14. Literature Review on Question 5: Effective/appropriate strategies to increase the relevance and understanding of vocational training amongst allied health professionals and health assistants

To ensure training is successful for allied health assistants in Australia, it is pivotal that it is relevant for the trainees and that both assistants and professionals recognise the importance of VET programs. Despite this, there was a lack of literature identified that addressed effective or appropriate strategies to increase the relevance and understanding of vocational training amongst allied health professionals and health assistants. Providing adequate recognition was highlighted as one strategy that was considered important in vocational training and identified in focus groups; this can incorporate recognition of prior learning and current competencies to increase the relevance of vocational training amongst allied health assistants.[9, 66, 131] An example of such recognition currently offered within the Australian setting exists within the VET sector.[9, 59]

It has also been found that professionals may not respect technical level education for assistants as a valued and effective part of learning,[65] despite the fact that the skill requirements of assistants are most efficiently and effectively taught at the technical level.[132] The assistant requires training related to the tasks they are to perform, with the professional checking competence and supervising the assistant in their development. To improve the reputation of vocational and technical level training programs, their content and depth should be clearly considered and carefully defined.[133] One strategy to increase the usefulness of training is to tailor the program to the needs of the service area,[134] and to increase relevance to the assistant, so that training should focus on the practical and not the just the theoretical component.[4]

Fieldwork or placement is an important part of any vocational program, and is where assistants and professionals transform academic learning into the requisite knowledge, skills, and attitudes for effective entry-level practice.[34] It is acknowledged that providing effective placement imbues students with the necessary learning experiences to be able to practice effectively once entering the profession.[34]

Strategies

Continuing Professional Development (CPD) is essential for all professionals, due to the demand on healthcare professionals to critically review their skills and knowledge and continuously keep up to date with changes in practice.[135] A whole range of activities contribute to CPD, including in service training, on the job day to day experiences, and courses to name but a few.[135] Some organisations mandate CPD and how it can be accrued.[135] In-service training is one of the most important forms of CPD, and for many physiotherapists, is a routine part of their week.[135] Continuing professional development may also be considered for assistant staff.

Imperative in the development of an education course for support workers is having defined roles and tasks that they will fulfil so that the course can contain the requisite knowledge.[131] For occupational therapy support workers, their role has expanded and developed over time, although it still varies amongst different settings. The Higher National Certificate, which is an example of competence-based vocational education in the United Kingdom for occupational therapy support workers takes account of individual learning styles and various approaches in delivery. This course encompasses the concept of learning by doing. This involves the learners and their experiences, the integration of theory to practice and the provision of credit and recognition.[131]

Different studies have assessed the use of certain techniques to improve training for mental health paraprofessionals and assistants.[136, 137] One study found that the use of modelling-role playing enhanced paraprofessionals counselling skills,[137] whilst another found that experiential techniques (such as role plays and simulations) are efficacious learning methods for nursing staff in a nursing home.[136] Adult learning techniques may be appropriate strategies to increase the relevance and satisfaction of participants in training programs.[138,139] Role playing during in-services is a hands on, experiential learning technique that can be used to improve retention amongst adult learners. Role playing was well received by certified nursing assistants in one aged care facility and was successful in addressing the outcomes of its training program, with empathy for the resident enhanced.[138] In-services may be repetitive and monotonous for both the attendees and presenter. Mannequins were found to be useful to encourage participation of learners and was responded to positively by home health aides.[139]

There have been a number of studies that focused on collaborative fieldwork between assistants and professionals during their education.[13, 24, 25] The aim of these courses is to prepare assistants and professionals to work together following training, and to gain a better understanding of each other's roles. This strategy resulted in benefits in all three studies, and may be considered as a way to increase the relevance of training amongst allied health professionals and health assistants.[13, 24, 25]

A study was conducted to determine which interventions entry level occupational therapist and occupational therapy assistants were performing in order to determine what the implications are for fieldwork education.[34] From this study, four guiding principles were highlighted when planning occupational therapist and occupational therapy assistant fieldwork. The first was not to automatically assume that the setting of the fieldwork will provide a wide variety of fieldwork experiences. The second recommended each student being granted the opportunity to develop entry level competencies in the core interventions used across the sites with high frequency. Third, careful consideration regarding placement locations is required, as some may provide replication of experiences, whilst others may allow divergent experiences. Both of these may be valued. Finally, fieldwork coordinators should assess each site prior to fieldwork to ensure appropriate professional development.[34]

One article described the use of a postal survey to evaluate the relevance of an allied health assistant training course. The respondents noted that the skills they learnt during the course were utilised regularly, and their training was relevant to their responsibilities at work, their relationships with clients, and to their usefulness of work.[140] By performing surveys of training needs and developing educational programs based on the results, the relevance of training may be increased.[130]

Conclusion

To ensure training for allied health assistants is successful, it is pivotal that its relevance and importance is understood by allied health professionals and allied health assistants. Different strategies were identified in the literature to increase the relevance of training, which can be considered by policy makers. Strategies include use of adult learning techniques, recognising prior learning, ensuring relevance to future work, surveying entry level practice and designing training based on this, collaborative learning, and continuing professional development. Many of these strategies are already being addressed in the Australian VET sector.

Recommendations for practice

From the included studies in the literature review component of this review for question 5, the following recommendation has been made, which is assigned a grade and a level of evidence according to the Joanna Briggs institute Levels of Evidence and Grades of Recommendation (Appendix 6).

- The evidence suggests that training should be mostly practically oriented and as relevant as possible to the associated profession of the health assistants, and utilise adult learning techniques. (Level 3) (Grade B)

15. Summary and conclusions

This review commissioned by Queensland Health, aimed to summarise the Australian and International evidence regarding effective/appropriate strategies for the clinical education and training of allied health assistants.

The review was undertaken during April-May 2011, and included 19 studies in the systematic component of the review. A large number of studies were identified that did not meet the inclusion criteria from the systematic component of this review, and were included in a literature review.

Overall, there was a significant lack of literature for all of the questions in the review, and that which was identified, was of generally low quality. Despite this, a meta-synthesis was able to be performed for question 2, providing a unique perspective on the role of health assistants and strategies to include them in models of care.

Notwithstanding the limitations of the evidence, this review provides a comprehensive discussion surrounding the issues of clinical education and training for health professionals, and information contained in both the systematic and literature review components may be considered to inform policy and practice.

Five questions specific questions were addressed in the review and the results for each question are summarised below along with identified recommendations for practice[1] from both the systematic and literature review components of this review.

Question 1: What are effective/appropriate strategies to increase/promote recruitment and retention of HAs in vocational training programs?

For question 1, there was some evidence, albeit limited, regarding motivations and barriers to the uptake of training programs identified in the literature review component. Common barriers to recruitment were noted, which included costs associated with training, lack of time, distance issues and lack of recognition for training. Common barriers to retaining students included academic course content and the fast pace of training. Motivating factors for undertaking and staying in training included the desire to progress professionally, guarantee of employment following training, the ability to earn and learn, flexible course times, options to progress to professional training, and introducing key skills from the beginning. Although the information presented did not discuss strategies as such, it can be used to inform strategies to increase/promote recruitment and retention of health assistants in vocational training programs.

Recommendations for practice

- The evidence suggests that the distribution of information highlighting the health assistant role and its career potential can increase recruitment to allied health assistant VET programs. (Level 4) (Grade B)
- The evidence suggests that academic support, program flexibility and program applicability all increase the attractiveness of training programs for participants. (Level 4) (Grade B)
- The evidence suggests that financial reimbursement measures and guaranteed employment upon completion of training may address the deterrent to allied health assistant training imposed by costs. (Level 4) (Grade B)

[1] Recommendations have been assigned a grade and a level of evidence according to the Joanna Briggs institute Levels of Evidence and Grades of Recommendation. Grade A recommendations have 'strong support that merits application,' whilst Grade B recommendations have moderate support that warrants consideration of application.

Question 2: What are effective/appropriate strategies to establish the HA role as a recognised delegated clinical role and promote their inclusion in models of care?

The majority of the studies included in both the systematic review and the literature review components of this project were identified for question 2. In the systematic review, strategies to promote assistant inclusion in models of care included empowered work teams, collaborative learning, analysing and redesigning the assistant role and educational courses/workshops. The literature review identified other issues of importance, such as delegation, barriers to inclusion, and educational needs of assistants and professionals.

Analysis of the included qualitative studies resulted in four meta-synthesised findings. These meta-syntheses addressed the relationship between assistants and professionals, what affects the assistant's role and how it is perceived, training programs for assistants and professionals, and accountability and supervision concerns. Together, these findings can be used to provide guidance when educating assistants and health professionals, and when preparing to incorporate assistants in models of care.

Recommendations for practice

- Where possible, undergraduate allied health professionals and allied health assistants in training should have the opportunity to interact with each other, either in the classroom or in the clinical setting, as this has been shown to result in collaborative relationships. (Level 3) (Grade B)
- Educational courses/workshops for assistants and professionals regarding working with assistants have been shown to improve collaboration and may be recommended. (Level 3) (Grade B)
- Empowered assistant work teams are one strategy that has resulted in improved practice for nursing assistants, and may be considered. (Level 3) (Grade B)
- Prior to introducing assistants, it may be useful to analyse and design their role in the setting, in consultation with staff, as this has been shown to result in positive outcomes in nursing assistant roles. (Level 3) (Grade B)
- Relationships between assistants and professionals are dependent on a range of factors, all of which need to be considered when incorporating assistants in models of care. (Level 1) (Grade A)
- A number of different factors influence the assistant role, and policymakers need to be aware that people perceive the role and need for practice change differently. (Level 1) (Grade A)
- The preparedness of assistants to undertake training programs needs to be considered when running training courses; as do the characteristics of effective training programs. (Level 1) (Grade A)
- Due to the concerns of health professionals regarding responsibility in models of care using assistants, there is a need for appropriate supervision and mentoring of assistants in these models. (Level 1) (Grade A)
- The evidence suggests that a clear framework for delegation amongst staff coupled with education on delegation skills can facilitate inclusion of assistants in models of care. (Level 4) (Grade B)
- The evidence suggests that communication mnemonics can facilitate necessary interaction between allied health assistants and allied health professionals. (Level 4) (Grade B)
- The evidence suggests that, in planning for the inclusion of health assistants in models of care, the variety of barriers and obstacles that exist in the workplace must be considered. (Level 4) (Grade B)

Question 3: What are effective/appropriate strategies to promote consistency and standardisation of vocational training delivered to HAs?

For question 3, there was widespread agreement regarding the need to promote consistency and standardisation of vocational training delivered to health assistants. Despite this, there was a significant lack of literature focusing on strategies to accomplish consistent or standardised training. However, there were promising signs, with different organisations creating guidelines, standards and accreditation processes for assistant training courses, and the two studies included in the systematic review expounded on how standards could be developed and tested, or generated from practice. These findings may be used to provide guidance when conducting strategies to promote consistency and standardisation of vocational training for health assistants.

Recommendations for practice

- There is an acknowledged need for consistency and standardisation of vocational training programs nationally for health assistants, and programs should be designed as such. (Level 4) (Grade B)
- The evidence suggests that national standards allow recognition of qualifications and competencies associated with them across states. (Level 4)

Question 4: What are effective/appropriate strategies to adapt vocational training programs to local context in healthcare?

For question 4, there was limited evidence supporting the need for appropriate and effective strategies to adapt vocational training programs to local contexts. From the few papers on this topic, it appears that training need to be contextualised for local contexts, and this may need to take into account (depending on the setting) population spread and rural health, cultural issues, developing countries, and local healthcare shortages.

Recommendations for practice

- The evidence suggests that community and participant consultation can facilitate development and provision of VET programs that are appropriate to the local context. (Level 4) (Grade B)
- The evidence suggests that when contextualising programs for certain locations, population spread, cultural issues, and local healthcare needs all need to be taken into account. (Level 4) (Grade B)

Question 5: What are effective/appropriate strategies to increase the relevance and understanding of vocational training amongst allied health professionals and HAs?

For question 5, different strategies or points relating to increasing the relevance of vocational training amongst allied health professionals and assistants were identified in the literature. These included the use of adult learning techniques, ensuring relevance to future work, surveying entry level practice and designing training based on this, collaborative learning, and continuing professional development. The one study included in the systematic review highlighted components of a training program that were either well received or not. These findings may be able to provide guidance to increase the relevance and understanding of vocational training amongst allied health professionals and assistants.

Recommendations for practice

- Different characteristics of training may be preferred or be more relevant for health assistants in training. Training should be designed in order to be as relevant as possible for health assistants. (Level 3) (Grade B)
- The evidence suggests that training should be mostly practically orientated and as relevant as possible to the associated profession of the health assistants, and utilise adult learning techniques. (Level 3) (Grade B)

16. References

1 Lizarondo L, Kumar S, Hyde L, Skidmore D. Allied health assistants and what they do: a systematic review of the literature. Journal of Multidisiplinary Healthcare. 2010;3:143-53.

2 Joy P, Wade S. Opening the door to healthcare assistants and support workers. Nursing Older People. 2003;15(6):18-20.

3 Edwards M. The nurses' aide: past and future necessity. Journal of Advanced Nursing. 1997;26(2):237-45.

4 Saunders L. Issues involved in delegation to assistants. Physiotherapy (London). 1997;83(3):141-7.

5 Saunders L. Managing delegation to physiotherapy assistants: application of a functional analysis model. Physiotherapy (London). 1996;82(4):246-52.

