experiences	Themes that emerged were that on 'good wards' students felt appreciated and supported, there was good quality of mentoring and patient care - important that preceptors point out what is important in patient care. Collaboration between teachers (uni) and mentors is vital for positive learning experiences

No	Author(s)	Title	Evidence	Quality	Strength	Relevance	Method	Summary
81	Trevitt, Grealish, Reaby 2001	Students in transit: Using a Self Directed Preceptorship Package to Smooth the Journey	QE	8	3	3	Evaluation of teaching /learning package titled "transition to professional practice". Focus groups and questionnaires.	Development of package resulted from the fact that was still confusion about roles for both preceptors and students in spite of workshops to outline roles and responsibilities. This lead to development of a pamphlet to describe the basic activities of a preceptor and liaison visits to the health care facilities by University staff. The preceptorship package was found to assist in identifying learning goals and directing clinical experiences towards these goals. The assertive communication techniques outlined in the module helped students to communicate with their preceptor re matters such as their learning plan and their progress. Criticism of the package was that the students felt that completing the journal activities contributed markedly to their work load
82	Stockhausen 2005	Learning to become a nurse: students reflections on their clinical experiences	QE	7	3	3	reflective unstructured debriefing session and journal writing	The findings indicate that learning in the clinical context can be a positive experience through active engagement with patients and applying theory to practice. A supportive RN helps the learning and helps the student develop critical reflective skills. The students begin to construct a personal identity of 'becoming nurses' as they grow in confidence, develop and assimilate knowledge.
83	Clark 2005	Undergraduate and Pre Enrolment Nursing Clinical Placements Project. Brisbane: Queensland Health	QE		3	3	Data collection methods: • Focus groups with stakeholders • Analysis of stakeholder groups via surveys • Literature reviews • Consultations with peers	This discussion paper sets out the results of the three-month inquiry known as the Clinical Placement Project. The aim was to 'review the existing structure and associated processes linked with providing adequate and appropriate clinical education experiences for Queensland nursing students with the higher education sector' (p8). A six-page summary sets out the objectives, methods, key findings and recommendations. Problems addressed: Variability in provision of placement opportunities among health service districts Potential for deficit in numbers of places available Project objectives were to: • Map the availability of places in the public and private sectors • Map the requirements for placements • Develop a model for determining availability of places in QH sites • Develop an equitable, efficient allocation model for Queensland's health services • Develop strategies for improved management of requests for placements.
84	Robinson et al 2005	Building Connections in Aged Care	QE	8	4	4	Detailed 134-page report on a project 'Building Connections in Aged Care' (BCAC) that addressed the problems of introducing undergraduate nursing students to clinical placements in RACFs and ensuring that these proved to be positive in the eyes of the students. This project was built on a successful earlier, similarly named project (Robinson et al 2002) with the same objective.	Numerous incidental findings emerge together with the principal findings bearing on the major objective, i.e. discovering what factors influence attitudes towards learning and possibly working in aged care. Key themes are discussed under these headings: Significant improvements in student attitudes to working in the sector were disclosed by pre- and post-testing attitudes (results, at note 2, p4); • the generalisability and sustainability of these positive changes were studied (pp5-6); • the possible impact of students having had prior experience in aged care (p6); The vulnerability of a chronically under-resourced sector's capacity to support students and maintain quality when unexpected change strikes, depleting marginally adequate resources and reducing resilience (pp7-9). Orientation of students was identified as 'a central component to establishing quality clinical placements in aged care' (p9). • Student comments indicate the importance of 'feeling welcome' on site (p9). • All RACF staff need to be fully organised and informed about the placement to show it is

<table>
<tr><th>No</th><th>Author(s)</th><th>Title</th><th>Evidence</th><th>Quality</th><th>Strength</th><th>Relevance</th><th>Method</th><th>Summary</th></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>BCAC, was a three-phase, eighteen month operation between Sept 03-April 05 with five objectives (see p1). Six Tasmanian aged care industry partners provided sites for three different groups of students (N=61) who undertook 3-week clinical placements under the supervision of RN and EN preceptors (N=37). Three regions formed the basic organisational units, with separate student and preceptor groups for each region meeting weekly in alternate locations during the placements.

Three phases (= three semesters), in each of which a cohort of Year 2 students participated in placements in the participating facilities.

(1) scoped the issues impacting on teaching and learning clinical settings, and investigated the capacity of the RACFs to support the students' learning.

(2) assessed the possibilities of creating high quality learning in such settings, and mapped who students worked with and what they did during placements in RACFs.

(3) took a closer look at what students did, how closely they interacted with their preceptors and the views they took of residents; and also tried to assess the sustainability of gains achieved in earlier phases.</td><td>important to them. This preparation should include: dates and names; outline of their prior learning and clinical experience; detailed outline of their learning objectives for this placement to be given to DON and designated supervisor (pp9-10).
Continuity between students and preceptors, allowing the development of a degree of familiarity and intimacy was found to be highly regarded: but staffing profiles mean that continuity won't usually happen without deliberate planning as shown by placement diaries kept in Stage 3 (p10). Diaries showed that a de facto 'preceptor group' including RNs, ENs and PCAs, formed to compensate for staff profile, shifts, etc. This worked fairly well and is a realistic goal. However, regular (daily?) access to a nurse preceptor, RN or EN, seemed important. Working in the one area also important since it allows the cultivation of relationships with residents (p11) and (probably?) allows the perception of changes/patterns in behaviour and relationships which form the substance of the learning (cf, eg, in medical wards/ICU, etc).
Student activities: 39 students during Stages 2 & 3 logged their activities and who they worked with for every hour during their 3-week placement. Their records showed averages as follows:

<table>
<tr><td>Students worked with</td><td>% time</td><td>Tasks students worked on</td><td>% time</td></tr>
<tr><td>RNs</td><td>38</td><td>Medic mgmt & admin</td><td>23</td></tr>
<tr><td>ENs</td><td>22</td><td>Hygiene care</td><td>14</td></tr>
<tr><td>PCAs</td><td>16</td><td>ADL</td><td>11</td></tr>
<tr><td colspan="4">But note that averages conceal significant variations between RACFs and depended on who student worked with.</td></tr>
</table>

