Depth of Field® - enhancing nursing students’ preparedness to care for older adults

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ABSTRACT

Introduction: In health professions programs, early clinical placements are often in aged care settings, however these residents often have complex care needs and some students may feel underprepared to work with older people. Unexplored assumptions or stereotypes about older people can constrain person-centred approaches to care. The Depth of Field: Exploring Ageing © (DOF) resource (Brand, Miller, et al., 2016) was trialled and evaluated with novice nursing students as preparation for their first placement, in aged care settings.

Methods: A mixed methods, cluster randomised control trial. First semester undergraduate nursing students were randomised to receive the intervention (DOF) in addition to usual clinical preparation or usual clinical preparation alone. The 45 minute workshop used photo-elicitation techniques, older adult narratives and collaborative small group work designed to prompt reflection to surface students’ unconscious bias or perceptions towards older adults. The study comprised three phases: pre/post intervention survey (T1/T2); post clinical survey (T3); and post clinical focus groups. The survey included: the Geriatrics Attitude Scale (GAS) (Reuben et al., 1998); demographics and questions about experience. Semi-structured questions were used for the focus groups.

Results: There were nine classes in the control (n=161 students) and eight classes in the intervention cluster (n= 141 students) with a response rate of 74.83% (226/302). The majority of students were female and in their early twenties (range 17 – 50 years) and groups were equivalent at baseline. For the intervention group, statistically significant improvements (p< 0.05) were demonstrated at T2 in nine of the 13 GAS survey items, with small to moderate effect size (Cohen’s d: 0.35 - 0.56). For post clinical surveys (T3) approximately 15 months following the intervention, group sizes were smaller but equivalent: intervention cluster 28 (28.28%), control cluster 26 (24.07%). Post clinical (T3) mean GAS scores remained the same or changed slightly (+/- 0.44 to 0.47). Themes from qualitative data included: preconceptions; translating context to practice; stigma; and applicability to more specific aspects of ageing.

Discussion: Significant, positive changes between T1 and T2 in the GAS survey questions indicated the intervention had impact in changing students’ perceptions towards older adults. Focus group participants gave several examples of having translated the intervention into their practice. In particular, they identified the benefits of knowing the life history of residents as a means of developing a therapeutic relationship. Students’ willingness to engage with residents, and, in a number of cases, to overcome potential barriers to communication arising from memory and language deficits, demonstrates an awareness of these aspects of practice as crucial in working effectively with older adults. Some nursing students were able to draw on their clinical experience and critically reflect on and reconstruct previous stereotypes and attitudes towards older people and aged care. Supporting students to have a more positive opinion about older people is critical considering the greater health care challenges and future care requirements globally for a rapidly ageing population. Reconstructing stereotypes about older people is critical for all health students and equally beneficial for clinicians.

Conclusion: The DoF program is an effective intervention as preparation for nursing students in caring for older adults. Surfacing and reconstructing stereotypes about ageing was achieved and beneficial for students in their subsequent clinical practice. The DOF intervention is ideally suited to other health curricula either within discipline or as an interprofessional learning experience.

References:
A new instrument to measure attitudes regarding high value, cost-conscious care of healthcare stakeholders: development of the MHAQ

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ABSTRACT

Introduction: High value, cost-conscious care (HVCCC) is regarded crucial to counter the trend of progressively increasing healthcare costs and need to be advocated in residents’ training environment. As attitudes are important indicators for predicting behaviour, knowing important stakeholders’ attitudes toward HVCCC, enables predicting how they act upon HVCCC. There is not yet a reliable instrument available for measuring attitudes towards HVCCC in residents’ training environment. This study aims to develop an instrument that maps residents’ training environment regarding high value, cost-conscious care, by reliably measuring residents’, staff physicians’, administrators’, and patients’ attitudes toward different facets of HVCCC.

Methods: The Maastricht HVCCC-Attitude Questionnaire (MHAQ) was developed through a four-phase process. First, we used original data from a survey conducted by Leep Hunderfund, et al (2017), which consisted of 21 items preliminary focused on cost consciousness. We conducted factor analyses to define underlying factors and examined internal consistency of constructs using Cronbach’s alpha. Second, we added nine new items, preliminary focused on high-value care to conceptually balance items on value and costs in the MHAQ and to strengthen subscales. Moreover, we adapted items for use by residents, staff physicians, administrators, and patients. Third, we tested the questionnaire among four samples of these stakeholders, used factor analysis to identify subscales and examined internal consistencies, and developed the final version of the MHAQ, consisting of 25 items. Fourth, we used generalizability analyses to assess the number of respondents per specialty on a national level needed to reliably measure a specialty attitude score.