6 Kummeth P, de Ruiter H, Capelle S. Developing a nursing assistant model: having the right person perform the right job. MEDSURG Nursing. 2001;10(5):255-63.

7 Arblaster G, Streather C, Hugill L, McKenzie M, Missenden J. A training programme for healthcare support workers. Nursing Standard. 2004;18(43):33-7.

8 Robinson AJ, McCall M, DePalma MT et al. Physical therapists' perceptions of the roles of the physical therapist assistant. Physical Therapy. 1994;74(6):571-82.

9 Chief Health Professions Office. Discussion Paper: Allied Health Assistants, Assistants in Allied Health and Health Science Workforce Project. Perth: Department of Health; 2008.

10 Australian Physiotherapy Council. Guidelines for physiotherapists working with assistants in physiotherapy practices/services. Australia: Australian Physiotherapy Council 2007.

11 Douglas FM. An in-service part-time undergraduate programme for occupational therapy support workers. Occupational Therapy International. 2000;7(3):206-12.

12 Dean E. Move to improve support workers' competencies as their role widens. Nursing Standard. 2009;24(10):9.

13 Jelley W, Larocque N, Patterson S. Intradisciplinary clinical education for physiotherapists and physiotherapist assistants: A pilot study. Physiotherapy Canada. 2010;62(1):75-80.

14 Nemes J. What should be the role of audiologic technicians? It's debatable. The Hearing Journal. 2001;54(8-31).

15 Plack M, Williams S, Miller D et al. Collaboration Between Physical Therapists and Physical Therapist Assistants: Fostering the Development of the Preferred Relationship Within a Classroom Setting. Journal of Physical Therapy Education. 2006;20(1):3-13.

16 Chief Health Professions Office. Assistants Workforce Profile Survey Report 2008: Assistants in Allied Health and Health Science Workforce Project. Perth: Department of Health; 2008.

17 Australian Qualifications Framework Advisory Board. Implementation Handbook. 4th ed. Carlton, Victoria: Australian Qualifications Framework Advisory Board 2007.

18 The Joanna Briggs Institute. Joanna Briggs Institute Reviewers' Manual: 2008 edition. Adelaide: The Joanna Briggs Institute 2008.

19 Sutton J, Valentine J, Rayment K. Staff views on the extended role of health care assistants in the critical care unit. Intensive & Critical Care Nursing. 2004;20(5):249-56.

20 Fronek P, Kendall M, Ungerer G, Malt J, Eugarde E, Geraghty T. Towards healthy professional-client relationships: the value of an interprofessional training course. Journal of Interprofessional Care. 2009;23(1):16-29.

21 Hancock H, Campbell S, Ramprogus V, Kilgour J. Role development in health care assistants: The impact of education on practice. Journal of Evaluation in Clinical Practice. 2005;11 (5):489-98.

22 Hauxwell J. A National Vocational Qualification in the Operating Theatre: Participants' Perspectives on Its Effects on Staff Relationships. 2002:477--96.

23 Johnson M, Ormandy P, Long A, Hulme C. The role and accountability of senior health care support workers in intensive care units. Intensive & Critical Care Nursing. 2004;20(3):123-32.

24 Jung B, Salvatori P, Martin A. Intraprofessional fieldwork education: Occupational therapy and occupational therapist assistant students learning together. Canadian Journal of Occupational Therapy. 2008;75(1):42-50.

25 Jung B, Sainsbury S, Grum R, Wilkins S, Tryssenaar J. Collaborative fieldwork education with student occupational therapists and student occupational therapist assistants. Canadian Journal of Occupational Therapy. 2002;69(2):95-103.

26 Nancarrow S, Mackey H. The introduction and evaluation of an occupational therapy assistant practitioner. Australian Occupational Therapy Journal. 2005;52(4):293-301.

27 Potter P, Grant E. Understanding RN and unlicensed assistive personnel working relationships in designing care delivery strategies. Journal of Nursing Administration. 2004;34(1):19-25.

28 Bergin S. Getting a foot in the door: Can expanding the role of podiatry assistant improve access to public podiatry services? Australian Journal of Primary Health. 2009;15 (1):45-9.

29 Chow J, Miguel SS. Evaluation of the implementation of Assistant in Nursing workforce in haemodialysis units. International Journal of Nursing Practice. 2010;16(5):484-91.

30 Clayworth S. The integration of unlicensed assistive personnel using an "expanding our skills" workshop. Journal of Nursing Staff Development. 1997;13(5):243.

31 Gould R, Thompson R, Rakel B, Jensen J, Hasselman E, Young L. Redesigning the RN and NA roles. Nursing Management. 1996;27(2):37.

32 Yeatts D, Cready C. Consequences of Empowered CNA Teams in Nursing Home Settings: A Longitudinal Assessment. Gerontological Society of America. 1030 15th Street NW Suite 250, Washington, DC 20005. Tel: 202-842-1275; Fax: 202-842-1150; e-mail: geron@geron.org; Web site: http://www.geron.org/journals/gsapub.htm 2007:323--39.

33 Barr JS, Gwyer J, Talmor Z. Evaluation of clinical education centers in physical therapy. Physical Therapy. 1982;62 (6):850-61.

34 Crist PA, Brown LI, Fairman A, Whelan L, McClure L. Entry-level OTR and COTA intervention utilization derived from NBCOT practice analysis: implications for fieldwork experiences. Occupational Therapy in Health Care. 2007;21(1-2):71-89.

35 Lin L, Yeh S, Yang L, Tseng C, Yeh M. Satisfaction of nurse aides with pre-job training programs. Journal of Nursing Research (Taiwan Nurses Association). 2003;11(2):101-8.

36 Galloway J, Smith B. Meeting the education and training needs of rehabilitation support workers... including commentary by Hasson F, and Spilsbury K. International Journal of Therapy & Rehabilitation. 2005;12(5):195-9.

37 Fowler V. Health care assistants: developing their role to include nursing tasks. Nursing Times. 2003;99(36):34-7.

38 Hibbert A. NT research. The factors that affect HCA routes into nurse training. Nursing Times. 2006;102(1):32-6.

39 Cunningham A. Developing a foundation apprenticeship in care. Nursing Standard. 2006;21(5):40-5.

40 Gould D, Carr G, Kelly D, Brown P. Healthcare assistants: the new registration route. Nursing Standard. 2004;18(33):37-40.

41 Ellis B, Connell NAD, Ellis-Hill C. Role, training and job satisfaction of physiotherapy assistants. Physiotherapy. 1998;84(12):608-16.

42 Glasper A. Widening participation in pre-registration nursing. British Journal of Nursing (BJN). 2010;19(14):924-5.

43 Dinsdale P. Healthcare assistants are 'ready and willing to fill nursing gap'. Nursing Standard. 2005;19(46):9-.

44 Yeatts D, Cready C, Swan J, Shen Y. The Perception of "Training Availability" among Certified Nurse Aides: Relationship to CNA Performance, Turnover, Attitudes, Burnout, and Empowerment. Routledge. Available from: Taylor & Francis, Ltd. 325 Chestnut Street Suite 800, Philadelphia, PA 19106. Tel: 800-354-1420; Fax: 215-625-2940; Web site: http://www.tandf.co.uk/journals 2010:115--32.

45 Cherry B, Marshall-Gray P, Laurence A et al. The Geriatric Training Academy: innovative education for certified nurse aides and charge nurses. Journal of Gerontological Nursing. 2007;33(3):37-44.

46 Thornley C. A question of competence? Re-evaluating the roles of the nursing auxiliary and health care assistant in the NHS. Journal of Clinical Nursing. 2000;9(3):451-8.

47 Bull P, Halligan CM. Home care today. Growing your own CNAs: it's worth the effort... Certified Nurse Assistants. Home Healthcare Nurse. 2002;20(1):18-21.

48 Kneisley B, Heater S. Factors which motivate the certified occupational therapy assistant (COTA) to become a registered occupational therapist (OTR). Occupational Therapy in Health Care. 1998;11(3):39-51.

49 Cottrell RPF. COTA to OTR: factors influencing professional development. American Journal of Occupational Therapy. 2000;54(4):413-20.

50 Felton-Busch CM, Solomon SD, McBain KE. Barriers to advanced education for Indigenous Australian health workers: an exploratory study. Education for Health: Change in Learning & Practice (Network: Towards Unity for Health). 2009;22(2):7p.

51 Smith J, Roberts R, Fahy S. Use of study days to develop the healthcare assistant role. Nursing Times. 2006;102(30):34-5.

52 Priestley J, Selfe J. The foundation degree: an education framework for rehabilitation assistants?... including commentary by Long AF, Kneafsey R, Stewart SR, and Salvatori P. International Journal of Therapy & Rehabilitation. 2003;10(11):504-10.

53 Ries E. Recruiting the next generation of PTs and PTAs. PT: Magazine of Physical Therapy. 2005;13(11):36.

54 Garcia RM, Sublett C, Pettee EJ, Knox J. The nursing assistant to licensed practical nurse program: a collaborative career ladder experience. Journal for Nurses in Staff Development. 2003;19(5):234-7.

55 Jaffe JL, Andersen SL. Project BEGIN: recruiting students from ancillary personnel. Nurse Educator. 1990;15(3):29-31.

56 Gould D, Carr G, Kelly D. Seconding healthcare assistants to a pre-registration nursing course: role transition to qualified practitioner. Journal of Research in Nursing. 2006;11(6):561-72.

57 Goldberger S. From the Entry Level to Licensed Practical Nurse: Four Case Studies of Career Ladders in Health Care. Jobs for the Future, 88 Broad Street, Boston, MA 02110. Tel: 617-728-4446; Web site: http://www.jff.org. 2005:0.

58 Ahmad SG, Luebben AJ. OTA-OT partnerships: Offering educational options and opportunities. Occupational Therapy in Health Care. 2004;18 (1-2):202-4.

59 TAFE South Australia. Certificate IV in Allied Health Assistance. 2011 [cited 2011 24th June]; Available from: http://www.tafe.sa.edu.au/xml/course/aw/aw_XSA.aspx

60 Hegney D, Tuckett A, Parker D, Robert E. Access to and support for continuing professional education amongst Queensland nurses: 2004 and 2007. Nurse Education Today. 2010;30(2):142-9.

61 Duckett SJ. Health workforce design for the 21st century. Australian Health Review. 2005;29(2):201-10.

62 Hemingway M, Freehan M, Morrissey L. Expanding the role of nonclinical personnel in the OR. AORN Journal. 2010;91 (6):753-61.

63 Loomis J, Hagler P, Forward J, Wessel J, Swinamer J, McMillan A. Current utilization of physical therapy support personnel in Canada. Physiotherapy Canada. 1997;49(4):284-91.

64 Webb F, Farndon L, Borthwick A, Nancarrow S, Vernon W. The development of support workers in allied health care: a case study of podiatry assistants. British Journal of Podiatry. 2004;7(3):83-7.

65 Natell BJ, Ahmad SG, Banks MB. What does the move to master's level education for the occupational therapist mean for occupational therapy assistant education? Occupational Therapy in Health Care. 2004;18(1/2):199-205.

66 Chief Health Professions Office. Focus Group and Submission Response Report 2009: Assistants in Allied Health and Health Science

Workforce Project. Perth: Department of Health; 2009.

67 Australasian Podiatry Council. The role of Podiatry Assistants in Podiatric Practice Brunswick, Victoria.: Australasian Podiatry Council.

68 OT Australia. OT Australia Position Statement - Occupational Therapy Assistants. Fitzroy, Victoria: Australian Association of Occupational Therapists.

69 Chow J, San Miguel S, LiDonni M, Isbister J. The introduction of Assistants in Nursing in an Australian haemodialysis service. Renal Society of Australasia Journal. 2010;6(2):81-7.

70 Conti S, LaMartina M, Petre C, Vitthuhn K. Introducing a vital new member to the critical care team: our physical therapy assistant. Critical care nurse. 2007;27 (4):68, 7.

71 Bashi HL, Domholdt E. Use of support personnel for physical therapy treatment. Physical Therapy. 1993;73(7):421-9; discussion 9-36.

72 Knight K, Larner S, Waters K. Evaluation of the role of the rehabilitation assistant. International Journal of Therapy and Rehabilitation. 2004;11(7):311-7.

73 Chadwick MM. The feasibility of the role of the allied health assistant in the rural health delivery model. New Zealand Journal of Physiotherapy. 2008;36(2):84-.

74 Bosley S, Dale J. Healthcare assistants in general practice: practical and conceptual issues of skill-mix change. British Journal of General Practice. 2008;58(547):118-24.

75 Petrova M, Vail L, Bosley S, Dale J. Benefits and challenges of employing health care assistants in general practice: A qualitative study of GPs' and practice nurses' perspectives. Family Practice. 2010;27 (3):303-11.

76 Green S. Shaking our foundations: in the future... the relationship between occupational therapists and their helpers... part 2. British Journal of Occupational Therapy. 1991;54(2):53-6.