Students were legally required to be under direct or indirect RN supervision at all times. How/whether this was achieved would need further study; but until then there must be some doubt. It was clear that direct supervision decreased as the placement went on.
Preparing PCAs to work with students: this pairing is the reality but does not always work well for the students as their feedback for Stage 1 showed. Subsequent Stages adopted these strategies:
• Careful selection and prior preparation of capable PCAs
• Academics talked to students about working fruitfully with PCAs.
Building capacity among RNs: 'a key focus of the project, especially in relation to their role and function in working as preceptors…'
Findings under this sub-head show that:
• student presence is a stimulant for AC nurses to become more active in CPE
• AC nurses are professionally isolated with little chance to develop collaboratively
• collaborative learning/overcoming isolation hampered by lack of IT facilities and skills</td></tr>
</table>

No	Author(s)	Title	Evidence	Quality	Strength	Relevance	Method	Summary
85	Abbey, J., Abbey, B., Elder, R., Lemcke, P., Liddle, J and Thornton, R (2004).	Aged Care Clinical Placements through QUT- What works and what does not work Report to Aged Care Queensland	QE	6	4	4	Nominal groups 14 students Interviews 12 clinical teachers. Thematic analysis	Five main themes and questions emerged 1.Confusion re what are 'basic nursing skills' and how much 'technical' care can be taught in an aged care setting. Opinions differed between students and teachers, with teachers considering that there were many skills that could be classed as 'technical' in aged care settings. 2. Is it true that students are inevitably indifferent or antipathetic towards residential aged care nursing; or just poorly prepared for it? Students felt they had not learnt enough about aged care before undertaking their clinical placements and so were unprepared for, for example, people with dementia and some of the sights sounds and smells they encountered. 3. The fear of being in charge but not in control. Students indicated that the lack senior staff on the floor left them feeling vulnerable, and lack of, what they considered appropriate resources, left them feeling powerless to do a good job. 4. A free hand, or no one to reach out to: the challenge of autonomy or the burden of being alone at the top? The image of an RN working in aged care did not seem appealing to students. They perceived that RNs were left alone to make decisions and had little time for any patients care, being too involved with paper work 5.Status concerns: Lack of respect for aged care vs. high status of acute care Students perceived the status of aged care to be low, and that there were more interesting career opportunities in acute care. However, there was some suggestion that appealing to a certain 'personality' who likes responsibility and autonomy may assist in recruiting. Results also showed that the clinical placement experiences of nursing students have the potential to impact on their future work decisions. The clinical teachers agreed that a positive experience during clinical placement was vital to both widen and deepen the students' nursing education, and to present the sector in a positive light. There appear to have been three main factors that contributed to this. First, the groups revealed unspoken beliefs and values related to aged care nursing that had been present in the students' environment but never brought to the surface of their awareness and directly questioned. Secondly, there were concerns about the organisation of placement experiences and finally, certain residential aged care industry practices and issues negatively influenced students' experiences.
86	Watkins, MJ 2000	Competency for nursing practice.	EO		4	4	Discussion paper	Discusses fitness for practice and identification of clinical competencies. Competencies broad in nature, but this avoids returning to the reductionist teaching of the past. Need strong links between university and industry. Should clinical placements be facilitated by lecturers in Universities or 'practice educators', a new type of nurse educator role. Concept outlined (p342): need research to find answer. An apprenticeship model is possible (though not advocated here); but runs the risk of further separating theory and practice (p343). Is continuous assessment by itself adequate? How does a clinical supervisor know what the individual student should be able to do? Need to determine the distinction between skill elements and competencies themselves. Maybe add periodic summative assessments? Need national standards for clinical competencies to be worked out by all the stakeholders.

No	Author(s)	Title	Evidence	Quality	Strength	Relevance	Method	Summary
87	Reid-Searl and Dwyer 2005	Clinical placements for undergraduate nursing students: An educators' guide	EO		4	4	Discussion paper	Describes clinical placements at Central Queensland University (CQU). Unveils CQU's Clinical Learning Cycle (comprising: preparation (of students); briefing (for clinical facilitators, via workshops, see p1); resources (provision of guides, CD-ROMs, websites etc for both students and facilitators - see pp1-2); prior visits by facilitators (to promote collaborative links and brief staff) - see p2). Daily briefing and debriefing (to forewarn and clarify objectives); collaboration and communication throughout placement; and debriefing.
88	Storey and Adams 2002	Improving student placements in nursing homes.	EO		3	4	Discussion paper	Findings were that imaginative and well-supported clinical placements in nursing homes (NHs) can have positive impact on the attitudes of nursing students. Describes a process for organising, conducting and reviewing clinical placements in nursing homes which helps overcome the poor initial image/expectation of NH placements. The process featured: careful preparation of the cohort prior to 1st site visit; deliberate orientation process which gives prominence to planning and recording student's own learning goals, stimulated via brainstorming cohort's learning opportunities, discussion of both positive and negative expectations, SWOT analysis of self and aged care sector, observation exercises, four class periods on key setting-specific topics (care planning, pain control, infection control in NHs, pressure sore prevention); mid-point formative assessment process; exit interviews, questionnaires etc.
89	Landers 2000	The theory-practice gap in nursing: the role of the nurse teacher.	EO		3	3	A general descriptive review of literature to provide an overview on the theory practice divide with a final focus on the nurse teacher role.	Key messages include: • the lecturer-practitioner role is important in closing the theory-practice gap • a nurse teacher has potential to facilitate learning in clinical practice but that acting only as a supervisor is of limited use due to the focus on tasks not issues • nurse teachers must be clinically skilled to: o close theory-practice gap for students o enhance links to clinical practitioners o build relationships between the health service and university.
90	McKenna and Wellard 2003	Discursive influences on clinical teaching in Australian undergraduate nursing programs.	EO		3	4	Conceptual analysis	Discussion on construction of clinical teaching, including the factors that have influenced the development of practices both in the past and present. Change in clinical education from service-orientated to academic university-based. Critique, based on the work of Foucault, examines the dominant and competing discourses influencing clinical teaching through their constructions within the literature. Review of literature about clinical teaching in nursing has 3 discourses. 1. Academia (focuses on the individual). Nurse teachers until late 20th century had responsibility for classroom and clinical teaching within hospital based apprenticeship programs. Transfer of nurse education to tertiary sector – roles as employees and education was not part of hospital environment. Education of nurses went from one driven by clinical demands to one with academic agendas. Result: learning was not service orientated. Nurse educators expanded their role to include research, scholarship and community service with less emphasis on clinical teaching. Sessional clinical teachers were seen as a solution but there are issues about how nurses working in academia can assist students in clinical areas.