Results: Initial factor analysis identified three subscales with Cronbach’s alphas between 0.64 and 0.66. After the addition of nine new items, 301 residents, 297 staff physicians, 53 administrators and 792 patients completed the new questionnaire between June 2017 and July 2018. The aforementioned analyses resulted in 25 items distributed among three partly different subscales, each covering an important aspect of HVCCC in clinical environments. Subscales were defined as providing high-value care (eight items), integration of healthcare costs (ten items), and drawbacks of HVCCC (seven items). We optimized the composition of subscales and thereby Cronbach’s alphas for each stakeholder group, considering all items in all subscales had to fit every stakeholder. Cronbach’s alphas were between 0.61 and 0.82 for all stakeholders on all subscales. Generalizability analyses indicated as from 14 respondents are sufficient to reliably assess a national specialty attitude.

Discussion and Conclusion: In this study, we developed the MHAQ, an instrument that measures HVCCC-attitudes of important stakeholders in residents’ training environment. Found subscales align well with three key aspects of HVCCC as explained by Owens and et al (2011): value assessment, cost-effectiveness, and consequences of using these assessments. This supports the content validity of the MHAQ. These aspects need to be addressed by medical education to effectively implement HVCCC. The MHAQ can be used to identify frontrunners, who can help to prioritize HVCCC, to pinpoint aspects of HVCCC that need to be improved or changed in order to give HVCCC a higher priority in residency training, and to benchmark and compare specialties, regions, and potentially hospitals. The MHAQ can serve as a starting point and as an evaluation tool for educating future physicians to provide HVCCC.

References:
How residents deal with HV3C-dilemmas: an ethnographic study

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ABSTRACT

Introduction: Increasing healthcare costs have a major impact on the sustainability of healthcare systems. Since physicians’ behavior determines up to 80% of the total healthcare expenditures (1), training residents to deliver high-value, cost-conscious care (HV3C) is an important target for cost-containment. Additionally, physicians can use their medical expertise to eliminate care that does not contribute to the quality of care. Previous research demonstrated that residents acknowledge the importance of HV3C-delivery (2), yet experience difficulties identifying and seizing learning opportunities. Therefore, an ethnographic study was designed to explore how and if high-value, cost-conscious care is practiced throughout post-graduate medical training. The research question driving this study was formulated as: How do residents in the post-graduate learning environment deal with HV3C-dilemmas in clinical practice?

Methods: This ethnographic study builds on 175 hours of non-participant observations during which 21 gynecology residents were shadowed. Additionally, informal interviews, 5 semi-structured interviews and document analysis were performed. Observations focused on the occurrence, content and context of HV3C-dilemmas and how residents dealt with these. High-value, cost-conscious care-dilemmas were defined as events in which standard practice did not seem to fit the case at hand, for example due to patient characteristics (i.e. allergies or strong personal preferences) or the absence of a protocol or empirical evidence. Data collection and analysis occurred iteratively. Data analysis was performed by a multidisciplinary research team and followed principles of open coding, thematic analysis, in-depth questions and team-discussions.

Results: Observations demonstrated that care delivery often did not lead to dilemmas since standard practice (based on protocols and empirical evidence) provided ample directions towards what was considered high-value, cost-conscious care among health care teams of individual senior physicians. HV3C dilemmas arose in cases in which standard practice was not a match and residents dealt with these either by trying to solve them independently or by consulting others. Independent approaches included; copy-paste behavior, work-around strategies and searching for additional information. Consulting others as an attempt to solve the HV3C-dilemma at hand was aimed at para-medical staff including nurses, peers, or senior physicians. How residents applied these approaches solutions was influenced by the urgency to deal with the dilemma, the preferences of individual supervisors, and the department in general. The approach used by residents was the result of a strong socialization process.

Discussion & conclusions: Optimizing residency training in HV3C-delivery benefits from learning from HV3C-dilemma’s in clinical practice. The prominent role of socialization is important in order to develop effective educational interventions aimed at workplace-based learning in residency training. Insight in the different approaches used by residents can help both supervisors and residents to verbalize explicitly how they determine HV3C and challenge residents to critically assess HV3C-dilemmas they encountered in daily practice. Awareness that residents used independent approaches that do not include supervisors in HV3C-dilemma’s might be important to foster a more active role of both supervisors and residents in discussing HV3C-dilemmas.

References:
A Randomised Controlled Trial of SAFMEDS to Promote Fluency in Interpretation of Electrocardiograms

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ABSTRACT

Introduction: Deficiencies in Electrocardiogram (ECG) interpretation are apparent at undergraduate and postgraduate level. “Say All Fast Minute Everyday Shuffled” (SAFMEDS) is a flashcard-type behavioural intervention involving one-minute learning trials that has been widely used in higher education and other educational domains to produce fluency in target behaviours. Behaviours trained to fluency have been shown to maintain better over time, to transfer to other contexts and to endure despite distraction. This study examined whether SAFMEDS could produce behavioural fluency (i.e., accurate and rapid responding) in ECG interpretation among final year medical students, and whether this approach conferred a benefit beyond usual teaching.