77 Barter M, Harter M, McLaughlin FE, Thomas SA. Registered nurse role changes and satisfaction with unlicensed assistive personnel. Journal of Nursing Administration. 1997;27 (1):29-38.

78 Orne RM, Garland D, O'Hara M, Perfetto L, Stielau J. Caught in the cross fire of change: nurses' experience with unlicensed assistive personnel. Applied nursing research : ANR. 1998;11 (3):101-10.

79 Marshall M. The use of unlicensed personnel: their impact upon professional nurses, patients and the management of nursing services. Nursing Monograph. 2006:4-8.

80 Ellis B, Connell N. Factors determining the current use of physiotherapy assistants: Views on their future role in the South and West UK region. Physiotherapy. 2001;87 (2):73-82.

81 Cottrell R. COTA education and professional development: a historical review. American Journal of Occupational Therapy. 2000;54(4):407-12.

82 Banks MB. Implications of the move to Master's level education for the occupational therapist and for occupational therapist education. Occupational Therapy in Health Care. 2004;18(1/2):204-5.

83 Workman BA. An investigation into how the health care assistants perceive their role as "support workers" to the qualified staff. Journal of Advanced Nursing. 1996;23(3):612-9.

84 Rhodes SD, Foley KL, Zometa CS, Bloom FR. Lay health advisor interventions among Hispanics/Latinos: a qualitative systematic review. Am J Prev Med. 2007;33(5):418-27.

85 Farndon L, Nancarrow S. Employment and career development opportunities for podiatrists and foot care assistants in the NHS. British Journal of Podiatry. 2003;6(4):103-8.

86 Kasewurm GA. Using support personnel frees audiologists to focus on audiology. Hearing Journal. 2005;58 (4):40-4.

87 Browne A. Education and training of the maternity care assistant: developments from a BTEC diploma in maternity care. RCM Midwives. 2005;8(2):72-3.

88 Hasson F, McKenna H, Keeney S, Gillen P. What do midwifery healthcare assistants do? Investigating the role of the trained healthcare assistant. RCM Midwives. 2005;8(2):74-7.

89 Naylor SM. National vocational qualifications (NVQs) from the candidate's perspective. Radiography. 2004;10(1):61-7.

90 Ford P. The role of support workers in the department of diagnostic imaging - Service managers perspectives. Radiography. 2004;10 (4):259-67.

91 Hogan J, Playle JF. Professional issues. The utilization of the healthcare assistant role in intensive care. British Journal of Nursing (BJN). 2000;9(12):794-801.

92 Annett MM. Setting the standard for speech-language pathology assistants: ASHA launched a new approval process this month for SLPA training programs. ASHA Leader. 2002;7(1):1.

93 McCartney E, Boyle J, Bannatyne S et al. 'Thinking for two': A case study of speech and language therapists working through assistants. International Journal of Language and Communication Disorders. 2005;40 (2):221-35.

94 Anthony MK, Vidal K. Mindful communication: a novel approach to improving delegation and increasing patient safety. Online Journal of Issues in Nursing. 2010;15(2):2-.

95 Forte B. Strategies for resolution of intraprofessional conflict related to the role of the certified occupational therapy assistant. Occupational Therapy in Health Care. 1988;5 (2-3):159-68.

96 Russo JM, Lancaster DR. Evaluating unlicensed assistive personnel models. Asking the right questions, collecting the right data. Journal of Nursing Administration. 1995;25(9):51-7.

97 Atwal A, Tattersall K, Caldwell K, Craik C. Multidisciplinary perceptions of the role of nurses and healthcare assistants in rehabilitation of older adults in acute health care. Journal of Clinical Nursing. 2006;15(11):1418-25.

98 Donahue M, Smith L, Dykes P, Fitzpatrick JJ. Phase 2 of the EMPOWER project: enhancing communication for paraprofessionals. Journal of Continuing Education in Nursing. 2010;41(5):197-8.

99 Gran-Moravec MB, Hughes CM. Nursing time allocation and other considerations for staffing. Nurs Health Sci. 2005;7(2):126-33.

100 Hall LM. Nursing staff mix models and outcomes. Journal of Advanced Nursing. 2003;44(2):217-26.

101 Hall LM. Policy implications when changing staff mix. Nursing economic$. 1998;16 (6):291-7, 312.

102 Salmond SW. Delivery-of-care systems using clinical nursing assistants: making it work. Nursing Administration Quarterly. 1997;21(2):74-84.

103 Perry M, Carpenter I, Challis D, Hope K. Understanding the roles of registered general nurses and care assistants in UK nursing homes. Journal of Advanced Nursing. 2003;42(5):497-505.

104 McKinnon M, Luke G, Bresch J, Moss M, Valachovic RW. Emerging allied dental workforce models: Considerations for academic dental institutions. Journal of Dental Education. 2007;71(11):1476-91.

105 Blechert TF, Christiansen MF, Kari N. Intraprofessional team building... between occupational therapists and occupational therapy assistants. American Journal of Occupational Therapy. 1987;41(9):576-82.

106 Scheerer C. The partnering model: occupational therapy assistant and occupational therapy students working together. Occupational Therapy in Health Care. 2001;15(1-2):193-208.

107 Mackey H. An extended role for support workers: the views of occupational therapists... including commentary by Workman B. International Journal of Therapy & Rehabilitation. 2004;11(6):259.

108 Conger MM. Delegation decision making: development of a teaching strategy. Journal of Nursing Staff Development. 1993;9(3):131-5.

109 Conger MM. The Nursing Assessment Decision Grid: tool for delegation decision. Journal of Continuing Education in Nursing. 1994;25(1):21-7.

110 Henderson D, Sealover P, Sharrer V et al. Nursing EDGE: evaluating delegation guidelines in education. International Journal of Nursing Education Scholarship. 2006;3(1):1-10.

111 Anthony MK, Standing T, Hertz JE. Factors influencing outcomes after delegation to unlicensed assistive personnel. Journal of Nursing Administration. 2000;30(10):474-81.

112 Chase P, Paul S. Integrating assistive personnel: a teambuilding approach. Nursing management. 1995;26 (6):71-3.

113 Hand T. Standardised training is key for healthcare assistants. Nursing Standard. 2010;24(26):32-.

114 Field L, Smith B. An essential care course for healthcare assistants. Nursing Standard. 2003;17(44):33-5.

115 Kendall-Raynor P. Urgent need for formal HCA training structure, says Carter. Nursing Standard. 2007;22(7):7-.

116 Daykin N, Clarke B. 'They'll still get the bodily care'. Discourses of care and relationships between nurses and health care assistants in the NHS. Sociology of Health & Illness. 2000;22(3):349-63.

117 Sengupta M, Harris-Kojetin L, Ejaz F. A National Overview of the Training Received by Certified Nursing Assistants Working in U.S. Nursing Homes. Routledge. Available from: Taylor & Francis, Ltd. 325 Chestnut Street Suite 800, Philadelphia, PA 19106. Tel: 800-354-1420; Fax: 215-625-2940; Web site: http://www.tandf.co.uk/journals 2010:201--19.

118 Nakhnikian E, Wilner MA, Hurd D. Nursing assistant training and education: recommendations for change: contributors to recent government-sponsored report on minimum staffing ratios suggest improvements for staff training. Nursing Homes: Long Term Care Management. 2002;51(8):44.

119 Accreditation standards for an educational program for the occupational therapy assistant. American Journal of Occupational Therapy. 2007;61(6):662-71.

120 Everett T, O'Siochru M, McPherson K. A UK National framework for support worker education and development. International Journal of Therapy and Rehabilitation. 2005;12(3):96.

121 Maring J, Costello E. Education program and student characteristics pass rates on the national physical therapist assistants therapy examination for physical. Journal of Physical Therapy Education. 2009;23(1):3-11.

122 Task Force for the Development of Student Clinical Performance Instruments. The development and testing of APTA clinical performance instruments. Physical Therapy. 2002;82(4):329-53.

123 Khomeiran RT, Deans C. Nursing education in Iran: past, present, and future. Nurse Education Today. 2007;27(7):708-14.

124 Harmuth S, Goodman 3rd JS. Developing an adequate and high quality nurse aide workforce in North Carolina. North Carolina medical journal. 2004;65 (2):101-3.

125 Bigelow JK. Establishing a training programme for rehabilitation aides in Haiti: successes, challenges, and dilemmas. Disability & Rehabilitation. 2010;32(8):656-63.

126 Foster J, Regueira Y, Burgos RI, Sanchez AH. Midwifery curriculum for auxiliary maternity nurses: a case study in the Dominican Republic. J Midwifery Womens Health. 2005;50(4):e45-9.

127 Fitzgerald MA, Chromy B, Philbrick CA, Sanders GF, Muske KL, Bratteli M. The North Dakota mental health and aging education project: curriculum design and training outcomes for a train-the-trainer model. Gerontology & Geriatrics Education. 2009;30(2):114-29.

128 Engle EM, Bethell HD. Implementing an Occupational Therapy Assistant training course for the Eastern Caribbean. American Journal of Occupational Therapy. 1977;31(8):493-8.

129 Freeman P. A culturally orientated curriculum for Aboriginal health workers. World Health Forum. 1993;14(3):262-6.

130 Goodale B, Spitz S, Beattie N, Lin I. Training rural and remote therapy assistants in Western Australia. Rural and remote health. 2007;7(774).

131 Newton L, Kirk H. The relevance of vocational education for occupational therapy support workers. British Journal of Occupational Therapy. 1999;62(3):131-5.

132 Royeen CB, Barnett P, Eberhardt KM, Walski T, Youngstrom MJ. Commission on Education position paper: the viability of occupational therapy assistant education. American Journal of Occupational Therapy. 2003;57(6):645-.

133 Parry R, Vass C. Training and assessment of physiotherapy assistants. Physiotherapy (London). 1997;83(1):33-40.

134 Lindsay P. Introduction of maternity care assistants. British Journal of Midwifery. 2004;12(10):650-3.

135 Dowds J, French H. Undertaking Continuous Professional Development (CPD) in the workplace in physiotherapy. Physiotherapy Ireland. 2008;29(1):11-8.

136 Kemeny B, Boettcher IF, DeShon RP, Stevens AB. Using experiential techniques for staff development: liking, learning, and doing. Journal of gerontological nursing. 2006;32 (8):9-14.

137 Teevan KG, Gabel H. Evaluation of modeling - role-playing and lecture-discussion training techniques for college student mental health professionals. Journal of Counseling Psychology. 1978;25(2):169-71.

138 Jellema JJ, Bair PW, Tuohig GM, Wright SJ. What's wrong with this picture?--A role-playing inservice for CNAs. Director (Cincinnati, Ohio). 1997;5 (2):73-6.

139 Guariglia WS. OBRA-required inservice programs can be creative. A couple of mannequins helped this educator interject fun into an inservice program for home health aides. Geriatr Nurs. 1993;14(1):45-6.

140 Strong GD. Allied health assistants: their training, role and attitudes. Australian Occupational Therapy Journal. 1983;30(3):117-23.

17. Appendices

Appendix 1: Initial search in Medline using Ovid

1 Allied Health Personnel/ or allied health.mp. or Allied Health Occupations/
2 physical therapy.mp. or "Physical Therapy (Specialty)"/
3 "Physical Therapy (Specialty)"/ or physiotherapy.mp.
4 "Physical Therapy (Specialty)"/ or physical therapist.mp.
5 "Physical Therapy (Specialty)"/ or physiotherapist.mp.
6 nursing.mp. or Nursing/
7 nurse.mp. or Nurses/
8 occupational therapy.mp. or Occupational Therapy/
9 Occupational Therapy/ or occupational therapists.mp.
10 Podiatry/ or podiatrists.mp.
11 podiatry.mp. or Podiatry/
12 speech pathology.mp. or Speech-Language Pathology/
13 Speech-Language Pathology/ or Speech Therapy/ or speech pathologists.mp.
14 Dietetics/ or dietitian.mp.
15 dietetics.mp. or Dietetics/
16 nutritionist.mp.
17 Pharmacists/ or pharmacists.mp.
18 Pharmacy/ or pharmacy.mp.
19 Orthopedics/ or orthotists.mp.
20 prosthetists.mp.
21 Radiography/ or radiographers.mp.
22 Podiatry/ or chiropodists.mp.
23 nurse aide.mp. or Nurses' Aides/
24 Nurses' Aides/ or assistants in nursing.mp.
25 dental assistants.mp. or Dental Assistants/
26 support worker.mp.
27 Psychiatric Aides/ or Pharmacists' Aides/ or Nurses' Aides/ or aides.mp.
28 helpers.mp.
29 helper.mp.
30 Health Education/ or Education, Nursing, Graduate/ or Education, Dental, Graduate/ or Education, Predental/ or

Education, Nursing, Associate/ or Competency-Based Education/ or Education, Nursing, Baccalaureate/ or Education, Public Health Professional/ or Education, Nursing/ or Education, Premedical/ or Education, Pharmacy, Graduate/ or Education, Professional/ or Education, Nursing, Diploma Programs/ or Education, Medical, Undergraduate/ or Education, Pharmacy, Continuing/ or Education, Graduate/ or Education, Special/ or Education, Medical/ or education.mp. or "Education of Mentally Retarded"/ or Area Health Education Centers/ or Education, Medical, Graduate/ or Education, Pharmacy/ or Education, Professional, Retraining/ or Education, Dental, Continuing/ or Nursing Education Research/ or Education/ or Education, Distance/ or Vocational Education/ or Education, Medical, Continuing/ or Education, Nonprofessional/ or Education Department, Hospital/ or Education, Continuing/ or Health Education, Dental/ or Education, Nursing, Continuing/ or Education, Dental/
31 training.mp. or Inservice Training/
32 vocation.mp. or Occupations/
33 Learning/ or learning.mp. or Problem-Based Learning/

34 instruction.mp. or "Instructional Films and Videos"/

35 Remedial Teaching/ or Teaching Rounds/ or Hospitals, Teaching/ or Teaching Materials/ or Teaching/ or teaching.mp.

36 curriculum.mp. or Curriculum/

37 curricula.mp. or Curriculum/

38 enrollment.mp.