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								2. Nursing (focuses on ideas about what nursing is or might be).Undergraduate education may be different between clinical areas. Students are sometimes seen as a burden; clinical staff may not understand the curriculum and with patients who are admitted more acutely ill and for shorter time periods, time pressure on nurses is high. Collaborative appointments have become a way to address the gap between academia and clinical areas. However cost capping shapes policies and there is increasing use of part-time and casual clinical tutors. Preceptors are a good model but hard to sustain. 3. Economics (focuses on cost and efficiency). Economic costs influence clinical teaching models. Economic rationalism supports casualisation of clinical teaching. At present ratio is 1 clinical teacher to 8 students. There are difficulties in recruitment and retention of casual teaching staff. Collaborative preceptors models where students work in a 1:1 relationship with a clinician from the host health agency are advocated. Schools of nursing vie for limited clinical placements and there is an emphasis on inpatient acute clinical placements. Research examining specific practices which occur within clinical teaching workplaces may help understand the power-knowledge relationships that give rise to these discourses. .
91	Lloyd - Jones and Akehurst 2000	Should service providers be paid for providing pre-registration clinical placements?	EO		3	3	Discussion paper	This UK study found that on (1) a cost benefit basis and (2) on general grounds of equity between the acute and community sectors, there is no justification for paying service providers to provide clinical placements for nursing students. Not on the wards; there is a cash benefit to the provider in terms of labour contributed, and anyhow baseline NHS funding assumes it. More problematic in community setting; although evidence for costs outweighing benefits to the service provider is not strong.
92	Trew 2002	Letters... Improving student placement in nursing homes	EO		3	3	Letter	Letter in response to article 'improving student placement in nursing homes' (NOP July 2002). Wanted to go to a placement on a children's' ward, but was placed in nursing home instead. Did not want to go because she was 'scared' but loved it and would encourage other nurses to go.
93	Sillitoe 2005	Students are not used as cheap extra help.	EO		3	4	Letter	A DON of a care home expresses disappointment with students' complaints about the way they had been handled while on clinical placements (not at her site). Her facility has rules: 1. All students are supernumerary 2. Friendly and supportive atmosphere 3. Teaching sessions to students re working with older people. She advocates wider adoption of these approaches.
94	McCord and Farmer 2001	Student experiences in nursing homes. A response. Comment	EO		3	3	Discussion paper	A response to critique by Lumley et al of the nursing home placement (item 95**)**. Two students (from elsewhere in the UK) take the earlier authors to task for what they, on the basis of their happier experience in a NH where resident choice is valued, believe it is an unrepresentative account also marked (they imply) by unrealistic expectations. Unlike Lumley et al who do not link quality of service to fee levels/affordability, McCord and Farmer contrast standards but without making any reference to available resources.

No	Author(s)	Title	Evidence	Quality	Strength	Relevance	Method	Summary
95	Lumley, Calpin-Davies and Mitchell 2000	Student experiences in nursing homes: a placement policy gap?	EO		3	3	Discussion paper	2 undergraduate students and 1 nursing academic have written a highly critical account of their placement in an English for-profit nursing home They considered that care was organised around 'regimentation' + lack of respect=lack of resident choice' theme, with illustrations covering every aspect of the residents' daily lives. They note good intentions of most staff and appear to attribute 'staff blindness' to (1) widespread misperception that the elderly don't value 'choice" and (2) primitive and deficient notion of 'care' unthinkingly judged adequate to 'aged care'. They do report complaining and being moved to another placement site, but are critical of a regulatory inspection system that is in place.
96	Hunsberger, Baumann, Lappan, Carter, Bowman and Goddard 2000	The synergism of expertise in clinical teaching: An integrative model for nursing education.	EO		3	3	Asked n=20 staff nurses (not preceptors) what they thought of the operation of a clinical supervision scheme and the results are informally reported.	A clearly written account of 3 different methods for conducting clinical supervision (a) faculty only (b) staff preceptor only (c) partnership, deliberately scheduled and structured to benefit all parties. Advocates, by recounting local initiative, implementation of collaborative models with 2-day placements in acute wards at a Canadian hospital. Emphasis on carefully planning collaboration of the faculty member and staff preceptors.
97	Ottani 2003	A balanced perspective of elder Americans: practicum immersion experiences	EO		3	3	Discussion of course for 2nd semester students in Mass, USA	If students visit older people in different settings they learn the different ways older people manage health. More understanding than can be shared in a classroom setting.
98	Chen, Melcher, Witucki and McKibben 2002	Nursing home use for clinical rotations: taking a second look	EO		3	3	Narrative literature review to describe advantages and disadvantages of using nursing homes as clinical sites for Bach of Nursing program in US	Advantages: wide spectrum of health needs provides breadth of nursing experience; stable population allows familiarisation and closer study; regularly scheduled treatments in nursing homes. Disadvantages: lack of adequate role models; lack of preparation and interest among nursing faculty in working with the elderly; potential for creating negative attitudes toward the elderly and their care. Students have: more chance to practice basic skills; have social interaction and continuity with person & family; easier access to patient documentation; experience is considered less threatening and less stressful; provides experience working with unregulated workers; less technology; allows early clinical learning in complex care without coping with acute care patients' short stay in hospital; students first exposure to elderly positive for some; and can help take care of elderly in hospital later. Suggests paid employment in aged care for student preparation. Role modelling by uni staff vital due to skill mix (lack of RNs) in aged care facilities.
99	Chen, Witucki, Melcher and McKibben 2001	Use of nursing homes in baccalaureate nursing education.	EO		3	3	Descriptive study outlining guidelines for universities to establish appropriateness of nursing home for clinical placement.	This paper is a narrative review of the literature with a US perspective. It concludes that nursing homes are suitable places for clinical learning but only if precautionary steps are taken. Issues that warranted attention were that students needed to learn about such issues as end-of-life care and be well prepared. The nursing home chosen in which to place students must be accredited and provide a high standard of care.

