Practical Advice Paper

The Collaborative Care Project: A Practice-Based Approach to Interprofessional Education in a Primary Healthcare Setting in South Africa

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ABSTRACT

Background: There is global evidence that primary healthcare (PHC) leads to improved health outcomes. In the South Africa PHC model, the PHC team identifies healthcare needs through community visits. For health professional students to learn this PHC model requires an immersed, interprofessional community experience. **Context:** A select number of final year undergraduate health science students from Stellenbosch University, South Africa spend six weeks to one full year working at a rural clinical school with the focus on contextualised, transformative and interprofessional clinical training. **Objective:** The collaborative care project is one of the opportunities aimed at exposing students to contextual interprofessional training in a resource constrained community. Students are challenged to collaboratively find potential solutions to problems patients face using local resources, with the aim of improving patient outcomes and transforming students into collaborative change agents. **Activities:** Students, under the supervision of local community health workers, are tasked with conducting interprofessional home visits for discharged patients or patients identified by community members. Possible environmental, personal and health risk factors are identified and referrals made to existing community or state facilities for further management. **Outcome:** The collaborative care project has resulted in improved patient identification, accessibility to available resources and referral. Students recognise the value of contextualised collaborative clinical training to shape them as clinicians. Challenges and successes are shared to encourage more practical, community based opportunities for collaborative care. Reciprocal teaching and learning take place and students express a change in self-perception, team identity and improved role clarification. **Conclusion:** This project creates an opportunity for students and community to improve their understanding of precipitating factors to illness, which are not often considered as routine health care and to find local solutions to problems identified.

Keywords: Clinical training, collaborative, contextual, education, health sciences, interprofessional

Background

Primary healthcare (PHC) is not new, but there is global evidence that it results in improved health outcomes. South Africa (SA), an ethnic and culturally diverse country with a quadruple burden of disease, is still finding its metaphorical feet in a PHC model that aims to improve patient healthcare through early detection of disease, efficient referrals, evenly distributed resources, and access to healthcare for people living in rural areas.[1,2] The SA PHC team consists of a visiting physician, one nurse, one assistant nurse, and four to six community healthcare workers (CHWs), who are integral in the efficacy of the PHC team due to their inherent knowledge of the local community they serve.[2] CHWs who are resident in the community are primarily tasked to compile a database of their community members, screen households to initially identify potential health

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and/or social needs, and make appropriate referrals to the necessary services.[2]

This primary care contact role requires in-depth knowledge of disease presentation and what professional care is available throughout the healthcare system.[3-5] Preparing health science students for the PHC model requires a departure from the traditional SA hospital-based training to a more distributed, interprofessional, and immersed clinical learning experience.[6,7]

This paper describes an interprofessional education (IPE) and collaborative practice home visit project started in 2012 in an under-resourced community in SA, with the aim to meet some of the learning needs required to prepare undergraduate health science students to work in and better understand the PHC system.

Context

In 2011, Stellenbosch University responded to the need for decentralized, contextually relevant, and PHC clinical education with the development of the first rural clinical school (RCS) in Worcester, Western Cape, the first in Africa to offer longitudinal year-long placement of final-year health science students on a rural platform.[8] The overarching vision of the RCS is community-engaged clinical training with applicable knowledge and hands-on experience of the health issues facing rural, under-served, and resource-limited communities in SA.[8]

A preceding socioeconomic and social-capital study of Avian Park, which is located just outside Worcester and forms part of the clinical training platform,[9] gave insight into issues faced by this community related to crime, drug abuse, high incidence of teenage pregnancy, high unemployment rates, poverty, a high prevalence of chronic and infectious diseases, and the lack of adequate medical facilities in the area.[10]