39 enrolment.mp.

40 30 or 31 or 32 or 33 or 34 or 35 or 36 or 37 or 38 or 39 (818332)

41 assistant.mp. or Ophthalmic Assistants/ or Dental Assistants/ or Pediatric Assistants/

42 model of care.mp.

43 models of care.mp.

44 pathway.mp.

45 Personnel Delegation/ or Delegation, Professional/ or delegation.mp.

46 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12 or 13 or 14 or 15 or 16 or 17 or 18 or 19 or 20 or 21 or 22

47 aid$.mp.

48 Home Health Aides/ or Psychiatric Aides/ or Community Health Aides/ or Pharmacists' Aides/ or Nurses' Aides/ or aide.mp.

49 23 or 24 or 25 or 26 or 27 or 28 or 29 or 45 or 48

50 41 or 49

51 30 or 31 or 32 or 33 or 34 or 35 or 36 or 37 or 38 or 39 or 42 or 43 or 44

52 46 and 50 and 51

53 limit 52 to english language

Additional search following inclusions to the search strategy after feedback.

54 community rehabilitation assistant.mp.

55 Community Health Aides/

56 community health aides.mp. or Community Health Aides/

57 education.mp. or Education/ or Vocational Education/

58 training.mp.

59 vocation.mp.

60 Learning/ or learning.mp.

61 instruction.mp.

62 Teaching/ or teaching.mp.

63 curriculum.mp. or Curriculum/

64 curricula.mp. or Curriculum/

65 enrolment.mp.

66 enrollment.mp.

67 models of care.mp.

68 pathway.mp.

69 role development.mp.

70 role redesign.mp.

71 57 or 58 or 59 or 60 or 61 or 62 or 63 or 64 or 65 or 66 or 67 or 68 or 69 or 70

72 56 and 71

73 69 or 70

74 Psychiatric Aides/ or Pharmacists' Aides/ or Nurses' Aides/ or aide.mp.

75 assistant.mp. or Ophthalmic Assistants/ or Dental Assistants/

76 support worker.mp.
77 helper.mp.
78 Personnel Delegation/ or Delegation, Professional/ or delegation.mp.
79 74 or 75 or 76 or 77 or 78
80 73 and 79

Appendix 2: Critical Appraisal Instruments

JBI Critical Appraisal Checklist for Experimental Studies

JBI Critical Appraisal Checklist for Randomised Control / Pseudo-randomised Trial

Reviewer _____ Date _____

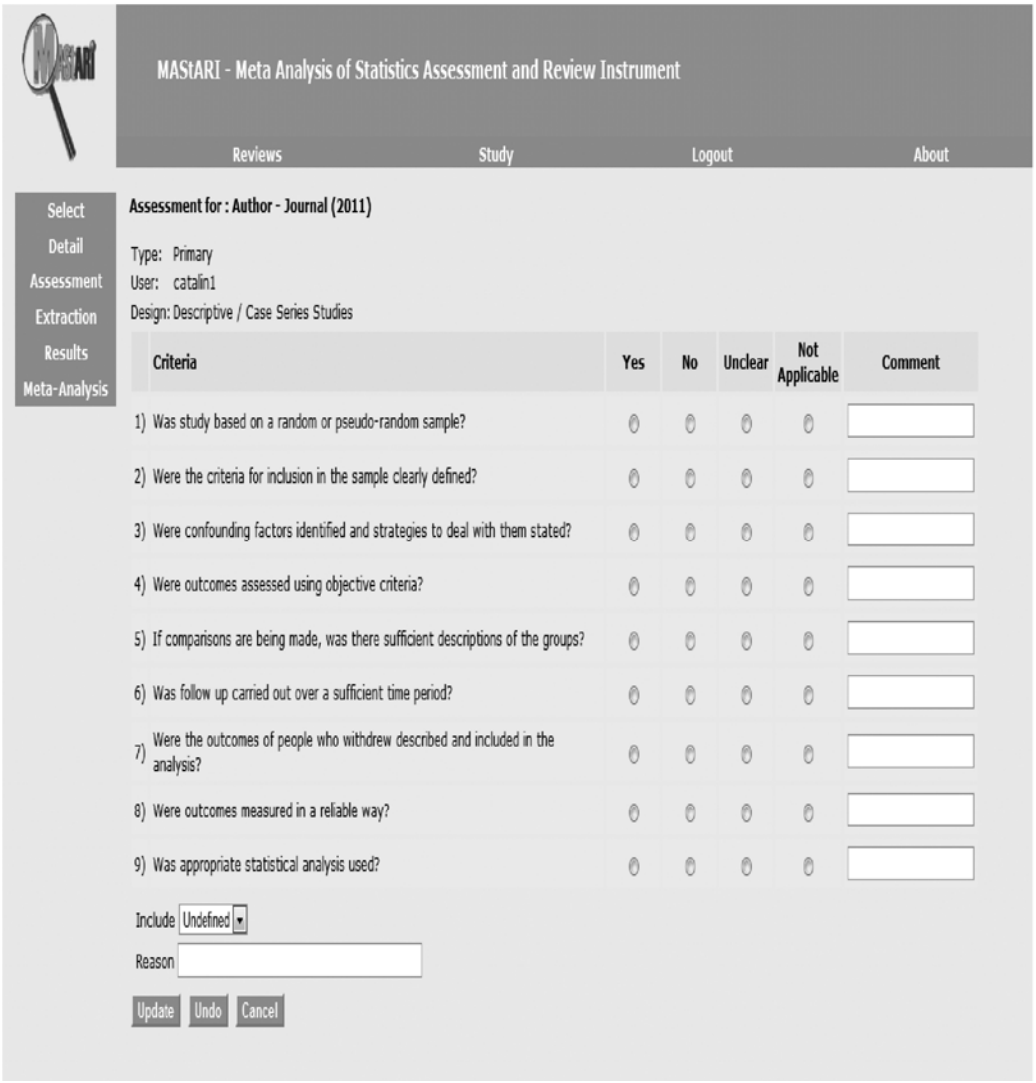
Author _____ Year _____ Record Number _____

	Yes	No	Unclear	Not Applicable
1. Was the assignment to treatment groups truly random?	☐	☐	☐	☐
2. Were participants blinded to treatment allocation?	☐	☐	☐	☐
3. Was allocation to treatment groups concealed from the allocator?	☐	☐	☐	☐
4. Were the outcomes of people who withdrew described and included in the analysis?	☐	☐	☐	☐
5. Were those assessing outcomes blind to the treatment allocation?	☐	☐	☐	☐
6. Were the control and treatment groups comparable at entry?	☐	☐	☐	☐
7. Were groups treated identically other than for the named interventions	☐	☐	☐	☐
8. Were outcomes measured in the same way for all groups?	☐	☐	☐	☐
9. Were outcomes measured in a reliable way?	☐	☐	☐	☐
10. Was appropriate statistical analysis used?	☐	☐	☐	☐
	☐	☐	☐	☐

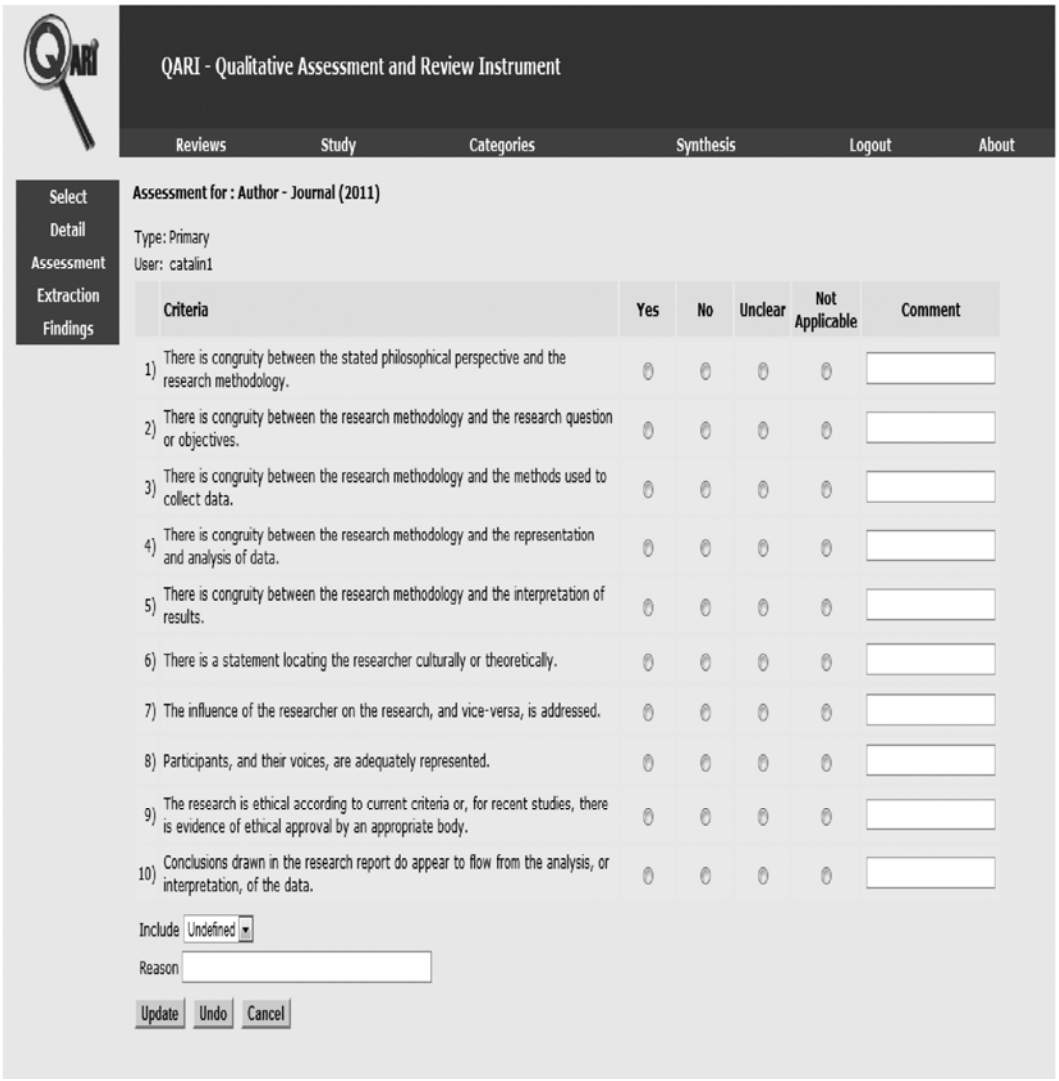
Overall appraisal: Include ☐ Exclude ☐ Seek further info. ☐

Comments (Including reason for exclusion)

JBI Critical Appraisal Checklist for Descriptive/ Case Series



JBI QARI Critical Appraisal Checklist for Interpretive & Critical Research



Appendix 3: Data Extraction Instruments

JBI data extraction form for experimental/observational studies

JBI Data Extraction Form for Experimental / Observational Studies

Reviewer _____ Date _____

Author _____ Year _____

Journal _____ Record Number _____

Study Method

RCT	☐	Quasi-RCT	☐	Longitudinal	☐
Retrospective	☐	Observational	☐	Other	☐

Participants

Setting

Population

Sample size

Group A _____ Group B _____

Interventions

Intervention A

Intervention B

Authors Conclusions:

Reviewers Conclusions:

Study results

Dichotomous data

Outcome	Intervention ( ) number / total number	Intervention ( ) number / total number

Continuous data

Outcome	Intervention ( ) number / total number	Intervention ( ) number / total number

JBI QARI Data Extraction Form for Interpretive & Critical Research

Reviewer _____ Date _____

Author _____ Year _____

Journal _____ Record Number _____

Study Description

Methodology

Method

Phenomena of interest

Setting

Geographical

Cultural

Participants

Data analysis

Authors Conclusions

Comments

Complete Yes ☐ No ☐

Findings	Illustration from Publication (page number)	Evidence		
		Unequivocal	Credible	Unsupported

Extraction of findings complete Yes ☐ No ☐

Appendix 4: Summary of quantitative studies included in Question 2

Consequences of Empowered CNA Teams in Nursing Home Settings: A Longitudinal Assessment[32]

Yeatts and Cready (2007)[32] performed a multi-method, pre-test/post-test design including qualitative analysis to determine the effects of empowered certified nursing assistant (CNA) work teams within nursing home settings in Texas. Empowered work teams consist of a group of employees with similar roles and titles, with characteristics of the teams including members taking on supervisory responsibility, and workers are 'empowered to make decisions about some aspects of their work and recommendations about others.'(p. 324)[32] Other titles for empowered work teams include self-directed teams, autonomous work groups, and self-managed work teams. The study used a non-equivalent control design, where in five nursing homes CNA empowered work teams were established as the experimental group; whilst in five comparable nursing homes the CNAs were treated as the control group. Self-administered questionnaires that measure employee empowerment using a Likert-type scale ratings were used to collect data. Qualitative approaches included observations of team meetings, examination of meeting summaries, and examination of written weekly responses from nurse management to the teams. The results found that there was increased CNA empowerment, improvements in CNA performance, improved delivery of resident care and choices, improved procedures, increased cooperation between nurses and CNA, improved coordination, and possibly reduced turnover of staff. Work attitudes were mixed regarding the empowered work teams.[32] The strategy of using empowered work teams maybe one way to promote the inclusion of health assistants in models of care.