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100	Southall 2002	Nursing home buddies: a unique service learning opportunity.	EO		3	3	Descriptive study	Nursing Home buddies (NHB) are a report of a simple matching -and-visiting program designed to expose students to the lives, thoughts and needs of elderly residents (outside of their direct nursing needs). No care provision is expected; relationship building is the aim. Takes regular commitment of 30-60 min per week. Academic expectations negligible, by design. Students positively rate the experience as attitude-changing and experience-broadening. Clinical staff in NHS report observed benefits (impression of benefits) to residents. The evaluation (no methodology outlined) showed a big change-of-attitude outcome: pre test shows 75% of students would not work in AC - 75% would in posttest.
101	McCallum 2004	Clinical education in a nursing home setting: a structured framework for student learning... including commentary by Chen S	EO		3	3	This article reviews a three tiered clinical education model for use by physical therapy students in a nursing home setting.	Student outcomes: Exposure to structured activities involving clinical, supervisory and research opportunities helps to develop clinical competence. Authors recommend the creation of clear objectives and defined roles. They found that without structured activities administrative skill development was decreased (cited Jung et al 2002). Also cite work by 2 authors (Crowe and McKenzie 2001, Tovin 2002) that indicates student exposure to positive clinical education experiences improves the likelihood of student selecting specific work intentions. This is important as working with the elderly or in nursing homes carries negative perceptions. Negative perceptions may be formed as a result of: student's placements that are emotionally draining, difficulties working with those cognitively impaired and witnessing poor care attitudes from other staff members toward patients. Positive perceptions may occur from positive role models from faculty and health professionals and structured experiences. The authors favour educators working with clinical faculty to develop comprehensive structured environments that promote student learning and appreciation for working with the older population especially in the nursing home setting. This article outlines a process that can be designed by clinical educators to draw upon structured activities to improve the students working experience in the nursing home setting. Model Description A 3-tiered model designed around the themes of clinical, administrative and research work was designed. This model has been successfully used in nursing homes. Tier 1 – Clinical development Tier 2- Administrative tasks Tier 3 – Research skill development The authors advocate this structured 3 tier approach but provide no evidence to support their conclusion that it is a success.
102	Richardson, Humphries, Fuggle, Barber, Shepherd and Druce 2001	Student placements in the nursing home setting	EO		3	3	Exposition of past practice; larded with quotes from new appointed clinical facilitators who then became co authors.	Describes the evolution of the Clinical Facilitator's role once Project 2000 came into operation. Describes careful selection of sites; preparation and training of staff; and - key point - appointment of p/t RN clinical facilitators (each with a territory) to act as liaison (see job description box p3; and their activities and strategies- box p5.) Results: academics happy, clinical facilitators happy; NH staff now pursuing education. Students - No evidence of their reaction (except one quote from a student see p2).

No	Author(s)	Title	Evidence	Quality	Strength	Relevance	Method	Summary
103	Queensland University of Technology 2004	Aged Care Core Component in Undergraduate Nursing Curricula - Principles Paper	EO		3	3	Consultation with key stakeholders	Desirable aged care content for undergraduate curricula in Australia; resources to support principles and barriers to future implementation are explored. Teaching and learning of aged care should reflect core values 'to respect personhood at all times' and 'to have the right to quality care in all settings'. Expertise in aged care is necessary to facilitate the integration of aged care content and for teaching the aged care content in undergraduate nursing curricula p7. Involvement of industry and clinicians in aged care is important in the teaching of aged care in undergraduate nursing curricula. It is acknowledged that there is difficulty accessing quality learning environments related to aged care.
104	Commonwealth of Australia	National Review of Nursing Education - Discussion Paper	EO		3	3	National review of nursing education discussion paper.	Workforce planning must be context dependent and requires appropriate mix of staff particularly in aged care p13. Some students are not receiving good quality learning experiences due to: • retention issues of clinical staff • delegation to unregulated workers Education and training of nurses needs to be responsive to the shifts in health and aged care. Theoretical gerontology content is regarded as inadequate in much of undergraduate curriculum. Other issues included: demands of new technology; the rising level of acuity of patients in aged care; and the level of management skills required to work in multi skilled and team working environments is high p16. Students have concerns over clinical placements (p17) and suggestions of casual paid employment in aged care were made (p20).
105	Johnson, Preston. 2002	An overview of the issues in nursing education report in The Nursing Workforce National Review of Nursing Education	EO		3	3	Literature review as part of the National Review of Nursing Education	This is a synthesis of major and minor reports since the 1997 review to provide a national picture of issues to inform the National Review of Nursing Education 2001. Key points from the executive summary are: • the context of nursing is changing (complexity, pressure, changes of clientele, older people and the community) • there is dissatisfaction with conditions of work • the transition from university to employment is of concern where the first few months are significant • finding placements and funding them • different expectations of academics and clinical supervisors • a lack of communication is also noted. (p7 refers to list of clinical programs). There is a need to • enhance and increase partnerships • address issues of education within and for a multicultural society • prepare students to meet the needs of rural contexts and issues Quality of graduates and the teaching quality in Schools of Nursing are issues. There is very little evaluation of clinical education by outcomes, too much emphasis on time spent in clinical instead. It is also noted that students are leaving courses because 'nursing is not what they expected' (p10). Nurses are also increasingly unwilling to work with students because of workforce issues (p42)

