

Paramedic Mini CAT (Critically Appraised Topic)

Title: Paramedic student preparation for working with geriatric patients

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PICO (Population – Intervention – Comparison – Outcome) Question: In paramedic students, do geriatric clinical placements compared to general field placements result in better preparation for working with aging populations?

Search Strategy: (paramedics OR paramedic OR emergency medical service OR emt OR ambulance) AND (student OR students) AND (clinical placement OR clinical education OR placement OR practice placement OR clinical experience)

Google Scholar additional search specification: (geriatric OR gerontology OR older adults OR older populations)

Limits: last 5 years

Databases: Google Scholar and CINAHL

Search Outcome: Google Scholar: 18,200 results and CINAHL: 93 results

Relevant Papers:

Author, Date	Design	Population: Sample Characteristics	Outcomes	Results	Strengths/Weaknesses
O'Meara et al (2015)	Qualitative study LOE 4	15 paramedic instructors with experience supervising at least one university level paramedic student during field placement	Performed interviews aimed at determining the participants' views and expectations of paramedic student placements (both clinical and field) and exploring the important element of quality field placements	Vocationally educated paramedics preferred more field placements whereas, university educated paramedics valued the clinical placements in a greater range of settings Without agreed standards there is too much diversity in the focus of field placements, the value of a variety of clinical placements, and the expectations of students and instructors There needs to be a standard for programs and experience for students so there is better "international portability of	<u>Strengths:</u> participants were equally distributed amongst the possible education pathways for becoming a paramedic (5/pathway) They compared services from different countries <u>Weaknesses:</u> there was a wide range of experience amongst the participants as minimum was 1 year but no maximum The sample size was fairly small and limited to only two services in two countries. They should have used more services in each country in order to better generalize their

				qualifications and flexibility of employment”	findings.
Ross et al (2015)	Quantitative: Cross-sectional study using 3 questionnaires: Experience with Older Adults Questionnaire (experience), the Australian Facts on Aging Quiz 2 (knowledge), and the Age Semantic Differential (attitude) LOE 4	871 paramedic students from any level of undergraduate paramedic study All students were from one of four universities in Victoria, Australia: Monash University, Victoria University, La Trobe University and Australian Catholic University Median age = 21 56% female 47% in first year	Determine level of student paramedic experience with, knowledge of, and attitudes toward older adults and to examine the relationship between these factors	<u>Experience/Education</u> : 79% had a living grandparent ≥ 65 , 52% had no specific geriatric education. 63% had experienced working with older adults on placement Median for self-rated level of experience interacting with older adults = 6/10 with 45% rating themselves as 7/10 or greater. <u>Knowledge</u> : statistically significant differences between universities [F(3867)=34.15, $p < 0.001$, $n^2 = 0.11$] and age groups [F(2868)=4.47, $p = 0.012$, $n^2 = 0.01$] but no significant difference between year levels [F(2686)=2.04, $p = 0.130$, $n^2 = 0.01$] or gender [F(1869)=0.25, $p = 0.619$, $n^2 = 0.01$], overall low levels of knowledge of older people and aging. La Trobe University had the highest mean score for the FAQ2 test, which could be due to the fact that they offer a specific gerontology course and geriatric placement opportunities. <u>Attitudes</u> : mean scores between year level, age, and gender had no statistically significant differences Slight correlation between experience, knowledge and attitudes: positive attitudes only	<u>Strengths</u> : large sample size from a variety of universities, compared results to other similar studies with different healthcare students and found very similar results (knowledge and attitudes of older people is similar across many healthcare fields) <u>Weaknesses</u> : universities were all from one state of Australia, students were from different levels within their education meaning that their knowledge and experience levels varied widely, questionnaires were conducted at the beginning of the year and the majority of participants were in first year (therefore their education was very limited), quality of experience with older adults was not accounted for, FAQ validity and reliability among healthcare students is questionable, selection bias due to only motivated students who attended lectures on those days completing the questionnaires, and the ASD uses out-dated wording to describe older people.