Collaboration Between Physical Therapists and Physical Therapist Assistants: Fostering the Development of the Preferred Relationship Within a Classroom Setting15

Plack et al. (2006)[15] performed a mixed methods study to evaluate a model that fosters the development of a preferred relationships between physical therapists and physical therapist assistants in a classroom setting. The study used pre-test/post-test questionnaires and focus groups as a way to collect quantitative and qualitative data respectively. The study consisted of 34 first year physical therapist students and 21 second year physical therapist assistants. Also included for comparison were 24 second and 22 third year physical therapist assistants, who did not partake in the same collaborative course with assistants as the first year students. Two focus groups consisting of 6 assistants and 5 physical therapists respectively were conducted. The course that the first year physical therapists undertook included three 2-hour sessions. The first session covered various aspects regarding assistants such as their role, delegation and the preferred relationship between therapists and assistants. The second session was between the researchers and the assistants, as they discussed what would be delivered to the physical therapist students in the final session, which was a collaborative experience between physical therapist students and assistant students. Results showed that for the first year physical therapist assistants, there was a significant difference between pre-test and post-test scores. The results of the qualitative component confirmed that the learning experience was valued. Qualitative findings also included assistants students found it as a satisfying experience, and both groups of students suggested continuation of the course, stating that it had 'enhanced appreciation for the preferred relationship.'(p.3)[15] The authors conclude that the instructional model is an effective method to teach physical therapist assistant students about assistants and it provides a basis for forming collaborative relationships.[15] The strategy of using classroom sessions to teach physical therapists regarding assistants, and then to have them collaborate in a session whilst still learning, can be considered an effective and appropriate strategy to establish the health assistant role as a recognised delegated clinical role and promote their inclusion in models of care.

Redesigning the RN and NA roles [31]

Gould et al. (1996)[31] conducted a survey following a redesigning of the registered nurse and nurse assistant roles. The Nursing Administration Council, who developed the new system of nursing and care delivery, set goals for reorganising care delivery, and sought input from staff, including a survey. Policies were then drafted, one giving guidance regarding nursing observations and delegation, and another regarding educational processes for developing and maintaining nursing assistants. Nursing assistants were then educated using a competency based approach for all the tasks or skills that they could perform. A survey was conducted following the change and the results were positive, with concerns for quality of care decreased, improvement in patient care and satisfaction, staff satisfaction improvement, nurses had more time, and improved teamwork. Staff overtime was also recorded and a decrease in overtime was found for most units. By analysing and redesigning the role of the assistant, a more effective model of care may be able to be developed.[31]

Towards healthy professional-client relationships: the value of an inter-professional training course [20]

Fronek et al. (2009)[20] performed a quantitative and qualitative analysis of an inter-professional training course throughout Queensland, Australia to promote healthy professional-client relationships. The one day course was entitled Professional Boundaries for Health professionals, and included four topics areas: professional boundaries, ethical decision making, rigid relationships, and unique issues for community settings, rural and other small communities. The 109 participants included a range of health care professionals and assistants across seven different sites working in various areas. The quantitative evaluation consisted of a questionnaire. Open-ended questions were used to collect qualitative data regarding the course, and thematic analysis was sued to analyse this. The course was rated as very good by 31.9% of the 109 participants, and 68.1% rated it as excellent. It is thought that the effectiveness of this training will help foster collaborative relationships between professionals and paraprofessionals. The authors conclude that delivery of inter-professional training courses for professional boundary training is supported by evidence of the positive evaluations, and the consequences of professional boundary violations.[20] Courses such as this may help define boundaries between assistants and professionals, and improve collaboration in models of care.

The integration of unlicensed assistive personnel using an “expanding our skills” workshop [30]

Clayworth (1997)[30] conducted before and after study assessing the effects of a education program entitled ‘Expand our skills workshop’ on a range of statements in a questionnaire. The workshops consisted of a pre-workshop questionnaire, distribution and review of a role clarification tool, and a delegation exercise and further discussion, followed by a post-workshop questionnaire. The aim of the workshop was to ‘facilitate the use of obstetric technicians in a large labour and delivery unit’[(p.243)30]. Multiple workshops were conducted over three weeks, with 79 completed post-workshop questionnaires. Following the workshop, there were a wide range of improvements in the questionnaire responses. More participants felt as if they understood the role of obstetric technicians more, and there were more nurses confident about their delegation skills. The authors conclude that an educational program for nurses can increase the likelihood of success when implementing a nurse assistant program.[30] A workshop such as the one described in this article may be useful to facilitate the inclusion of assistants in models of care, and improve the reception of the introduction of assistants by professional staff.

Evaluation of the implementation of Assistant in Nursing workforce in haemodialysis units [29]

Chow and Migeul (2010)[29] conducted a before and after survey evaluation following the introduction of assistants in nursing in Sydney, Australia, in a haemodialysis units at a major tertiary Area Health Service. The primary outcome measure was nurse’s attitudes and satisfaction with the organisation of care, with secondary outcome measures including incidence of patient and nurse adverse outcome events across the units. A baseline survey was conducted amongst nurses, followed by an education session to prepare staff for the introduction of assistants in nursing. A follow up survey was conducted six months following

the implementation of the assistants in nursing. For the baseline survey, 52 nurses responded, with 33 responding on the follow up survey. From the results of the follow up survey, it was found that nurses acknowledged they coped well with the introduction of assistants, as would other staff. It was also found that less people disagreed that their workload would increase. There was also a small difference in the rate of clinical incidents following the introduction of assistants. The authors conclude that the research presented 'unique data about the effects of skill mix changes on nurses' attitude to organisational change and patient outcomes.'[(p.490)29] This study describes the introduction of a new model of care and staff reactions to it, which can help inform future projects.

Getting a foot in the door: Can expanding the role of podiatry assistant improve access to public podiatry services? [28]

Bergin (2009)[28] performed a before and after evaluation pilot study to measure the effects of delegating tasks to a qualified podiatry assistant. Outcomes of the project included clients seen, change in podiatry hours, change in waiting times, adverse events and patient satisfaction. Workshops were conducted to produce a service map and to identify gaps in current services, with additional workshops conducted to define the role of assistant and the required skills set and training needs. The role of podiatry assistant was then implemented. The results found that the assistant saved 40 hours per month, through the allocation of non-clinical tasks such as sterilisation of instruments and equipment. Waiting periods were reduced by ten weeks (from 12 to 2). The authors conclude that 'the findings of this pilot have implications for improving affordability and accessibility of footcare services to a significant proportion of the community and reducing the burden on current community based services.'[(p.45)28] The study displays how a podiatry assistant can be incorporated into models of care with positive outcomes.

Appendix 5: Summary of qualitative studies included in Question 2

Towards healthy professional-client relationships: The value of an inter-professional training course [20]

Fronek et al. (2009)[20] performed a quantitative and qualitative analysis of an inter-professional training course throughout Queensland, Australia to promote healthy professional-client relationships. The one day course was entitled Professional Boundaries for Health professionals, and included four topics areas: professional boundaries, ethical decision making, rigid relationships, and unique issues for community settings, rural and other small communities. The 109 participants included a range of health care professionals and assistants across seven different sites working in various areas. Open-ended questions were used to collect qualitative data regarding the course, and thematic analysis was used to analyse the data. The authors concluded that delivery of inter-professional training courses for professional boundary training is supported by evidence of the positive evaluations, and the consequences of professional boundary violations.[20] The findings of the study are listed below.

Finding1	**Teaching methods**
Illustration	The intimacy of the group and the practical example, made people think and exchange ideas. page 24 The hands on activities really cemented the information given. page 24
Finding2	**Ethical decision making**
Illustration	I really enjoyed this workshop today, it really makes you stop and think about the way you handle situations not only at work but also in your own life, still unsure about whether some things are appropriate or not, while there are not always clear cut black and white answers to some of these situations, I feel I now have the tools and knowledge to do the right thing. page 24
Finding3	**Supervision**
Illustration	There is a need for supervision opportunities; will encourage supervision with all staff; need to introduce into the orientation; make the education compulsory; will support staff more. page 24
Finding4	**Critical reflection**
Illustration	I enjoyed the opportunity to self analyse; it made me more aware of my own obligations, to analyse more, be more aware of own thoughts, reactions, feelings and how this impacts on work . . . I will stop and think; recognize my own ethics and values may or will impact on others. page 25
Finding5	**Separation from the workplace**
Illustration	Some participants indicated they were concerned about their absence from the workplace for the duration of the one-day training workshop…Time spent away from work based responsibilities was perceived by a number of participants. Participation in training, though highly valued, was seen of lesser importance against the competing priorities necessitated by those work-based responsibilities. page 25

Role development in health care assistants: The impact of education on practice [21]

Hancock et al. (2005)[21] conducted a qualitative, inductive study using semi-structured interviews to determine the impact of an educational health care assistant development programme on care delivery and the role of the healthcare assistant. The study was split in two parts; part one, which included three health care assistants, 24 of their colleagues and nine patients, aimed to evaluate the impact of the health care assistant development programme. Part two, which consisted of twelve healthcare assistants who did not participate in the development programme, aimed to ascertain their current and desired roles, barriers to the new roles, and assess their preparedness to attend the development programme. The authors concluded that the development programme had a positive influence on the role of the healthcare assistant, and that there is a need to prepare for the restructuring of roles. The findings from the study are listed below.

Finding1	**Changes to practice that occurred as a result of the programme**
Illustration	'There was an overriding sense of a transition from the execution of tasks to the provision of a more holistic approach to care' page 492-493
Finding2	**Variations in practice within and between wards/departments**
Illustration	Local need and decisions about the HCAs roles affected the skills they performed both prior to and following the HCA Development Programme. The HCAs spoke of the difficulty they encountered, and frustrations they experienced as a result of differences in role between areas. At least to some extent, their role was affected by that of the qualified staff… HCA1 learnt and applied phlebotomy to practice, HCA2 was learning the skill but was not competent to practise at the time of the study. HCA1 was in the process of learning about heart manual delivery. HCA1 learnt and applied troponin testing and HCA2 learnt and applied pin site dressings. These changes do not provide a full portrayal of the impact of the HCA Development Programme, as they do not demonstrate improvements or changes in the way that care was delivered. page 493
Finding3	**Factors influencing the application of knowledge and skills gained from the HCA Development Programme into practice**
Illustration	There were a number of factors that affected the HCAs' ability to apply their knowledge and skills. page 493
Finding4	**Reactions by HCAs to role development**
Illustration	While it was apparent that the HCAs had had some initial concerns about changes to their role, the completion of the programme resulted in a sense of satisfaction and achievement. page 493

Finding5	**Responsibility**
Illustration	The HCAs viewed the increased responsibility that came with their role development as part of their new role. Any concerns were accompanied by their acceptance of responsibility to their own level, and a sense of reassurance about the back-up provided by qualified staff. Responsibility appeared significant to the HCAs' colleagues' perceptions of the role development. They voiced positive views, as well as concerns about the consequences of taking responsibility for care provided by the HCAs. They also expressed some concerns about the potential impact of the increased responsibility on the HCAs themselves. page 493-494
Finding6	**Patient dependency**
Illustration	Patient dependency affected the level of input from the HCAs, so that the more dependent the patient, the less they were involved in care. page 494
Finding7	**Local decisions about roles**
Illustration	Despite competencies listed for the HCAs following the Development Programme, local decisions about their roles affected and restricted their roles. page 494
Finding8	**Responses of colleagues to extended HCA role**
Illustration	The HCAs spoke of difficulties in their role as a result of their colleagues' reactions to it. Much of what occurred seemed to be explained, at least in part, by negative perceptions about their role development. While the HCAs' colleagues saw obvious benefits in the HCAs' role development, they also voiced concerns. page 494
Finding9	**Relationships**
Illustration	Relationships between the HCAs and their colleagues influenced the HCAs' roles and appeared to be determined by the local experience of the HCA (in years). page 494
Finding10	**Role clarification**
Illustration	One of the HCAs spoke of the positive effect of the programme on the responses of her colleagues to her role. There was however, an apparent lack of clarity in regard to the HCAs' role from their colleagues in relation to what the HCAs were allowed to do, and about the rationale upon which roles were allocated. page 494
Finding11	**Role transition**
Illustration	Many of the HCAs' colleagues spoke of changes to ways of working as a result of role developments. The delay between recognizing the need for change and implementing it was also acknowledged. page 494