No	Author(s)	Title	Evidence	Quality	Strength	Relevance	Method	Summary
106	Commonwealth of Australia 2001	Summary of KPMG final report to Nursing Council of New Zealand May 2001- Strategic review of undergraduate nursing education: Information paper 3	EO		3	3	Formal and informal consultation process, 120 submissions received virtual reference group, key groups and individual consultations. Identify and clarify issues and explore themes and concepts.	Major themes and points of note are: need to change both consumer and professional attitudes; critical to understand both context in which practice occurs and nature of future. Forces for improvement were identified as consumer and community need; global and electronic connectedness and scientific development. (p6 lists the environmental scan.) There needs to be a flexible approach to providing patient care to meet the challenges. It is critical that nurses have a comprehensive understanding of the socio-political and economic environment and resource allocation constraints. (p8) skills needed by nurses include clinical inquiry and advanced practice, people skills, health and technology advances, information technology, business and management, cultural safety, are flexible and adaptable, and knowledgeable. (p10) threads essential for curricula are set out here. Points made by the report include: (p11) Australia has flexible models of CE; courses should specify competency based outcomes; system should maintain or increase amount of clinical experience; programs for preparation and support of clinical facilitation should be supported; the use of the preceptorship model during clinical experience should be encouraged; partnerships are essential foundations of nursing education. P13 describes models and fundamental principles that should apply to all models for future undergraduate education: collaborative relationships, integrated model as preferred approach, focused experience options in first year.
107	Commonwealth of Australia 2001	Recent changes to nurse education and training	EO		3	3	Historical background for National Review of Nursing Education (NRNE) on Australian nursing education	Historical overview of reviews and developments identifies the Senate inquiry due to report 2001 and the NRNE 2001. It states that: emphasis on training nurses quickly for employment produced nurses with restricted outlook, resistant to change and unable to cope confidently with scientific and technical advances of medicine and social problems.
108	Commonwealth of Australia 2002	Our duty of care	EO		3	3	Commissioned research, submissions and consultation.	Final report that draws together a wealth of commissioned research, stakeholder consultation and formal submissions 2001-2002. Key points included: • Health care provision must be effective and efficient; nursing is a profession; future development should build on current expertise and promote continuous improvement, planning and quality. • Nursing is a practice discipline and so educators and clinicians need to be able to remain current in their practice; students need to be able to learn in a practice environment as well as academic. Nursing should be inclusive, partnerships are essential for quality practice and education. p84 education partnerships. • Much stronger involvement of the practice community in education. Quote- 'enacting knowledge through activity; from conception of humanity centred exclusively on the brain to a wider conception where humans are seen as embodied centres embedded in the world' Gonzi 2002, p15-16 cited p84 of report. Future directions: nursing should define its work in terms of needs of the health, community and aged care. p23-24 recommendations to support continuing clinical development of nurses in aged care p97 from Nay recruitment study that there is a lack of acknowledgement within the aged care sector and the general community of the complexity of competencies needed for effective and appropriate nursing of older people. Collaboration between education and aged care sectors needs to be strengthened eg: Warabrook Centre Uni Newcastle; La Trobe Gernotic Nursing Clinical school Bundoora; Blue Care Qld QUT

No	Author(s)	Title	Evidence	Quality	Strength	Relevance	Method	Summary
109	National Rural Health Alliance 2004	A quality rural placement system for health students	EO		3	3	Position paper from National Rural Health Alliance (NRHA).	Placements need to be accessible, well coordinated and well supported; and costs should be covered. Workload of clinical staff needs consideration. It proposes there be agreed standards/benchmarks and applied equally to health professionals and place. Need Information rich communities where communication is important and mentors know who is coming when, well resourced and supported. Need for flexible models of placements that take into account the size and capacity of rural venue to accommodate students, all mentors should be remunerated. This is a general paper about placement per se rather than dynamics of clinical placement education for UG pre-reg nursing students, or in aged care. University departments of Rural Health and Rural Centres of Health education are promoted due to their partnerships etc.
110	Nurses Board of Tas 2003	Supervision of students in the practice setting policy statement	EO		3	3	Position paper	Policy statement covering the supervision of students in the practice setting. Sets out policy directions for accountability; level of supervision; preceptor's role; employer and preceptor responsibilities, competency and demonstration of standards relating to good clinical practice.
111	Haas, Deardorff, Koltz, Baker et al 2002	Creating a collaborative partnership between academia and service	EO		3	3	Evaluation of program of clinical teaching.	Evaluates a program at the University of Texas for nursing students based on the principles of active learning. Clinical faculty members matched students with preceptors taking into account students interest and experience. Students worked the same shifts as their preceptor. Clinical experiences were shared with peers through weekly clinical conferences and case study preparations. Advantages: • for students - increased clinical experience, confidence, continuity, better time management, real world expectations, flexibility and responsibility for own learning. • for preceptors - it stimulated their own growth, they found it rewarding, considered the students a help toward the end of the rotation and knew the students capabilities Disadvantages: • for students - long days, sometimes difficult with scheduling, only exposed to one population, clinical experience cancelled if preceptor unavailable • for preceptors - they found it time consuming and an added stress and responsibility.
112	Lockwood_Rayermann 2003	Preceptors, Leadership Style, and the Student Practicum Experience	EO		3	3	Commentary	Preceptors: • help develop competency and problem solving in students • need to be prepared, have good interpersonal skill and time available for the role • leadership style (eg directing or coaching) can be matched to particular students' learning/behaviour styles with advantage.

