

Combining to Innovate: A Collaborative Interprofessional Learning Approach to Delivering Tobacco Use Prevention and Cessation (TUPAC) Education for Undergraduate Oral Health Students

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Abstract

This paper provides a description of a pilot project in Tobacco Use Prevention and Cessation (TUPAC) in response to a national and international trend to include TUPAC curriculum components in the clinical education of undergraduate oral health students. In order to deliver quality brief intervention strategies for smokers a need to adequately prepare oral health students was identified during student clinical placements. An interprofessional (IP) project team was established with membership from the University of Adelaide's School of Dentistry, QuitSA, Cancer Council SA, the South Australian Dental Service (SADS) Somerton Park and TAFESA's Faculty of Dental Studies to streamline the efficient use of resources and most importantly draw on a diverse range of interprofessional health care expertise. On the website for The UK Centre for the Advancement of Interprofessional Education (CAIPE) (2002) it states that "Interprofessional education occurs when two or more professions learn from and about each other to improve collaboration and the quality of care". Through interprofessional learning (IPL) in classroom and clinical settings, second year Bachelor and Advanced Diploma oral health students were provided with the opportunity to develop an understanding of the respective roles of each health professional responsible for delivering positive health initiatives in the area of TUPAC. With limited national oral health curricula in the area of TUPAC, the project team forged links with the University of Manitoba's Dental Hygiene Program, and the convenor of the TUPAC in Dental and Dental Hygiene Undergraduate Education European Workshops for curriculum benchmarking against evidence based criteria. Most importantly as the IP concept of health care considers the patient at the centre of the health care team, assessment was designed to encourage a patient centred approach through the review and analysis of a clinical case study. A formal evaluation of this project is currently in progress, however results were not yet available at the time of publication.

Introduction

The impetus for this project was derived from the fact that every year approximately 15,500 Australians die from diseases caused by smoking. More Australians have their quality of

life significantly affected by chronic disease caused or exacerbated by smoking (Australian Institute of Health Welfare 2003). Emerging evidence such as Walsh et al. (2005) suggest that oral health professionals, including dental hygienists and dental therapists, have an important primary preventive health role to play in TUPAC. Tomar (2001), reports that smoking is responsible for 75% of deaths resulting from oral and pharyngeal cancer in the United States. Current and long term smoking in young adults has a detrimental effect on periodontal health and as highlighted by Thomas et al. (2007), the cessation of smoking is likely to decrease the risk for periodontitis. Consequently a pivotal role for the oral health students from the University of Adelaide (UoA) and TAFESA, was to provide brief intervention strategies for patients at the Somerton Park Dental Clinic who identified themselves as smokers. This required students to develop confidence, knowledge and skills in educating patients about the negative systemic and oral health effects of smoking and to provide the necessary support to patients attempting to quit. To achieve this, students needed to undertake effective patient motivational interviewing and recognise how to organise referrals to the appropriate TUPAC community health care providers such as Quitline.

The ten-member IP project development team included educators, project and clinical practice coordinators, practitioners and researchers in the areas of oral health, dentistry and community health services. The implementation team that was responsible for the detailed coordination and execution of each session was delegated to the four members of this larger group who had direct contact with the students and provided regular updates to the larger project team. Downes (2007) proposes that the combining and sharing of knowledge, resources and expertise in a collaborative manner benefits not only the individual, but also the community as a whole. By combining knowledge and resources across several organisations the project team developed a collaborative IP partnership to encompass a diverse range of interprofessional expertise within existing organizational constraints. This expertise is considered essential when attempting to effectively prepare oral health students to provide quality TUPAC brief intervention strategies in a comprehensive and multifaceted community health context.

The importance of IPL is highlighted on an international level by The Health Council of Canada Report (2005, p. 38), which provides evidence of the importance of IPL by stating that "health care delivery models of the future clearly envision teams of health care providers working together to meet patient needs." On a local level, in the Framework for inter-professional learning and clinical education ACT Health, Braithwaite and Associates (2005, p.5) identify IPL as being "centrally concerned with improving the way people work together so that clinicians can grow professionally, learn from others, provide support to colleagues and improve the quality of care to patients. Further to this, Braithwaite and Associates Discussion Paper No 3, (2005, p.4) states that interprofessional relations are "influenced by professionals' willingness to collaborate, and to establish trusting and respectful relationships." Thus, in light of limited resources, the driving forces for the success of this project's development and implementation were the goodwill, trust, support and commitment demonstrated by the IP team to exert a positive influence on the quality of care provided to the community by oral health students.

Project Aims and Guiding Principles.