Finding12	**Competency assessment**
Illustration	The successful completion of competencies by the HCAs was dependent upon a number of factors including time, availability of staff, utilization, relevance and previous training. page 494
Finding13	**Staffing levels**
Illustration	Staffing levels were viewed as significant to the HCAs' role and resulted in either more or less being done by them. page 494
Finding14	**Other training needs**
Illustration	The issue of having a number of staff in the same ward/department who required training and development was highlighted as restricting time for training and for access to patients or procedures and therefore role development. page 494
Finding15	**Housekeeping**
Illustration	The lack of a designated housekeeper affected the ability of the HCAs to apply their knowledge and skills. There was some concern from the HCAs and their colleagues about ensuring the quality of housekeeping and about the difficulty the HCAs faced in attending to housekeeping duties at the expense of their new, patient-focused, roles. page 494
Finding16	**Current and desired roles**
Illustration	Individual roles varied significantly, both in terms of remit and responsibility and were affected by a number of factors, which included patient needs, colleagues, relationships, local decisions about roles, staffing levels and clarity about the remit of roles. As a result, the HCAs' roles varied between and within areas. The HCAs held both positive and negative views about the development of their role. Positive views were in relation to patient benefits as well as personal job satisfaction as a result of their increased contribution to care. HCAs who were prepared to develop their role spoke specifically about the areas or particular skills in which they saw the potential for this, which included: more hands on patient care, more skills and more responsibility. page 494
Finding17	**Preparedness to attend the HCA Development Programme**
Illustration	Of the 12 HCAs interviewed: Eight were prepared and keen to attend the HCA Programme. Two were undecided. Two were not prepared to attend the programme. page 495
Finding18	**Prepared to attend**
Illustration	Those who wished to attend the programme spoke of their desire to do more training. One HCA spoke of her desire to train more, to the extent that she was leaving to do her training. page 495

Finding19	**Prefer not to attend**
Illustration	For some HCAs, their reluctance to attend the programme was as a result of their lack of knowledge about it, for others it was based in satisfaction with their current role, their level of responsibility and pay issues. There was an overriding sense among the HCAs that, if they were to develop their roles, they should be rewarded financially for doing so. For some HCAs this meant that they were not prepared to develop their roles. page 495

A national vocational qualification in the operating theatre: participants' perspective on its effects on staff relationships [22]

Hauxwell (2002) [22] conducted a qualitative case study using structured interviews for 40 participants; only 26 were of use. The aim of the study was to determine the participant's perspectives on the implementation of a National Vocational Qualification in the operating theatre, and its effects on work relationships, safe practice, and teaching and learning. The sample consisted of both nurses and assistants. The authors concluded that the implementation of the National Vocational Qualification resulted in an improvement in staff relationships, particularly noted by assistants. The findings of the study are below.

Finding1	P**articipant's perspectives of staff relationships**
Illustration	I found it involves more people in the teaching ... it's taken it away from a few people who like to own the teaching and assessing of learners. page 485 The nurses' become involved ... they tend to be getting involved a bit more. page 485 The major impact at (sic) NVQ has been to motivate the qualified staff' with many more people involved in training ... Certainly professionally it's certainly involved nurses in the qualification much more than 752 ever did. page 485
Finding2	**Greater awareness by nurse and ODA of each other's actual job**
Illustration	We've got an infiltration of both sides ... I think they (the nurses) appreciate our skills as both surgical and anaesthetic. I think we appreciate theirs as well we understand what they do. page 488 It was divided down the middle ... I think they've (the nurses) now realised what the ODA has done all these years. Which they never sat back and looked at ... I don't think there's one that hasn't come back and said we never realised just what you had to do. page 488
Finding3	**The creation of a new 'them and us' concept**
Illustration	... the them and us situation that we have here are those ... who do not take on the whole of theatre practice ... then those nurses and ODPs who are multi-skilled are the us. page 490 What Mrs X [name of theatre manager] tried to create was this core group of people ... a traditional nurse scrub, a traditional ODA doing anaesthetics and in the middle we've got this multi-skilled group of practitioners the ODPs. Which is getting bigger and bigger as we go on. page 490

Finding4	**Participants' perspectives of motivation issues**
Illustration	I think the image of the ODA and the ODP has changed as well ... because they've been encouraged to be multi-skilled ... maybe their [ODAs] outlook on careers have changed and there is opportunities there to be team leaders or deputy team leaders. Quite a lot of them [nurses] here have done it [the ODP NVQ] ... even the ones that haven't done it have been involved ... they can see the ODP's knowledge base ... and I think some of them realise that ... 'cos they've got nurse qualified qualification doesn't make them ideal to work in theatre ... so that's brought them down of(f) the high horse a bit.. Where now the enthusiasm is back again with every body ' wanting to learn to scrub again, majority can now. Again we [the ODAs] don't want to be left behind. page 491

Intra-disciplinary Clinical Education for Physiotherapists and Physiotherapist Assistants: A Pilot Study [13]

Jelley et al. (2010)[13] conducted a qualitative study to investigate the perceived impact of intra-disciplinary clinical education for physiotherapists and physiotherapist assistants. Data was collected via interviews with the participants both before and after placement, and the participants also kept journals. The sample consisted of three third year physiotherapist students, and three second year physiotherapist assistant students, as well as three physiotherapists as clinical instructors. The clinical education consisted of a paired five week clinical placement, using the 2:1 clinical model of supervision. The authors concluded that the shared clinical placements can result in improvements in student's communication, consultation and assignment skills. The findings of the study are below.

Finding1	**Collaborative practice**
Illustration	Certain days we'd have like 20 [patients] to see . . . In the morning we'd sit down, discuss it . . . like the patients we'd see together . . . we really figured out ways to get around our schedule and basically get through our schedule. Because if not we would never see the patients. . . if we wouldn't have done that it would never have worked. (PT student interview)page 77 [PT and PTA students] have gotten into a rhythm in their daily tasks producing excellent care to patients. (CI journal entry)page 78 Well she [PTA student] was good . . . because she has a better eye than me so sometimes she could pick things up that I didn't see. (PT student interview)page 78

Finding2	**Collaborative learning**
Illustration	She [PT student] really found that she learned a lot about the physiotherapist assistant's role that she didn't know before. So she had very clear outlines of what they did, what they could do, what they could not do. They discussed their education and what they learned in their courses and when she delegated, she knew what she could delegate and what she had to do on her own. (CI interview)page 78 I thought it was interesting from the beginning, seeing them learning together at the same time. It [learning together] worked all the way along they learned who did what and how to organize their time and lots about communicating.(PTA interview)page 78 Now I know a bit more about the mentality of why they [physiotherapists] are asking us to do certain stuff. (PTA student interview) page 78

The role and accountability of senior health care support workers in intensive care units [23]

Johnson et al. (2004)[23] conducted a qualitative study using structured non-participant observation and semi-structured interviews to evaluate the introduction of senior health care support workers with advanced skills into intensive care units. The sample consisted of 17 senior health care support workers who participated in semi-structured interviews. The authors found the senior health care workers have an important role to play, but that it is not as yet clearly defined. The findings of the study are below.

Finding1	**The role itself**
Illustration	Interviewer: Such as, what do you think, where is the line that you draw' SHCSW: Well I didn't know what the line was, this is what I am saying, I was sure that we shouldn't be messing with ventilators and things like that, I know that we don't actually attach a patient up, but we can set up ventilator, but we have not to do the alarms. Because we don't know what is right and wrong, we could take the blood pressure at 60 over 40 and the alarm wouldn't go off until it reached 60 over 40. You know what I mean, we are not qualified to do that so we don't do that now. Interviewer: But did you find you were doing that at the beginning, or you were being shown how to do it' SHCSW: Yes, yes, they were showing us everything, which was good, not that we were going to be doing everything but we were shown how to draw drugs up, although we will never touch some it was interesting to know what they were for. It helps us that way. I think if there are no guidelines for what you can and can't do I think you are open to abuse. (SHCSW 5, Site 2)page 127 Interviewer: So does it depend on who you are on with as to what you learn that day' SHCSW: Yes some days you learn absolutely nothing. You don't learn anything, you learn how to brew up and do bed baths. (SHCSW 5, Site 2)page 127

Finding2	**More than an auxiliary**
Illustration	SHCSW: I know they had an auxiliary here because I took her job. Andrea was here for 7 years and she left, that is when I asked about the job she said, 'Oh, I am leaving', and she was only part time and they want somebody full time, which is what I wanted, but I know Andrea was an auxiliary, just helped to turn the patients, do the filling up (stock) and running around, but I know that the Health Care Support Workers is going to be a lot more than that. (SHCSW 3, Site 1)page 127 Interviewer: So what duties have you performed in the ICU so far' SCHSW: This morning I've worked with Jenny who is an NVQ verifier and is very good and she actually showed me how to suction and I've gone on to suction myself and while she was on her meal break I did the hourly observations and actually suctioned the gentleman out and the nurse in the next bed watched me so it's been quite good today I've actually done things...yes not just watched. (SCHSW 10, Site 4)page 127
Finding3	**Accountability concerns**
Illustration	Manager: The nursing staff were concerned about the boundaries,...it matters, we want to know the boundaries. The staff are very scared about the boundaries of accountability. (Manager, Site 1)page 127 The thing I have found is that when I first started I did my first two shifts with someone (who wasn't even related to the NVQ), she taught me the blood gas, she was fantastic and she taught me the 'obs' in one day. Then when my assessor came in because she had been off for a while I hadn't even met her before. She said 'Oh, I'm going to have to show you how to do blood gas', and I said 'well I have been shown' and I have done a write-up on it to say I can do it and she (the other nurse) has signed it off. 'Well, I am not really happy you doing it, I want to watch to do it, and then you can build your confidence up.' (said the assessor) You are always going back to base with different people. (SHCSW 17, Site 6)page 128
Finding4	**The 'blood gas'**
Illustration	Interviewer: (Is it) that they don't know you can do it rather than they don't want you to' I don't think it is a case of them not wanting (us) to because again it is a 'big deal' blood gas and if they take a few times for me to pick it up, but now a couple of them (nurses) know I can do them 'Oh do you want to do this blood gas for practice go and get the results' and I say 'Fine, OK, yes,' but some of them say 'No, I'd rather do it. It depends on the person. (SHCSW 17, Site 6)page 128-129
Finding5	**Who really is accountable?**
Illustration	Interviewer: Who do you think is responsible, maybe when, well are you responsible when you do something or is it the nurse that is watching you' SHCSW: Everyone is accountable for their own actions, that is the way I have always worked. I know that the nurses do have an overall accountability, but I think that everyone should be responsible for their own actions. (SHCSW 1, Site 1)page 129

Finding6	**Responsibility of assistants**
Illustration	Interviewer: And who is responsible if you make a mistake' SHCSW: The trained staff, because when we have finished this course we work in HDU which is one nurse to two patients, so we would just assist the nurse in looking after one of the patients, well that is how I believe it is going to work anyway, we won't just be given a patient to look after ourselves. (SHCSW 12, Site 5)page 129 Interviewer: And who takes it on if you are doing something' SHCSW: Well if I am doing something that I have been trained to do then obviously I am responsible for my own actions, but also I suppose whoever has trained me as well and who ever supervises me is responsible to ensure that I have been shown the correct way, because if I do something and it works out that I have been shown the wrong way then obviously that person is responsible also for showing me the wrong technique or whatever. (SHCSW 2, Site 1)page 129
Finding7	**'I'll do it myself'**
Illustration	A lot of them are happy dealing with their own patient in their own way. And I get the feeling sometimes that even the ones (nurses) that I am put with, they feel that they would rather (as they say) 'be on my own and I can sort my own patient out. I know where I am up to with them and I don't want you interfering with that because I will lose what's going on.' It would be a shame if it (the new role) didn't work because it is a nice place to work but I don't know, time will tell us all. (SHCSW 17, Site 6)page 130

Intra-professional fieldwork education: Occupational therapy and occupational therapist assistant students learning together [24]

Jung et al. (2008)[24] conducted a qualitative study to assess the impact of a combined collaborative fieldwork placement between occupational therapist students and occupational therapist assistants student. During the placement, tutorials that discussed intra-professional issues were held. Data was collected using the journals of students, tutors and preceptors, as well as a post-fieldwork focus group. The authors concluded that intra-professional fieldwork and collaborative learning can assist in preparing occupational therapist and occupational therapist assistant students for working together post graduation. The findings of the study are below.

Finding1	**Developing the relationship**
Illustration	I have been able to teach [my student partner] what we have learned in our OTA classes and she taught me what they have learned. (student OTA) page 46

Finding2	**Understanding roles**
Illustration	I think that every OT student should have at least one opportunity to work alongside OTAs [student or graduates] so that they may learn the value of their role. (student OT) page 46 I have had the opportunity to work with the OT student on a module for the mentally ill. This I think has been a turning point in our relationship because it gave us the opportunity to actually see what the other was capable of doing. (student OTA)page 46 While we worked together with this client throughout the past two weeks, we would have a small discussion after each intervention, and we would discuss the differences in our roles as OT and OTA. It was a very interesting experience, and really clarified our roles to both of us. (student OTA) page 46
Finding3	**Recognising environmental influences**
Illustration	It appears that despite the stated goals of [our] research study, the [hospital] organization structure determines the students' ability to work collaboratively by controlling the frequency, duration, and quality of their interactions. (OTA tutor) page 47

Collaborative fieldwork education with student occupational therapists and student occupational therapist assistants [25]

Jung et al. (2002)[25] conducted a qualitative study using reflective journals and a questionnaire to describe the process of collaborative fieldwork between occupational therapist and occupational therapist assistant students. The authors concluded that there were benefits and challenges when using the collaborative learning model, and that students have the necessary preparation to work together. The findings of the study are below.