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113	Farrell, Pearson, Roberts 2002	The challenges in providing quality clinical education for undergraduate nursing	EO		3	3		Australian comment on the mandatory requirement that schools of nursing are to supply clinical teachers at the rate of one per 8 students. Commentary suggests cost of clinical education should be met through a combination of health and university/commonwealth funding; the nursing degree should be lengthened, flexible modes of delivering clinical education, such as a summer semester.
114	Elliot 2002	Clinical education: a challenging component of undergraduate nursing education	EO		3	3		Australian commentary explaining that literature shows students find clinical experience stressful; they often feel inadequate; they have to absorb a large amount of knowledge in a short time. Students can be exploited and used as *defacto* workers. It is suggested that clinical teaching has low `status in the universities' culture where research and publishing are considered more important. It is suggested this view must change. Puts forward the view that clinical teaching is a highly skilled activity - preceptors and clinical teachers need to be prepared , universities and clinical settings must collaborate; staff on wards should be adequately prepared; students need to be taught assertiveness and problem solving prior to clinical placement.
115	Elliot 2002	The Clinical Environment: A Source of Stress for Undergraduate Nurses	EO		3	3	Report of literature	Explores common sources of stress from clinical environment. Disillusionment with chosen profession; feeling incompetent; reality shock; feeling abandoned; fear of making mistakes; failing and harming patients; being assigned an intimidating and unsupportive preceptor. Solutions need greater collaboration and shared understandings between universities and clinical placement.
116	Edmond 2001	A new paradigm for practice education	EO		3	3	Discussion paper	Describes collaborative schemes between university and clinical practice sites. Says present system in unsustainable for quality clinical placements - Studies indicate that staff carry unrealistic clinical workloads, that cannot accommodate student teaching on top. Yet it is recommended that clinical staff teach the students since 'an educator would not be expected to know how to run a ward'. The best approach is a collaborative one where university staff and clinical staff work together
117	Burns, Paterson 2004	Clinical practice and placement support: supporting learning in practice	EO		3	3	Description of the development of a Clinical Practice and Placement Support Unit- no evaluation or results- although claimed to be 'successful'.	Three elements for success were considered to be: • adequate mentor support • developing and monitoring the clinical learning environment • increased collaboration between universities and service providers.
118	Bryant, Williams 2002	The Senior Practicum	EO		3	3	Discussion of some literature	Conclusions are that preceptors' roles can be under recognised. Contributions must be acknowledged - thank you letters and so on at least. Process of journal writing and critical thinking needs to be formalised to be most effective

No	Author(s)	Title	Evidence	Quality	Strength	Relevance	Method	Summary
119	Yonge 2003	Preceptorship - Faculty Preparation for the Preceptorship Experience- The Forgotten Link	EO		3	3	Literature review	Review reveals that preceptors need preparation & assistance from faculty. Workshops are necessary to address issues such as preparation of preceptorship teaching, standards of performance. Preceptorsahip may be considered a 'peripheral method of teaching' but is powerful and needs full attention of faculty
120	South Australian Parliament 2005	Report of the Select Committee on Nurse Training and Education	EO		3	3	Report	The Committee, established in June 2004 and reporting on 24 November 2005, examined the whole of nurse education and training but 'came to the view that clinical placement was a crucial focus for this inquiry'. The Committee acknowledged the differing perspectives and the challenges of providing undergraduate students with optimal clinical education experiences (placement). It was also recognised that a number of conflicting issues and tensions exist between the health service providers and the tertiary and VET sectors regarding the clinical placements and clinical supervision' (p19). Two models for clinical placements are outlined: (i) The (Flinders) Dedicated Education Unit model and the Block: Facilitator/Preceptor model (both described at p19) with support for the former, even it seems from the students at the Model II universities who appear to see their own model leading to overcrowding and stress, a view that was supported in the RANF submission. The report goes on (pp19 – 24) to outline some of those tensions between stakeholders; and chief among them are: • the limitation of placements to (more/less) 0900 – 1700 hrs x 5dpwk x 26 weeks (sep by semester breaks). This leads to 'bunching' of placements causing overcrowding in service sites and stress for clinical staff. There was strong support from clinical managers for spreading the load across the year and across the 7d x 24hr span, which it was said would give the students a better picture of what working life as a nurse would be like (A chart illustrates the peaks and troughs problem) • uncertainty/disagreement as to who (university/health service) carries the responsibility for instructing students in workplace health & safety (manual handling, use of safety equipment, dealing with aggression in the workplace, etc). There is also reference to the costs associated with clinical placements and the criticism from the universities that the C/w does not provide sufficient funding. This may have been (partly at least) addressed. The need to increase the curriculum coverage of aged care and mental health is noted, in the light of trends in the demand for services; and the need to attend to the OH&S issue is noted (without allocating responsibilities). Recommendations apply to the four main issues (24 x 7; whole calendar year; raised profile needed for aged care and mental health nursing; and OH&S. See p23). At Sn 3.1.4, 'Third year undergrad students employed in the clinical setting': the discussion concerns the practice of employing third-year undergrads, usually on a part-time basis as care workers, with a defined position with its own position description. This system is described as working well inasmuch as the students are said to have increased confidence in their skills by the time they graduate, have developed better time management and organisation skills, and require less support and supervision when their nursing career begins (pp25 – 27).