				<p>slightly increased as knowledge and experience increased</p> <p>Negative attitudes as deemed by ASD scores may not have a negative impact on patient care</p> <p>Regression analysis determined that more experience and knowledge does not lead to better attitudes towards older adults</p>	
Stratton et al (2015)	<p>Both qualitative (open-ended feedback meeting) and quantitative (questionnaires) data collected</p> <p>LOE 4</p>	21 final year undergraduate paramedic students	<p>Examine learning experiences of students in paramedic clinical placement in RACFs (Residential Aged Care Facilities) Specifically looking at the interactions with patients with dementia or other life-limiting conditions and changes in student understanding, competence and confidence caused by the placement.</p>	<p>Pre-placement questionnaires identified that 91% of students had no previous experience working in an aged care setting. 43% were unhappy about the general placement and 19% were unhappy specifically about having to work with older people.</p> <p>Important to note improvement in understanding of dementia as a progressive and life-limiting condition (as measured by the dementia knowledge tool D-KAT2) after placement</p> <p>Pre-placement D-KAT2 test results: 16.53/21 (SD=2.96)</p> <p>Post-placement D-KAT2 test results: 18.65/21 (SD=2.00)</p> <p>Paired t-test indicated that findings were statistically significant ($t(20) = -2.829$, $r = 0.535$, $p = 0.003$)</p>	<p><u>Strengths:</u> even split between male and female participants, all participants were of same knowledge level, used two different placement locations to increase validity and generalizability, inclusion of both qualitative and quantitative data, and a structured questionnaire was used for the meetings</p> <p><u>Weaknesses:</u> small sample size, geographically restricted limited experience hours in clinical placement</p>

Rationale and relevance of the topic:

This topic is relevant to current and future paramedic practices as a large portion of our patients are older adults. Our attitudes towards, knowledge of and ability to work with older populations directly affects our ability to provide adequate patient care. This is extremely important for the future of paramedicine as the average age of Canadians is rising due to the 'baby boomers' approaching geriatric age. Current and future paramedic students will need to be better prepared to work with older adults and the health conditions and injuries associated with aging as a larger portion of patients will be elderly. In order to better prepare paramedic students for this change of patient demographic, the experiences and educational components of school placements need to be adjusted accordingly.

How do the results relate to current practice and how might they influence current practice?

Based on the results of the studies examined, there is definitely a relationship between student experience with older adults/elderly populations and how well prepared they are to work with those populations in the field. Although some paramedics in the study by O'Meara et al (2015) believed that ambulance/field placements best prepare paramedic students for the career, it could be argued that the knowledge and attitudes of paramedic students could benefit from having specifically geriatric placements as well. These placements were shown by Stratton et al (2015) to improve student understanding and appreciation of the comorbidities of aging that they will have to deal with in the field but may not experience during strictly ambulance placements. Ross et al (2015) used questionnaires to determine that although some students may have experience working with older adults, it is also important to examine the quality of those experiences. It is important to allow students to experience a variety of geriatric placements in order to avoid solidifying any negative stereotypes about elderly populations. Students should experience geriatric placements where they are exposed to patients with and without mental/physical impairments in order to avoid labelling/viewing all older adults in a negative light. Schools should take these results into consideration when designing the placements for students. These studies highlighted the importance of having the real world experience of field/ambulance placements but also having the educational benefits of clinical placements that work directly with geriatric facilities. Ultimately, more research needs to be done on how to create the best quality of placements and what ratio of field to clinical placements is best for optimal student preparation. Further research on this topic could also help with the concept discussed by O'Meara et al (2015) of a standardized curriculum to help make the education more internationally portable and flexible.

Bottom Line:

In order for paramedic students to best prepare for the aging population they will undoubtedly be working heavily with in the field, schools should incorporate more geriatric clinical placements into their educational curriculum. This will allow students to enter the workforce with better attitudes and understandings of their older patients and therefore deliver better patient care.

References:

- O'Meara, P., Williams, B., & Hickson, H. (2015). Paramedic instructor perspectives on the quality of clinical and field placements for university educated paramedicine students. *Nurse Education Today*, 35(11), 1080–1084. doi: 10.1016/j.nedt.2015.06.002
- Ross, L., Jennings, P., & Williams, B. (2015). Experience, knowledge and attitudes: Are paramedic students prepared to care for older patients? *Educational Gerontology*, 42(4), 241–252. doi: 10.1080/03601277.2015.1109401
- Stratton, B., Lea, E., Bramble, M., Eccleston, C., McCall, M., Lucas, P., & Robinson, A. (2015). Residential aged care facility clinical placements for undergraduate paramedic students: An evaluation of the Australian experience. *Australasian Journal of Paramedicine*, 12(2). doi:10.33151/ajp.12.2.144