The multidisciplinary nature of the RCS training platform provided an ideal opportunity to conceptualize an innovative IPE project in collaboration with local community stakeholders. Stakeholders included CHWs who were resident and worked in the local communities, undergraduate and postgraduate students, and local academic coordinators both from the RCS as well as the local nursing college in Worcester. This IPE home visit project, established in 2012 and now referred to as the collaborative care project (CCP), aims to afford students the opportunity to learn with, from, and about each other's profession, while improving patient care and collaborative practice.[11] The project also provides the opportunity for students to work alongside disenfranchised community members providing comprehensive insight into social determinants of health and how these affect patients and their access to care.[12]

Initially, students from nursing at both undergraduate and postgraduate levels as well as undergraduate final-year students from physiotherapy, speech and hearing therapy, human nutrition, and medicine were involved in the project. This expanded in 2013 to include final-year occupational therapy students and final-year social work students from Stellenbosch University. The interprofessional teams worked together for 3 h a week for between 6 and 10 weeks depending on the duration of their clinical rotations.

Activities

The interprofessional teams were tasked with identifying environmental, personal, and health risk factors to patient and household wellness during their home visits.[13] This was facilitated using an assessment tool based on the International Classification of Function Disability and Health (ICF) framework,[14] which was developed and used to identify any health, social, and environmental needs in each household. Each group of students was paired with a CHW to facilitate students' learning about the local community and how to access the environment and community in a culturally-sensitive manner. Each interprofessional team had no more than five individuals visiting a home identified by the CHWs as safe and accessible. Initially, each household was already part of the CHWs existing PHC database.[12] The teams would mobilize into the community on foot, and on average, six households were assessed per week using the ICF framework. The principal respondent in each household gave consent, and all information gathered was added to a confidential "household file".

On return from the home visits, the groups collaboratively planned potential management strategies using the existing services offered by the local department of health and/or community-based organizations. Referrals to the appropriate organization and level of care were made in an attempt to provide the household with optimal care in the prevention and management of disease and environmental or personal barriers to wellness. A "weekly update report" served as a data collection tool with person, problem, action, and follow-up date being recorded. These reports were used to gather statistics of the project and ensure families were not lost to follow-up.[12] At the end of each session, the teams reflected on their findings, action plan, and experience of the day to the larger group with the facilitation of a lecturer.

Outcomes

The CCP has proven to be an extremely valuable learning experience by contributing to academic development, personal growth, and professional development.[15,16] The students felt collaboration was possible with hierarchical barriers and prejudices being challenged during engagement and reported feeling valued as part of a healthcare team.[16] The

ICF framework facilitated the biopsychosocial assessment of patients[17] and helped identify profession-specific boundaries which afforded insight into the value of the team.[16]

A case study conducted in 2016 highlighted the value of the CCP in helping identify unaddressed social and PHC issues in the community. 365 referrals were made by the interprofessional teams during a 2½ years period, where a number of previously unidentified residents and patients lost to follow-up were identified and re-referred to appropriate facilities.[12]

Since 2014, the IPE home visit project has been presented at five national and four international conferences. In 2017, this project was selected as one of the FAIMER Projects That Work winners and was presented at the 2017 Summit on Social Accountability in Hammamet, Tunisia.[11] Two research studies have been conducted; one related to student and graduate perceptions of the value of the project in preparing them for practice in SA[15] and the other a quantitative analysis of the health-related findings and how the project could contribute to identifying healthcare challenges in communities.[12]

Challenges

There are a number of challenges in running a project like this, i.e. accommodating multiple professions with varying student rotations, which resulted in an inconsistency in the type and number of students present each week affecting continuity of care and patient management. Other challenges were finding appropriate households to visit and facilitating discussion between students trained in silos, especially if preconceived barriers to collaboration already existed within the group. The importance of an academic facilitator in engaging with students during their discussions and reflection was crucial in defusing these barriers and in role modeling professional development.[15,16,18] However, such investment in students is not always possible due to human resource constraints, and there was an ongoing need for willing academic facilitators to engage in the project.[15] Environmental factors such as extreme weather conditions and gang violence also influenced the weekly success of the project. The CHWs were indispensable in keeping the students out of harm's way and helping orientate them to the community; however, there were occasions when students felt intimidated or unsafe.[15]

Despite this, allowing for dynamic engagement and flexibility over the years has resulted in some successful developments and lessons learned.