No	Author(s)	Title	Evidence	Quality	Strength	Relevance	Method	Summary
								Some sites (eg Repat) are very careful to distinguish the roles of supernummary student and part-time novice worker, using different uniforms and a carefully defined scope of practice and ensuring that the roles are played out in different wards to avoid confusion.
121	Parliament of Australia: Senate: Committee: Community Affairs Committee(2002)	The patient profession The patient profession: Time for action.	EO		3	3	Report	This summary focuses on the sections of this wide-ranging inquiry that relate directly to clinical education in general, and most particularly on those relating to clinical placements in general (Chs 3 & 5). It does not deal with Ch. 7, 'Aged care nursing', because that chapter makes no reference to undergraduate education or to clinical placements in particular. However Ch 7 refers to a number of general features of aged care nursing that make it unattractive to skilled registered nurses (e.g. lower salaries, the implications of RCS funding and its associated administrative requirements, preponderance of unregulated workers, etc). These must be recognised in at least a general way as imposing some limitations on the likely staffing/practice gains that could be made by improving clinical placement opportunities for undergraduates in aged care; and for that reason it is mentioned here. It is also worth noting that the Committee sat concurrently with the National Review of Nursing Education. The evidence basis for *The patient profession:* … is predominantly the submissions made to it from a wide variety of sources. Material of interest to the Modelling Connections teams includes: Evidence of the widely varying proportion of course time given to clinical education and placements by different universities' undergraduate nursing programs (Table 3.4, p38: Clinical Component in Undergraduate Courses – Selected Universities) Suggestion that clinical exposure should start earlier in the undergrad years. Brief outlines of several models of interest: • Flinders University's Dedicated Education Unit (pp55-6) • Notre Dame's year-round model (pp56-7) • innovations at UTS, UWS and Wollongong (all p57). Common and/or notable features of the models are mainly these: 1. the use of longer placements, either in the form of longer blocks or regular days-per-week over a longer span 2. Much closer cooperation of the education and health service institutions at both the formal and grass-roots/staff levels 3. Conflicting views (para 3.60) on whether staying with one provider or in one area is better for continuity (and therefore acculturation and relationships) than moving from one placement and one type of provider/setting to another over the duration of the course. Concerns were raised (as we have found them to be in many items reviewed for this study) about • the availability of sufficient suitable placement opportunities • the impact on very busy clinical staff • the costliness of providing sufficiently well supervised clinical placements. • sites levying a charge for accepting placements (para 3.65). Among the options proposed (3.66) as solutions were changes to structure of the placements (e.g. 'sandwich courses'; part-time employment for later year students, a suggestions that also found some support in the SA Parliamentary report tabled on 24 Nov 2005. See further on this at *The patient profession,* pp64-65.

No	Author(s)	Title	Evidence	Quality	Strength	Relevance	Method	Summary
								Another option was to keep courses at three years but require one year of supervised employment experience before registration could be achieved, p65, para3.95). Some evidence was cited (see para 3.69) to the effect that hospitals already taking up the part-time employment option had found it useful, and students were reported to have done so too (both of which outcomes were reported in the SA Parliamentary study where this practice was mentioned). One problem with this, of special importance to self-supporting students, is the rates of pay offered, lower than available in fast food outlets, for example (para 3.70). The remainder of Ch 3 goes on to consider, first, the 'Content of undergraduate courses', finding that some sub-disciplines, including aged care, are relatively neglected in the undergrad curriculum (see Table 3.5, p62; see also para 3.84, p63). (See further, the *Report of the National Review of Nursing Education*, p124, for confirming evidence and a possible solution involving a four-year degree containing a specialist component. Note the Uni Tas submission cited on this topic at para 3.96). *The patient profession* does not support a lengthening of the undergraduate nursing program on the grounds of cost (see paras 3.87 ff.) Paras 3.99 ff deal with the funding of clinical education and concludes with recommendations concerning the provision of sufficient tied funding to allow a clinical teacher: student ratio of 1: 4.

Appendix 3 – Items excluded from the review

No	Author(s)	Title	Evidence	Aged Care	Quality	Strength	Relevance
122	Hilton and Pollard	Supporting clinical skills development	QE	No	6	1	1
123	Dix and Hughes 2004	Strategies to help students learn effectively.	EO	No		2	2
124	Davies and Clarke 2004	Clinical skills acquisition in children's nursing: An international perspective.	EO	No		2	1
125	Neill and Taylor 2002	Undergraduate nursing students' clinical experiences in rural and remote areas: recruitment implications	EO	No.		1	2
126	Klang	Experiences of clinical education: a Swedish perspective	QE	No	4	2	2
127	Iliffe 2001	RN education has found its level	EO	No		1	1
128	Spouse 2000	An impossible dream? Images of nursing held by pre-registration students and their effect on sustaining motivation to become nurses.	QE	No	6	2	2
129	Johnsen and Barra 2002	Students' Perceptions of Change.	QE	No	5	2	2
130	Latter, Speller, Westwood and Latchem 2003	Education for Public Health Capacity in the Nursing Workforce: Findings from a Review of Education and Practice Issues.	QE	No	6	3	2
131	Murray 2001	Teaching opportunities in nursing homes.	EO	Yes		2	1
132	Buckis 2003	Aged care gets a boost from university and industry partnerships.	EO	Yes		2	2
133	Davies, Powell and Aveyard 2002	Mental health nursing. Developing continuing care: towards a teaching nursing home	QE	Yes	8	1	1
134	Cook 2005	Inviting teaching behaviours of clinical faculty and nursing students' anxiety	QE	No	8	2	2
135	Saxe, Burgel, Stringari-Murray, Collins-Bride, Dennehy, Janson, Humphreys, Martin and Roberts 2004	What is faculty practice?	EO	No		1	2
136	Schofield, Tolson, Arthur, Davies and Nolan 2005	An exploration of the caring attributes and perceptions of work place change among gerontological nursing staff in England, Scotland and China (Hong Kong).	QE	Yes	8	1	1
137	Campbell 2005	Conceptual model of attractiveness as a factor influencing quality of care and outcomes of residents in nursing home settings.	EO	Yes		2	2
138	Edwards, Chapman, Forster, Gaskill, Morrison and Sanders 2003	Challenges associated with implementing an education program in a residential aged care setting.	QE	Yes	4	2	2
139	Gaskill, Morrison, Sanders, Forster, Edwards, Fleming and McClure 2003	University and industry partnerships: lessons from collaborative research	QE	Yes	4	2	2
140	Kotzabassaki, Alabaster, And, Larsson and de Vree 2003	Care of older people in nursing homes: an Intensive Programme as an educational activity within Erasmus-Socrates.	QE	Yes	5	2	2
141	Birnie, Booth, Dodd, Jones, Petty, Price and Telford 2003	Bridging the gap: addressing the educational needs of nursing home staff.	EO	Yes		1	1