Finding1	**Learning about each other's roles**
Illustration	I feel that we are all confused about our roles and expectations and meeting the needs of all concerned (schools, facilities, student occupational therapists and student occupational therapist assistants). (Student occupational therapist) page 99 Once we had established approximately where our professional boundaries overlapped and where they separated, we were able to accept what each other was doing. (Student occupational therapist assistant) page 99 As for working with the [occupational therapist assistant] students, the experience has been an excellent learning process for me. I have learned, discussed, and analysed the professional boundaries, appropriate utilization of occupational therapist assistants and effective and efficient team functioning. (Student occupational therapist) page 99

Finding2	**Collaborative learning**
Illustration	The partnership that needs to exist for the students to provide care to clients is one of trust and an agreement on consistent, thorough and concise updates on clients between the occupational therapist and occupational therapist assistant. We have worked on this in our arrangement, which is great ...this focused time on communication has been very useful for organization and proper client care. (Student occupational therapist) page 100 I have been very conscientious about my approach with the occupational therapist assistant student to ensure a feeling of partnership and mutual esteem and respect. She has a great knowledge base of terms, and I have to wonder why I don't. I guess working with her I'll have the chance to learn all about them. (Student occupational therapist) page 100 The occupational therapist and occupational therapist assistant relationship is working really well. I feel that we are doing an excellent job and getting things done as a team. (Student occupational therapist assistant) page 100 This project ...is also an excellent way to practice team-work. I often found myself relying on something the occupational therapy student was working on or had already done, and I was also able to help her complete her work efficiently by doing certain things for her. As a result of this project, I now feel more prepared to work together with an occupational therapist in the future because I have had an opportunity to practice and explore first. (Student occupational therapist assistant) page 100
Finding3	**Impact on client care and future practice**
Illustration	From my perspective working together as a team means learning from each other and collaborating with other professions to best meet the needs of the residents. (Student occupational therapist) page 100 I feel that I have gained a lot of knowledge and ideas about how occupational therapists and occupational therapists assistants could work together in other settings. This may be useful for me in the future if I work in an area that had previously not used many assistants. (Student occupational therapist assistant) page 100
Finding4	**Resistance to roles**
Illustration	I don't mind giving treatment plans to the student occupational therapist assistants that they can carry out, but aside from that, I don't feel that our role is to supervise. (Student occupational therapist) page 100 I don't really like them being our teachers. I don't think they have enough hands on to show me the ropes. (Student occupational therapist assistant) page 100

The introduction and evaluation of an occupational therapy assistant practitioner [26]

Nancarrow and Mackey (2005)[26] conducted a qualitative study to explore and describe the introduction and evaluation of an occupational therapy assistant practitioner in a health trust in the United Kingdom. Data collection was via focus groups with assistant practitioners (five), supervising occupational therapists (5), team managers (4), and clients or carers (3). The authors concluded that career structures and accountability need to be clearly defined, and training should be available for staff undertaking new roles. The findings of the study are below.

Finding1	**Definition of the role**
Illustration	Basic skills that you are just taking on board so all the transfers; it is just basic bread and butter, as I would call it basic assessments in the kitchen. Kitchen practice, bathroom, bath board, and seat (assistant practitioner 471).page 296
Finding2	**Roles and responsibilities of assistant practitioners**
Illustration	Assistant practitioners have a range of roles and responsibilities within the service that vary according to the setting in which they work (health or social care setting); their relationship with their supervising occupational therapist; and the supervisory arrangements within the service. page 296
Finding3	**Interface between the assistant practitioners and state registered occupational therapists**
Illustration	Clinically I think we're working very similarly. If there is a more complex case then I will try and pick that case up but in practical terms that's not possible because I work part time so (the assistant practitioner) has actually gone out on cases that on paper look pretty complex (occupational therapist 96).page 296 From our point of view I think what the problem is, what a lot of OT's do is not OT and that is something that we've done over maybe 20 years, we've suddenly developed dressing practices in OT role, transfer practise, and actually we've lost the occupational meaning behind those roles, so suddenly this is a task, so we now end up in this new position of trying to defend tasks when really we shouldn't be taking a task approach, it's what we bring as professionals with their own background about the essence (Manager 405). page 297 When I first started I was not to take complex cases, noncomplex cases that was on my job description, there are no noncomplex (cases) as far as I am concerned. Then it was anybody that has got a multi-diagnosis well we haven't had one client that hasn't got a multi-diagnosis. I come across a lot of incredibly difficult social situations more so than medical (Assistant Practitioner 477).page 297
Finding4	**Circumstances in which assistant practitioners can add value**
Illustration	Sometimes I think that we are on ground level and we think at the most obvious things, obvious solutions (Assistant Practitioner 521).page 297

Finding5	**Accountability and supervision issues**
Illustration	We've certainly had issues where some of the supervising OT's have been so worried about the quality of the service on offer and so worried about not being able to control that they've actually over supervised the assistant practitioners and made them come back, and in great detail go through every single patient every week, and then we've also had the exact opposite which was perhaps 'well I don't really want these assistant practitioners but other people have imposed them on me and they've said they're okay and they say they can do the work so I'm letting them get on and doing it' and they haven't had supervision from one month to the next, official supervision, they'll say 'oh well, we'll catch them in the corridor or something (manager 215)'.page 298 Do you know what really brought it home to me was when last year you'd missed signing your professional accountability and (the manager) said that you couldn't see patients.' You couldn't see patients and yet we're sending (the assistant practitioners) out who have no legal status at all. We're sending them out to do clinical work and yet you couldn't see patients (Occupational Therapist supervisor 593).page 298 In some cases I don't think you've got the confidence in your assistants and until you build up that relationship you need to meet with them more often just to test their thinking (Manager 286).page 298
Finding6	**Training and education requirements of assistant practitioners**
Illustration	Good assistant practitioners can make reasonable judgements, that's not an OT skill, that's an anybody skill, you can take responsibility, they can build up the networks, so we're also looking at a set of competencies that are non-OT competencies ' (Manager 346). page 299 I see a knowledge base as being important and the training is important. You start off with a personal qualification but I think you have to have a professional set of qualifications at whatever level it is whether it is from the lowest down to degree level and beyond. The person doing the work must be at the right level. There is no good giving a person who's starting off something which they are unqualified for or incapable of and as has been said judging that person at whatever stage in their career for whatever task they are trying to achieve (Service user 330). page 299

Finding7	**Implementation of the role**
Illustration	The implementation of the new roles was seen as a challenge to managers who, on the one hand, are encouraged to be innovative and flexible, but need to manage this innovation within the confines of clinical governance and innovation. Factors that facilitated the implementation of the new roles included: having a 'champion' for the role at the management level, an innovative and flexible environment for service delivery, willingness of managers and clinicians to try new ideas and learn from their mistakes, and a team attitude that embraces 'modern' ways of working. page 299

Collaboration Between Physical Therapists and Physical Therapist Assistants: Fostering the Development of the Preferred Relationship within a Classroom setting [15]

Plack et al. (2006)[15] performed a mixed methods study to evaluate a model that fosters the development of a preferred relationships between physical therapists and physical therapist assistants in a classroom setting. The study used pre-test/post-test questionnaires and focus groups as a way to collect quantitative and qualitative data respectively. The study consisted of 34 first physical therapist students and 21 second year physical therapist assistants. Also included for comparison were 24 second and 22 third year physical therapist assistants, who did not partake in the same collaborative course with assistants as the first year students. Two focus groups consisting of 6 assistants and 5 physical therapists respectively were conducted. The course that the first year physical therapists undertook included three 2-hour sessions. The first session covered various aspects regarding assistants such as their role, delegation and the preferred relationship between therapists and assistants. The second session was between the researchers and the assistants, as they discussed what would be delivered to the physical therapist students in the final session, which was a collaborative experience between physical therapist students and assistant students. The results of the qualitative component confirmed that the learning experience was valued. The authors conclude that the instructional model is an effective method to teach physical therapist assistant students about assistants and it provides a basis for forming collaborative relationships.[15] The findings of the study are below.

Finding1	**Confirmed Misconceptions Presented in the Literature**
Illustration	A PTA student commented: I have worked at 3 places: One doesn't use PTAs, one utilized PTAs but under real direct supervision, and ...the other ...if you didn't know any better you would think she was a PT, she had an enormous amount of autonomy. That is 3 different uses of a profession I am entering. page 7 (One PT student noted) I came in with a bias honestly because when we had that [first] class, the biggest thought in my head was these people are going to take away my hands-on experience with my patients, for me, that's what I'm looking forward to ...not being someone who's back in the office, doing paperwork and telling other people what to do. I'm like wait, but I want to work with the patients, so I think that kind of biased my view towards it honestly. page 7

Finding2	**Reactions**
Illustration	We should know what the boundaries are because they are going to be working in our same environment and we need to know what they're capable of doing and what their coursework was, in that respect I thought it was a great experience. I think it really should be a part of our education. page 7 The [PTAs] had more of a sense of the differences between our practices, they get more, training at it. It's brought up to them a little bit more. page 7 In our curriculum it is reinforced over and over how important PTs are, how much you have to respect PTs, how much authority the PT has, and how we can never cross that, we can never step over [the PTs] authority. page 7 Comments from PTA students included: I am happy I went through that day. The PT students were very surprised at the training we really had. It was great for them to realize who we are and what we are capable of doing. page 7 It didn't only help [the PT students], I think it is really helping us to understand that when we do go out into the field as physical therapist assistants that we have a responsibility to ourselves and to everyone else to let them know what our role is also. page 7 I felt a little under prepared. It was hard to try and keep up with specifics of things where we really didn't know what we were talking about. It was hard to explain. page 7 [The PTAs] have more experience, they are more knowledgeable than we are, and it's kind of intimidating. page 7 They [i.e., the PT students] were shocked, and that bothered me. They shouldn't be shocked. They should not go out into the field and be shocked about what we know. They should already have that before they get out there. page 7 Some of them . . . were getting a little overly aggressive which automatically turns me off and makes me angry. page 7 I kind of got a negative view. They kind of came to us like, 'well, we've done all this, we know all this.' page 7

Finding3	**Process**
Illustration	I think the scenarios [were most helpful]. The class before we learned about their roles, . . . but actually putting that into a scenario or practice is, I think, helpful. page 7 It was very realistic . . . we are going to have to know how to communicate with the PT and how the PT is going to have [to] communicate with us and be on the same level. page 7 Everything is skewed to someone's perspective. That is why the interaction of both members of the profession gives you more insight than just you [i.e., PT faculty] teaching your PT students what a PTA does, that is your perspective. That is why the actual interaction of the individuals makes a difference. page 7 I think it's also helpful for them, too, because . . . a couple of them . . . got a little defensive, like 'whoa, PTs don't give us enough respect, like we're going to school for this. You can delegate this to me because this is my career and this is what I worked hard for.' So in that respect if they see us doing a class like this and being in these situations where we do have that mutual respect and can create that environment where we're working for the best preferred relationship. page 7-8 A lot of the scenarios showed that it was not always the PTs, but sometimes it is the PTAs who can be very aggressive with the chip on their shoulder thinking that people don't know what they are capable of doing, when you do have those physical therapists who do know exactly what we do, and do have a lot of confidence in what we are doing. It did help me understand that sometimes I have to back off and say, hey, this is what I am capable of doing . . . and not thinking that they are taking me for granted. page 8 The role playing opened up lines of [communication]. It enabled everyone to take on the role of the other person; It let the physical therapist assistant act like the physical therapist and then when you are in that position you realize things. I wouldn't have known a lot about the feelings involved, how do I ask this person what do they know, how would you ask them to show you what they know and all of this while you are trying to work and trying to get through the day, so it really opened that up. You were able to express a lot of the background feelings that you don't really want to say, but you have to find a nice way to kind of figure things out. It helped me figure things out and [I think it helped them too]. We figured out that communication was so big. page 8

Finding4	**Outcomes and Recommendations**
Illustration	[The PT students] are now more open to asking us questions and we are more open to asking them questions and I think it really helped me for when I go into clinic to be able to interact with my physical therapist, my supervisors. It opened my eyes a lot. page 8 It made us realize that [PTs] are people too and it is not all [PTs] against us PTAs and it made us realize that there are many PTs out there that are team players. It made us realize that [PTs] weren't the enemy. page 8 It [i.e., communication] is a collective responsibility .page 8 I think I would just be more aware of what the relationship should be like and I completely agree with the preferred relationship to be beneficial to everybody, both workers and of course the patients. I think I would strive more to already have that attitude to have that relationship with the PTA even before my first clinical. I have the mindset already [I know the] expectations I would want, so it definitely helped. page 8 They have more experience, they are more knowledgeable than we are and it's kind of intimidating because they're saying 'this is a fact, I've been out there, I know' and then I was like OK, should I just take it for granted because you [i.e., the PTA students] do have more knowledge' I mean, right now you know a lot more about it than I do. page 8 Even with all this class learning you do, none of us have had that experience out in the real world, so they definitely had that up on us. They've seen that interaction. page 8 It's probably almost better to go into [this classroom experience] without having any [clinical] experience because . . . you can go in there and have some knowledge on what the preferred relationship is and try to have knowledge of the laws . . . and maybe bring that to your clinical experience; whereas if you've already had the clinical experience you're definitely going to have a bias. page 8 The ultimate thing that [instructors] can do is to break up a semester so that the PT students and the PTA students spent like 2 weeks together on a role-playing activity in the field. That would definitely benefit the relationship, . . . because then when we both get into the field we can both say, 'alright now we are used to this, we have done this.' page 8 Even if it were 2 weeks or 1 day or a month that we go out there . . . there has to be more of that real life situation, not just the textbook, . . . the PT and PTA spending time together. I just think that that day showed what could be possible, and that was the first step in the right direction. page 8 [It would be good to determine] how confident [we] would be [turning] someone down that we are not sure how to treat' And [see] how the PT[s] would act if they see the PTA is not so secure. page 8 I would . . . see how they answer it right on the spot . . . in the clinic you don't have time, and you don't have a card that will tell you what kind of an attitude you will have, so a more impromptu role play would be helpful. page 8

Understanding RN and unlicensed assistive personnel working relationships in designing care delivery strategies [27]

Potter and Grant (2004) conducted a qualitative study to better understand the relationship between registered nurses and unlicensed assistive personnel and how they work together to deliver care strategies. The sample consisted of 13 registered nurses and nine unlicensed

assistive personnel who did not work on the same patient care unit. The authors conclude that the successful partnering between unlicensed assistive personnel and registered nurses provides a shared common patient care focus.