Developments

From 2014, local state-employed doctors and therapists started referring existing patients living in Avian Park that required household assessment or who were being discharged from hospital and required follow-up. In 2015, the interprofessional teams started to see patients referred to them by CHWs in the adjoining suburbs, referrals from local public healthcare facilities increased, and students followed up patients they had helped manage at the local hospital who had been discharged. This allowed for the collaborative home visits to extend to three predominantly disadvantaged and very segregated suburbs in Worcester.

Logistical improvements include:

- Comprehensive timetabling of seven overlapping disciplines has helped foster IPE
- Orientation of students has been streamlined through online orientation and videos
- Each home visit group is now equipped with a vehicle and cell phone for emergencies with a direct number to local police authorities
- Assessment and referral forms based on the ICF framework were developed in collaboration with Cape Winelands District Health and are used by local municipal district health services
- Continuous engagement and workshops with academic facilitators from different health science disciplines have resulted in four committed academic facilitators supporting the CCP. This engagement has also resulted in the development of specific student aims, objectives, and outcomes for IPE at the RCS, and the establishment of a graduate attribute rubric to help monitor and facilitate student's graduate attribute development
- The development and use of a secure online patient database and interprofessional note-keeping system enabled students to share, update, and communicate with regard to the same patient, facilitating interprofessional collaboration outside of the weekly meetings, and allowed for comprehensive electronic referral
- In 2016, the part-time employment of a Collaborative Care Coordinator for the project was secured to ensure sustainability and project expansion to all sites where two or more students are engaged in learning with, from and about each other
- In 2017, the CCP expanded to include an interprofessional academic lunch-time session where relevant topics were presented and followed by collaborative discussion by lecturers, students, clinicians, as well as invited speakers from the local district. In 2018, 33 academic lunches were held reaching as many as 52 students at a time using Skype® for Business 2016, Microsoft Corporation to connect with smaller cohorts of students in more remote towns
- In 2018, funding was sought to procure and stock two home visit assessment backpacks equipped with the necessary screening tools for a comprehensive health screening, which allowed for better objective assessments and referrals on the home visits by the interprofessional team

- Realizing the value of having student and CHW teams screening families in the community, state-employed clinicians have engaged with the university to train students to monitor certain high-risk groups in communities such as children at risk of severe acute malnutrition, giving students the authority to make direct referrals to the health system.

Future Directions

The project has morphed from being an interprofessional home visit screening exercise to an opportunity for collaborative home visit assessment, referral, and follow-up of patients and households at risk. This expansion has resulted in the IPE home visit and academic lunch project becoming a model for CCPs at other Stellenbosch University clinical learning sites. Further investigation into the perceptions of community and clinicians on the value of the project needs to be explored, and a comprehensive understanding of the students' transformative learning and change in clinical practice is needed.

Opportunities for more team-based care in contextually appropriate environments need to be threaded throughout the curriculum, and they need to include facilitated reflection[19-21] with the goal of sensitization and transformation of students. This CCP has enabled both students and community an opportunity to benefit from IPE and collaborative practice.[12,15]

Conclusions

Collaborative and contextualized interprofessional exposure is an important aspect of undergraduate training, and the CCP, which is contextually relevant, has afforded students the opportunity to understand barriers to wellness in SA and has value in promoting a deeper understanding of professional roles in the healthcare team, challenging world view, and providing a platform for transformative learning. The CCP provides students an opportunity to follow the patient from the hospital into their homes and communities allowing for continuity of care and a better understanding of the local health system. Although students have reported a change in their knowledge of other disciplines and their own country, further research is required to fully understand the perceived value of this project on community health and wellness and monitor if the reported student knowledge development and change in clinical practice is sustained.

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Conflicts of interest

There are no conflicts of interest.

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