At its core, this collaborative project aimed to provide undergraduate oral health students with an opportunity to develop an awareness of how IP care teams can be constructed to solve complex health issues, as indicated by Johnston et al. (2003). Ultimately the project team focused on developing a comprehensive perspective of the role of the IP health care team for the delivery of TUPAC brief intervention strategies that was modelled through

an IP approach to learning and teaching. The project team was committed to ensuring that students were engaged in a culturally competent manner by focusing on the needs of marginalized communities. As Oxfam (2007) identifies smoking as one of the top five health issues facing Aboriginal populations, it was essential for the team to include TUPAC strategies for this group. Students explored the issue of TUPAC in Aboriginal communities through a cultural awareness component that was conducted by the Yaitya Purrna Indigenous Health Unit, Faculty of Health Sciences, at the University of Adelaide. The psychosocial aspects of tobacco use were contextualised through the exploration of the reasons behind tobacco consumption by people in distress. Students working with the interprofessional health education team, were involved in “hands on” workshops that explored the issues caused by social displacement and cultural destruction. This was followed by the identification of the key concepts involved in the provision of culturally inclusive TUPAC strategies.

A further aim of this project was to develop an awareness and respect for the role of each respective health professional. Braithwaite and Associates (2005) state that interprofessional barriers, fostered by issues such as salary disparity, health policies, or administrative issues etc., tend to cause ‘interprofessional rivalry’, ‘stereotyping’ and ‘turf protection.’ Johnston et al. (2003, p. 658), identify how “uniprofessional educational silos have fostered turf protection and isolation” which have a negative impact on health care provision. As an alternative to this, CAIPE (2002) identifies that interprofessional partnerships cultivate “mutual trust and respect, acknowledging differences, dispelling prejudice and rivalry and confronting misconceptions and stereotypes”, and go on to highlight that “each profession gains a deeper understanding of its own practice and how it can complement and reinforce that of others”. The TUPAC project team was committed to the belief that any pre-existing or assumed barriers across health sectors could be challenged and overcome through the promotion of oral health as an integral part of general health care delivery. Cross-sectoral understandings deepened during the developmental and implementation stages of the project, as departmental and educational issues, along with possible solutions, were jointly explored. Every effort was made to consider and address the administrative and policy requirements of each organisation involved. Shared values of equity, and a positive regard for difference, diversity and individuality as outlined by CAIPE (2002), were the guiding principles by which any differences of opinions or ideas were addressed to meet the needs of all team members. Decisions were based on input from the whole group, and a positive effort was made to collectively address issues that arose. Lines of open, effective and ongoing communication were maintained through regular face-to-face meetings and enhanced through online communication technologies.

Governance

Through their extensive literature review of interprofessional learning models, Braithwaite and Associates (2005) discovered that successful relationships are also dependent on several layers of organisational structures, levels of support, resourcing and communication processes. On a macro level, governance for this project was under the umbrella of a series of Memoranda of Understanding (MOU) that were established to encourage collaboration and resource sharing across the relevant health and educational sectors. These included MOUs between:

1. The University of Adelaide and the South Australian Dental Service
2. The University of Adelaide and TAFESA
3. TAFESA and The South Australian Dental Service
4. QuitSA and The Cancer Council SA.

This project received crucial support and endorsement from the executive level of each respective organisation, which underpinned the project team's ability to problem solve issues collaboratively and trustingly.

Teaching and Learning Strategies

A limiting factor during the developmental stages was the lack of an existing local TUPAC oral health curriculum model. Establishing an international connection with TUPAC dental hygiene curriculum experts provided the project team access to a pool of knowledge and expertise. Gelskey (2001) provides an outline of the University of Manitoba's experience in setting up a TUPAC program for clinical integration. The importance of gaining widespread faculty support to facilitate the clinical integration of TUPAC initiatives is also emphasised. The local team's efforts were strengthened by the fact that all partner organisations recognised the importance of TUPAC as an oral health issue and provided the necessary expertise, resources and infrastructure to support the students in the application of knowledge to clinical practice.

In the initial stages the IP project team developed a conceptual curriculum framework that integrated the educational outcomes and expectations of each professional group in order to achieve what was perceived as quality community health outcomes in TUPAC. The content was mapped against international standards of best practice in TUPAC education for dental and dental hygiene undergraduate students as developed by Ramseier et al. (2006). Discipline experts across professions were identified to present relevant resource sessions to support the interprofessional teaching and learning experience. Students were able to transfer knowledge acquisition to clinical practice in the teaching clinics to make the content experiential and contextual. Clinical demonstrators were encouraged to attend TUPAC resource sessions to promote consistency of clinical standards of teaching and learning. As a result, students developed a clearer understanding of when and how to engage allied community health services for the provision of TUPAC interprofessional care.