Finding1	**Working Relationship Between RNs and UAPs**
Illustration	Whether RNs and UAPs can work together as a team is clearly a product of the relationship they share. An analysis of the authors' focus session interviews revealed that trust is central to effective RN and UAP relationships. page 20
Finding2	**Good Relationships**
Illustration	Yeah, they work with you. They know what you need. They're there doing it before you even have a chance to ask them. If you have anything special they will do it. If they can't, they will tell you they have something else that must be done and can you wait or do you have to do it yourself, which is fine.(An RN explains the importance of a UAPs initiative)page 20 Communication with me, when we can talk together. When she (the RN) is not talking down to me, and when she is treating me like I'm part of the team, I'm equal. Communicating with me and letting me know what is going on with the patient, you know, and that makes a good day when we can work together.(One UAP shared a valuable story by relating what makes a good relationship with an RN)page 21
Finding3	**Difficult Relationships**
Illustration	RN: I think it is often times just checking with them and asking, 'Oh, did you do Mr. So and So's vital signs'' UAP: Well yeah! RN: OK, I'm just checking, I'm just asking. I'm just making sure that it got done. And I think it is just a lot of times you're asking if care gets done. You know, and it's just, I guess they feel like we have authority over them and just keep questioning them, you know, did you do this, did you do that, is this getting done.(One RN in this study offered a valuable view of how discourse between an RN and a UAP might evolve in a difficult relationship)page 21

Finding4	**Assignment Method**
Illustration	Two of the UAPs who were interviewed share an instructive story of what it is like to work with multiple RNs and relate the disorder and relational stress that can develop: UAP 1: I can give you some examples where me and my nurses don't work well together. That's on days when they assign you to 4 nurses or 3 nurses or 5 nurses, and to me, that is crazy. UAP 2: Because you've got to remember who to report to and you've got them all coming to you at one time telling you something, you know. UAP 1: You get terrible feedback from the nurse. This nurse will tell you so-and-so needs a BMP and a CBC. And you say okay and you go to walk away. Then a second nurse says, 'I need an EKG and Ms so-and-so needs a gown.' UAP 2: What do you do first' UAP 1: You know, you tell yourself you got all this to do and she (RN) is telling me Ms so-and-so needs a gown' See it frustrates you because you've got too many places to go at one time. Then you get down to the point and you're grabbing the machine and they (RNs) see you with the EKG or they see you with the blood and they know you're going to draw blood, but then another nurse, number 3, she don't care because she got all the stuff she wants you to do and she wants you to do her stuff first. Why all the sudden she gives me this list of duties to do. I am only 1 person. page 22
Finding5	**Orientation and Mentoring**
Illustration	I like the way I did it because mentoring with an RN, well the particular RN was very, she showed you exactly how to do it and how to do it right. You know, no shortcuts, you just did it the way it was supposed to be done. And that was good, I mean, and she just knew how to teach. page 22
Finding6	**Change-of-Shift Reporting**
Illustration	This study also revealed that there was no standardized approach used by RNs in providing a beginning shift report to UAPs. UAPs did not attend their units' change-of-shift reports. RNs typically provided a report at some point after the change of shift, but when this occurred varied across units. page 23
Finding7	**Knowing Patients**
Illustration	(One UAP shared a poignant story): The patient's SATs (oxygen saturation) was, you know, when I went in earlier, the SATs were fine. Then you go in and you know you can see the difference in the breathing. You do a SAT and then like I said, a good UAP would know you don't have to go find a nurse to say do you need to get a SAT done. You just go ahead and you do it. And then you study it and then you go tell the nurse, listen, so-and-so's SATs have started dropping and he's not looking real good. She (the nurse) got right on up then. And I said that I'm going to go get the EKG machine because you know that's what is going to be next. And by the time, when we finished getting this guy, I mean this guy was almost in a full code. But we were able to head him off a lot because the nurse got right on up and that means a lot when you go and tell the nurse that something is going on with this person. page 23

Finding8	**One-to-One Assignments**
Illustration	Improvement in care delivery can be quickly achieved by assigning RNs and UAPs one-to-one. This can be difficult when patient care units are not budgeted to have an equal number of RNs and UAPs working together on an assigned shift. page 23-24
Finding9	**Change-of-Shift Report**
Illustration	The quality of a change-of-shift report has always been pivotal to keeping RNs informed so that patient needs can be anticipated and addressed. The authors' recommendations include having RNs and UAPs at- tend change-of-shift reports together. page 24
Finding10	**Patient Rounds**
Illustration	The authors recommend having RNs and UAPs accompanying each other during patient rounds. The RN can acquire a thorough picture of a patient's condition, developing needs, and priorities of care. The UAP can be an invaluable resource and help to minimize the disruptions that may prevent an RN from completing an uninterrupted and focused assessment. UAPs can assist in positioning patients during an examination, in acquiring equipment used for assessment (eg, a glucose meter or pulse oximeter), and in assisting RNs with initial care activities (eg, positioning and taking vital signs). page 24
Finding11	**Planning Based on Priorities**
Illustration	It is important for RNs and UAPs to share a common plan of care for their assigned patients. This can be best accomplished during the course of patient rounds. RNs conduct their assessments, UAPs observe RN actions and patient responses, and then RNs identify the care priorities for the day. page 24

Appendix 6: JBI Levels of Evidence and Grades of Recommendation

Levels of Evidence	Feasibility F (1-4)	Appropriateness A (1-4)	Meaningfulness M (1-4)	Effectiveness E (1-4)	Economic Evidence EE (1-4)
1	Metasynthesis of research with unequivocal synthesised findings	Metasynthesis of research with unequivocal synthesised findings	Metasynthesis of research with unequivocal synthesised findings	Meta-analysis (with homogeneity) of experimental studies (eg RCT with concealed randomisation) OR One or more large experimental studies with narrow confidence intervals	Metasynthesis (with homogeneity) of evaluations of important alternative interventions comparing all clinically relevant outcomes against appropriate cost measurement, and including a clinically sensible sensitivity analysis
2	Metasynthesis of research with credible synthesised findings	Metasynthesis of research with credible synthesised findings	Metasynthesis of research with credible synthesised findings	One or more smaller RCTs with wider confidence intervals OR Quasi-experimental studies (without randomisation)	Evaluations of important alternative interventions comparing all clinically relevant outcomes against appropriate cost measurement, and including a clinically sensible sensitivity analysis
3	a. Metasynthesis of text/opinion with credible synthesised findings b. One or more single research studies of high quality	a. Metasynthesis of text/opinion with credible synthesised findings b. One or more single research studies of high quality	a. Metasynthesis of text/opinion with credible synthesised findings b. One or more single research studies of high quality	a. Cohort studies (with control group) b. Case-controled c. Observational studies (without control group)	Evaluations of important alternative interventions comparing a limited number of appropriate cost measurement, without a clinically sensible sensitivity analysis
4	Expert opinion	Expert opinion	Expert opinion	Expert opinion, or physiology bench research, or consensus	Expert opinion, or based on economic theory

The JBI currently uses the following Grades of Recommendations

Grade of Recommendations	Feasibility	Appropriateness	Meaningfulness	Effectiveness
A.	Strong support that merits application	Strong support that merits application	Strong support that merits application	Strong support that merits application
B.	Moderate support that warrants consideration of application	Moderate support that warrants consideration of application	Moderate support that warrants consideration of application	Moderate support that warrants consideration of application
C.	Not supported	Not supported	Not supported	Not supported

Appendix 7: Summary of quantitative studies in Question 3

Entry-level OTR and COTA intervention utilization derived from NBCOT practice analysis: implications for fieldwork experiences [34]

Crist et al.[34] (2007) conducted a descriptive survey to determine the interventions that newly qualified occupational therapists and assistants performed, in order to provide a description of entry-level practice to inform academic fieldwork coordinators regarding placement decisions. The survey took place in seven different practice settings, with 479 occupational therapists and 168 assistants responding. The therapists and assistants worked in a range of settings, including acute care rehabilitation, skilled nursing facility, home health, long-term care, outpatient/community, schools, or a combination. Fourteen interventions were identified that occurred in every setting for occupational therapists, and eleven for assistants. The eleven interventions that were common to all settings for assistants were; adaptive equipment recommendation/training; attention, orientation, concentration; dressing; fine motor coordination training; functional mobility; gross motor coordination training; problem solving training; safety awareness insight training; strength and endurance training; therapeutic activities; therapeutic exercises. Following on from their analysis, four guiding principles were highlighted when planning occupational therapist and occupational therapist assistant fieldwork. The first was not to automatically assume that the setting of fieldwork will provide a wide variety of fieldwork experiences as required for accreditation standard. The second recommended each student being granted the opportunity to develop entry level competencies in the core interventions used across the sites with high frequency. Third, careful consideration regarding placement locations is required, as some may provide replication of experiences, whilst others may allow divergent experiences. Both of these may be valued. Finally, fieldwork coordinators should assess each site prior to fieldwork to ensure appropriate professional development.[34] These principles may be useful in order to promote consistency and standardisation of fieldwork training for assistants.

Evaluation of clinical education centers in physical therapy[33]

Barr et al. (1982)[33] conducted a descriptive survey to test a set of physical therapy clinical education standards for the selection and evaluation of clinical education centres which had been developed in 1976. Data was collected via mail questionnaires and telephone interviews, with results form 909 participants; 134 Academic Coordinators of Clinical Education, 708 Centre Coordinators of Clinical Education, 15 Clinical instructors, and 52 physical therapist or physical therapist assistant students. The results showed that all academic and centre coordinators believe that standards are necessary for clinical education in physical therapy, regardless of the setting. It was thought by a majority of responders (65%) that standards should be used as guidelines rather than minimal requirements. The standards tested were all seen as essential by more than 60 percent of Academic Coordinator respondents, bar one concerning professional associations. The standards also reflected characteristics of a strong clinical education centre. Based on the results of a weighting study, whereby responders ranked the 20 standards in importance, practicality and how crucial they are, the standards were organised so that the first 4 that are displayed were rated the most important and practical, with the fifth being a federal requirement. The authors recommended that clinical centres should comply with these first 5 criteria before assigning students there for placement. Evaluation forms for the standards were also found to be practical, reliable, and valid. Based on their results, the authors recommended that the standards to be used by those involved in physical therapy education programs. The authors conclude that the setting of the standards will benefit the centre, the academic educational program, and the profession.[33] This study provided an example of how standards could be systematically developed and tested for clinical education in physical therapy.

Appendix 8: Summary of quantitative studies in Question 5

Satisfaction of nurse aides with pre-job training programs[35]

Lin et al. (2003)[35] conducted a survey using structured and semi-structured questionnaires to determine nurse aid satisfaction with pre-job training programs in Taiwan. The sample was randomly selected from 20 facilities, with 165 questionnaires being accepted for analysis. The preferred sites for training programs were hospitals, then nursing homes, schools, and nurses associations. For clinical practice, preferred sites were general hospitals, nursing homes, chronic care hospitals, and schools. The highest satisfactions with training programs were with lecturers, practical application and practice instructors. Lowest satisfaction was with fees, class size, and clinical practice hours. Some students thought that were too few lecture hours and particularly clinical practice hours. Suggestions for course content were also made. Large class sizes were disliked by some. The authors conclude by stating that the findings of this study will be beneficial to those involved in designing nurse aid training programs.[35] The findings from this study may be able to assist educators in increasing the relevance of training amongst health assistants.