No	Author(s)	Title	Evidence	Aged Care	Quality	Strength	Relevance
142	Runciman, Dewar and Goulbourne 2002	Newly qualified Project 2000 staff nurses in Scottish nursing homes: issues for education.	QE	Yes	6	2	1
143	Eastham 2002	Out to pasture?	EO	No		1	2
144	Coombes 2000	Oldies but goldies	EO	Yes		1	2
145	Weber	Specialized Advanced Clinical Placements for Nurse Practitioner Students."	EO	No		1	1
146	Miller, Shaw-Kokot, Arnold, Boggin, Crowell, Allegri, Blue and Berrier 2005	A study of personal digital assistants to enhance undergraduate clinical nursing education.	III-2	No		3	1
147	Ruckdeschel and Van Haitsma 2004	A workshop for nursing home staff: recognizing and responding to their own and resident's emotions."	EO	Yes		2	1
148	Sundstrom 2000	The characteristics of effective clinical teachers in baccalaureate nursing programs.	QE	No	8	2	2
149	Totin Meyer 2002	The use of the Principles of Adult Learning Scale to assess the instructional practices of clinical instructors/preceptors for graduate nurse practitioner students in North Carolina.	III-3	No		3	2
150	Espeland and Indrehus 2003	Evaluation of students' satisfaction with nursing education in Norway.	QE	No		3	1
151	Shanley 2004	Extending the role of nurses in staff development by combining an organizational change perspective with an individual learner perspective	EO	No		1	1
152	Smith, Edwards, Courntey, Finlayson 2001	Factors influencing student nurses in their choice of a rural clinical placement site	QE	No		2	2
153	Meyer, Sedlmeyer, Carlson, Modlin 2003	A web application for recording and analysing the clinical experiences of nursing students	EO	No		2	2
154	Meyer 2002	Applying the theory of planned behaviour: Nursing students' intention to seek clinical experiences using the essential clinical behaviour database	QE	No		2	2
155	Leibbrandt, Brown, White 2005	National Comparative curriculum evaluation of baccalaureate nursing degrees: A framework for the practice based professions	EO	No		2	2
156	Howard, Steinberg 2002	Evaluations of Clinical Learning in a Managed Care Environment	QE	No		2	2
157	Happell, Brooker 2001	Who will look after my Grandmother	QE	Yes		2	2
158	Hand, Thompson 2003	Are we really mentoring our students	QE	No		1	1
159	Chan 2002	Development of the Clinical Learning Environment Inventory: Using the Theoretical Framework of Learning Environment Studies to Assess Nursing Students' Perceptions of the Hospital as a Learning Environment	EO	No		2	2
160	Orland-Barak, Wilhelem 2005	Novices in clinical practice settings: Student nurses stories of learning the practice of nursing	QE	No	8	2	1
161	Moyes 2004	Nursing education and the future	EO	No		2	1

No	Author(s)	Title	Evidence	Aged Care	Quality	Strength	Relevance
162	Hyde 2002	Staff nurses' perceptions of supernumerary status compared with rostered service for Diploma in Nursing students	QE	No	0	1	1
163	Ellerton 2003	Preceptorship - The Changing Face of Clinical Teaching	EO	No		2	2
164	Daigle 2001	Preceptors in nursing education: facilitating student learning	EO	No		1	1
165	Clare, van Loon 2003	Best practice guidelines for the transition from student to registered nurse	EO	No		2	2
166	Bradshaw, Rule, Hooper 2002	A Joint Junior-Senior Clinical Experience	QE	No	1	1	1
167	Bartz, Dean-Baar 2003	Reshaping clinical nursing education: an academic service partnership	EO	No		2	2
168	Andrews, Roberts 2003	Supporting student nurses learning in and through clinical practice: the role of the clinical guide	QE	No	4	1	1
169	Theobald, Mitchell 2002	Mentoring: Improving transition to practice	QE	No	4	2	2
170	Ogle, Bethune, Nugent, Walker 2000	Nursing Education and Graduates - Part 1	EO	No		2	2
171	Ogle, Bethune, Nugent, Walker, Wellman 2000	Nursing Education and Graduates - Part 2	EO	No		2	2
172	Jones, Cheek	The Scope of Nursing in Australia - A snapshot of the challenges and skills needed	QE			2	2
173	Mahnken 2002	Clinical Placements in Victoria: Issues affecting co-ordination in nursing and medical education	EO	No		2	2

Appendix 4: Thematic guide to items.

The text of the main report is laid out by levels of evidence, with material presented in order according to that criterion regardless of its content or focus. A single exception was made, and it was explained at the beginning of the part of the report dealing with material that is either aged care specific or heavily focused on that topic (at p29). The exception was explained in this way:

Because of the focus of the larger project of which this is part, *Aged Care specific material has been consolidated at the end of the document to allow all the relevant evidence to be more easily clarified and integrated through being juxtaposed.*

We anticipate, however, that at points during the progress of the larger project it may well be advantageous to have at least some of the material included in the review organised thematically or by sub-topic. The appendix below continues to identify the levels of evidence of the items but it reorganises that material in a way that makes themes or topics the primary consideration.

Topic/Theme	Levels of evidence	Relevant item numbers
Attitudes to aged care as work	Level IV	2; 16;
	QE	54; 60; 65;74; 84; 85; 97
Age/gender and prior experience of students: any influence?	Level IV	16
	QE	85
Curriculum	QE	52; 54; 61; 65
	EO	103; 106;
Status of clinical knowledge	QE	
	EO	90; 108; 109; ;110;113; 114; ;116; 120.
Collaboration	Level IV	3
	QE	20; 23; 28; 35; 40; 46; 55; 56; 58; 72; 80
	EO	87; 96; 99; 103; 105; 108, 111; 114; 115; 116; 117; 120
Preparation	Level IV	7; 11
	QE	21; 24; 27; 33; 42; 44; 58; 84;
	EO	87; 88; 98; 102; 106; 111; 119
Most valued traits of clinical teachers from the student's perspective	Level IV	2; 6; 9, 10;
Mentors/teachers/preceptors	QE	20; 25; 27; 29; 30; 31; 32; 40; 49, 55; 64
	EO	61; 112; 114; 115; 118,
Student-teacher contact	Level IV	6; 19
Resources	QE	38; 61; 43; 84; 85; 99
Models of clinical placements in generic settings	QE	56; 59; 61
	EO	106
Models of clinical placements in aged care settings	QE	85
	EO	106

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