Resource sessions were interactive and jointly delivered to UoA second year Bachelor of Oral Health and TAFESA second year Advanced Diploma of Oral Health (Dental Hygiene) students undertaking clinical placements at the Somerton Park Dental Clinic. The content was delivered and explored through case studies and a number of issue-based and peer group learning experiences. Willing past and current smokers within the staff and student cohort provided testimonials of their experiences with regard to the psychosocial factors involved with tobacco addiction. Students were also encouraged to interview friends and/or family members who were smokers in order to further explore and analyse the complex issues associated with tobacco addiction and consequently share these findings with their peers. Experienced Quitline counsellors presented an evidence-based approach to motivational interviewing through role-play and simulated clinical practice. Students were expected to participate actively in both the role-play and peer assessment of each other's motivational interviewing techniques. Students were offered the opportunity to observe the daily operations of the Quitline counselling service through student placements that enabled observational learning.

Faculty and health care experts from allied health services provided the expertise and underpinning knowledge required to understand the psychosocial implications of tobacco use and dependence. Qualified oral health practitioners including dental hygienists, dental therapists, dentists, and dental specialists facilitated resource sessions and group learning activities to contextualise TUPAC education in oral health settings through the exploration of clinical case studies. Sessions were delivered over a period of 7 weeks encompassing

five ninety-minute sessions and two three-hour sessions to cater for role playing and peer evaluation.

The topics that were presented and explored sequentially included:

1. History of tobacco use and modern day marketing
2. Role adequacy and legitimacy for oral health professionals
3. Introduction to implementing culturally competent TUPAC strategies
4. Barriers and challenges for the patient and the health professional
5. Systemic and oral effects of smoking
6. Psychosocial aspects of tobacco use
7. Brief Intervention strategies and Nicotine Replacement Therapies
8. History taking, oral health clinical assessment and treatment planning
9. Smoking and its relationship to modern day social issues
10. Smoking as an issue amongst youth
11. Brief intervention and motivational interviewing techniques and
12. Understanding and engaging community support services.

Oandasan and Reeves (2005) indicate that the aim of collaborative patient centred practice is designed to promote active IP participation. The TUPAC curriculum content, along with the teaching and learning experience was designed to increase the students' awareness of how complex health issues in patient-centred care are managed more effectively when health professionals are engaged positively in IP education and practice.

Student Assessment

Student assessment was based on the premise that, as Tomar (2001) indicates, training in TUPAC becomes more significant for the oral health professional if the didactic is integrated with clinical intervention and application. Consequently assessment took the form of a clinical case study, where students were asked to prepare an analysis of the effectiveness of their brief intervention strategies, by investigating the challenges, barriers and/or successes that both the student and their patient experienced. Students were required to provide a critical analysis of their patients' needs and highlight the TUPAC strategies and/or services that addressed these needs most effectively. As mentioned earlier, in the IP concept of health care the patient is an integral member of the team and therefore should be actively involved through informed decision-making and goal setting with regard to their health outcomes. Students were perceived to have embraced the IP concept of care as evidenced in their final assessment task through the non-judgmental manner in which they provided a detailed analysis of their patients' TUPAC needs. The strategies that students implemented to address these needs displayed a heightened sense of sensitivity towards the patient's own desires for their individual health outcomes. Students were actively engaged in raising the patient's awareness of the relevant TUPAC community support services and were prompt in organising timely referrals as agreed to by the patient.

Program evaluation

The Tobacco Research and Evaluation Unit of the Cancer Council South Australia, along with the UoA's School of Dentistry will conduct a program evaluation through pre- and post-course student surveys. There have been two strategic pre-course surveys completed and two post-course surveys will need to be undertaken. Of the post course surveys, one has been conducted directly after the conclusion of the program and the other will be conducted after 12 months to assess sustainable changes in attitudes and confidence in undertaking brief

intervention with patients, as well as program effectiveness and relevance. The Evaluation and Research Unit of the South Australian Dental Service will also track the students' brief interventions with patients through the Titanium electronic clinical management information system and specifically through the QUIT service code and customised data capture mini-screen designed by the SADS Health Promotion Unit, to capture TUPAC interventions. Data from the completed surveys are not available at this stage. In the QuitSA Addressing Tobacco in Hospital and Health Services Newsletter, September 2007, the following student testimonials were included:

JS, 2nd year Bachelor of Oral Health Student

The TUPAC program helped outline the impact of a brief smoking intervention in the clinic, and how such a conversation can make a difference to a person's smoking cessation. It also helped to establish our boundaries and limitations as oral health professionals in smoking cessation. I now am clear where my role begins and ends. I feel more confident in providing basic information to people who are serious about cessation and direct them to the relevant services for more information and guidance such as Quit SA.

DT 2nd year Bachelor of Oral Health Student

The program equipped me with the skills and knowledge on not only the various methods that are available in order to aid smokers in quitting, but how to approach people with whatever smoking history they present with. I now feel quite confident in addressing this issue of smoking with my patients and accessing community support.

Another example of a student testimonial from the final student assessment task was as follows:

JC 2nd Year Bachelor of Oral Health Student

I now understand how creative and successful strategies and sound advice can support patients in changing their behaviour when attempting to quit. I have found that I now know where to find resources and access community health support from the different organisations that are vital for the patient's successful attempts at quitting. Keeping a journal of progress can help a practitioner in future attempts by looking back at what strategies worked well and which ones didn't to perfect the skills needed to help patients quit.

To complement this, clinical demonstrators have noted that students' have become proactive and confident in engaging in TUPAC conversations and brief intervention strategies with patients when a 'window of opportunity' to do so presents itself and seem to have clear direction of when and how to access the relevant community health services.

Summary

Although results from the initial project evaluation are not available at this stage, the perceived success of this TUPAC project for oral health students seemed to rely on the collaborative IP partnership that was formed during the project's early stages. The willingness to share expertise and resources allowed the project team to develop and implement a quality teaching and learning experience to exert a positive impact on the quality of health care provided by oral health students. International colleagues contributed generously to the development of an evidence based TUPAC curriculum framework and shared strategies of overcoming organizational barriers and challenges that transformed the learning experience into an

undergraduate clinical context. All interprofessional team members modeled behaviours of best practice in the area of interprofessional understanding and collaboration to encourage the students' development of trust and respect for the role of each health care provider. The IP project team's goals and objectives were achievable because of the level of support that was received from all five health and educational organisations involved, as all considered TUPAC as an important health initiative for oral health professionals. The knowledge and skills that students have gained, in particular with regard to interprofessional practice, has provided them with confidence to access support from allied health professions to maximise the holistic health outcomes for their patients. The IP learning experience for the project team has been very rewarding and has highlighted how pre-existing barriers are overcome as a result of the combination of knowledge, expertise and resources to provide innovations in quality education and health outcomes for students, patients and educators alike.

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References

- Australian Institute of Health Welfare, *The Burden of Disease and Injury in Australia 2003*, Canberra, AIHW.
- Braithwaite and Associates, 2005, Inter-professional learning and clinical education: A background discussion paper No 3, ACT Health Department.
- Braithwaite and Associates, 2005, Framework for inter-professional learning and clinical education, ACT Health Department.
- CAIPE, UK Centre for the Advancement of Interprofessional Education 2002, Interprofessional Education. <http://www.caipe.org.uk/index.php?sid=3fb2052da7b9a30d5cbf3214a57b543&page=define> Viewed 5th May 2007.
- Downes S., 2007 Models for Sustainable Open Educational Resources, *Interdisciplinary Journal of Knowledge and Learning Objects*, Vol 3. <http://www.ijklo.org/Volume3/IJKLOv3p029-044Downes.pdf>. Viewed 2nd October 2007.
- Johnston G., Ryding H. A., Campbell L.M., 2003, Evolution of Interprofessional Learning: Dalhousie University's 'From Family Violence to Health,' module, *Journal of the Canadian Dental Association*, Vol 69, No 10. <http://cda-adc.ca/jcda/vol-69/issue-10/658.pdf> Viewed 30th August 2007.
- Gelskey S. C., 2001, Tobacco-Use Cessation Programs and Policies at the University of Manitoba's Faculty of Dentistry, *J Can Dent Association* 67:145-8.
- The Health Council of Canada, 2005, Annual Report. Viewed October 5th 2007. http://www.healthcouncilcanada.ca/en/index.php?option=com_content&task=view&id=32&Itemid=32
- Oandasan I., Reeves S., 2005, Key elements for interprofessional education. Part 1: The learner, the educator and the learning context, *Journal of Interprofessional Care*, 1: 21-38.
- Oxfam, 2007, Close the Gap: Solutions to the Indigenous Health Crisis facing Australia. http://www.naccho.org.au/Files/Documents/CTG_Pages.pdf Viewed 30th September 2007.
- QuitSA, Sept 2007, Addressing Tobacco in Hospital and Health Services. <http://www.quitsa.org.au/aspx/newsletters.aspx> Viewed 30th Sept 2007.

- Ramseier C. A., Christen A., McGowan J., McCartan B., Minenna, L., Ohrn, K. & Walter C., 2006, Tobacco Use Prevention and Cessation in Dental and Dental Hygiene Undergraduate Education, *Oral Health Prev Dent*, 4, 49-60.
- Tomar SL , 2001, Dentistry's role in Tobacco Control, *ADA*, Vol. 132.
- Thomas WW., Broadbent JM., Welch D., Beck JD., Poulton R., 2007, Cigarette smoking and periodontal disease amongst 32 year olds: A Prospective Study of a Representative Cohort, *Journal of Clinical Periodontology*, 43: 828-834.
- Walsh MM., Ellison JA., May 2005, Treatment of Tobacco Use Dependence, The Role of the Oral Health Professional, *Journal of Dental Education*, 65(5): 521-537.

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