Methods: A total of 32 final-year medical students were randomly assigned to either a “usual teaching” control group (n=16) or the SAFMEDS group (n=17), with the recognition of 15 specific cardiac conditions (e.g. atrial fibrillation, complete heart block) targeted for improvement. Both groups received a brief teaching session on the targeted conditions and all usual medical school teaching. However, the intervention group also got access to the SAFMEDS intervention and their performance was monitored over 8 weeks as they worked toward achieving the fluency criterion (17 correct ECG diagnoses per minute) by engaging in one-minute SAFMEDS trials. ECG interpretation accuracy was assessed using tests at baseline and post-intervention for both groups, and at two months post-intervention for the intervention group in order to assess retention of learning.

Results: In total, 7 of 15 intervention group participants achieved the fluency criterion, and completed an average of 45.7 one-minute trials (SD=19.6, range 26-76). There was no significant difference between the percentage improvement from baseline to post-test of participants who achieved fluency (M=327.14; SD=159.75) and the participants who did not achieve fluency (M=673.24; SD=576.69), p=.21. Although baseline performance was comparable among the two experimental groups, the intervention group significantly outperformed (M=61.5%; SD=12.1%) the control group (M=31.6%; SD=12.5%) at post-testing, p<.001, and a large effect size of the SAFMEDS intervention was discerned (partial η²=.41). Improvements in ECG interpretation among the intervention group were demonstrated to persist at the two-month follow-up.

Discussion: A large effect size of the SAFMEDS intervention was observed as compared to usual teaching only. Learning persisted at a two-month follow-up. The degree of improvement evidenced is particularly notable given the brevity of the intervention (an average of 39.73 minute-long trials). These results suggest that SAFMEDS may comprise a useful adjunct to usual teaching that allows students to independently manage and improve their own learning. Engagement with the intervention appears to be of benefit even when the learner does not achieve the fluency, or expert, criterion or not.

Conclusion: These findings support the efficacy of SAFMEDS for training ECG interpretation. Further research could explore SAFMEDS’ application to other clinical skills and assess whether learning transfers to clinical practice.
Fulfilling A New Obligation: Teaching and Learning About Sustainable Healthcare in the UK Medical School Curriculum

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ABSTRACT

Introduction: Doctors qualifying or registering in the UK will be required to understand and apply the principles of sustainable healthcare to medical practice. The General Medical Council's document 'Outcomes for graduates 2018' places a new obligation on medical schools to teach sustainable healthcare in the curriculum(1). Sustainable healthcare focuses on the improvement of health and better delivery of healthcare, rather than late intervention in disease, with resulting co-benefits to patients and to the environment on which human health depends. As sustainability is an emerging concept in the medical profession, this Master's thesis project aimed to make evidence-based recommendations on best practice for implementing this new learning.

Methods: A qualitative exploratory approach used grounded theory to generate themes through the triangulation and analysis of multiple sources of data. Informal interviews were held with key stakeholder organisations in the sustainable practice of medicine, such as the Sustainable Development Unit (NHS/PHE), the Centre for Sustainable Healthcare, and with an NHS sustainability manager. Informed by a literature review and document analysis, questions were developed and used in semi-structured interviews with medical educators of varying backgrounds, who have been teaching about sustainable healthcare through their own interest. These educators were from eight medical schools around the UK which have diverse approaches to curriculum structure, teaching methods and assessment.

Results: There was clear consensus from participants and the literature on the key barriers and enablers to implementing this new learning. Educators lack the knowledge and capacity to teach this new subject, which is also difficult to examine. However, many sources of support and learning resources are available. Of multiple suitable pedagogies, the most powerful impact on students' learning is through being taught by clinicians engaged in sustainability and in contexts directly relevant to patient care. Institutional prioritisation of sustainability is important. While there is continual pressure on space in the curriculum, there is a growing demand from university students for sustainability to be addressed in their education and future careers, and a new approach to healthcare delivery is required for the long-term sustainability of the health service.

Discussion: In 'Outcomes' the GMC has introduced to undergraduate medical education the concepts of over-diagnosis and over-treatment, cost effectiveness, and treatment as a burden on patients. Sustainability is already one of the seven domains used by the Royal College of Physicians to define quality(2). Educators less familiar with sustainability may be open to learning at the same time as they are teaching it to students, and even to learning from students who may already be better informed. As awareness develops of present unsustainability, the emotional resilience of both students and educators may need to be supported. An understanding of the wider drivers of disease should be embedded into assessment.

Conclusions: Educating new doctors to promote and practice sustainable healthcare may enhance satisfaction in clinical practice and has wider benefits for the healthcare system and the environment as well as for patients. Recommendations for implementing sustainable healthcare education include treating sustainability as a theme running through all subjects and year groups rather than as a topic, involving clinicians in the teaching as much as possible, sharing common learning resources among medical schools and embedding sustainability into assessment. There is a limited number of experts to access in this emerging field. Further research is needed to evaluate impact on students' learning.

References: