

## Investing in the future of rural and remote allied health and kids

Debra Jones<sup>1</sup>, Diena Grant-Thomson<sup>2</sup>, Elizabeth Bourne<sup>3</sup>, David Lyle<sup>1</sup>

<sup>1</sup>Broken Hill University Department of Rural Health, University of Sydney, <sup>2</sup>Greater Western Area Health Service, <sup>3</sup>University of Sydney

---

Debra Jones is Director, Primary Health Care, Broken Hill University Department of Rural Health, University of Sydney. She has a Master of Indigenous Health, a Grad Dip Aged Services Management, and a B Health Science (Ger).

Deb has worked in rural and remote health service delivery for over 20 years. A registered nurse by background, Deb is a strong advocate for multidisciplinary practice in rural and remote settings and addressing the unmet health needs confronted by rural and remote populations. Deb has a keen interest in the areas of primary health care, Indigenous health and health workforce development. These areas of interest have resulted in the development of a comprehensive Health Career Pipeline for rural and remote residents aspiring to health careers and urban based students with an interest in rural and remote practice. The delivery of structured education and development of tailored programs has promoted placements that reflect the principles of primary health care across nursing, medicine, and allied health. The School Health Hub-Student Run Clinic Program is an initiative that integrates multidisciplinary student placements with direct service provision in primary and central schools within western NSW. This model enhances learning experiences, service delivery and workforce development. The approaches to these programs are driven by 'community first' concepts and shared governance models across schools, health, academia and community. A high level of social activation has been critical in establishing new models of fieldwork placement for health students in non-traditional locations. The student-run clinic model is currently being adapted and piloted across the aged care and disability sectors in Broken Hill. Deb will be travelling to the USA and Canada in early 2011 to further explore multidisciplinary student run clinic programs and service delivery models for underserved populations. Deb will commence her PhD in 2011.

---

### Introduction

This paper describes the development of an innovative model of allied health student placement in rural and remote communities in western New South Wales. Although in the early stages of program development this model is enhancing opportunities for student placements and health care access within the region. The development of this model has resulted in a paradigm shift from traditional hospital based placement with one-to-one supervision tailored to meet external requirements to cohort placements in sites considered non-traditional for the region, the school education system and aged care and disability sectors, that respond to community priorities of unmet health need. The integration of non-traditional host sites with a direct student service provision role has enabled the Broken Hill University Department of Rural Health (BHUDRH) to expand allied health student placement opportunities. The development of Student Run Clinic Programs (SRCP) has provided a framework to address the unmet health needs of rural and remote populations whilst responding to Federal initiatives to increase capacity for student placements in line with student growth.<sup>(1)</sup> The complexities associated with the development of this model are identified within this paper and the benefits of adopting a community first solutions approach discussed.

No simple intervention can address the complex interconnectedness associated with student placements and health delivery in rural and remote locations. The requirement to develop equally complex Interventions and programs is implicit. The existence of complexity has offered us the unique opportunity to adapt service delivery models to the values and needs of local communities, health care systems and the changing landscape of student placements.<sup>(2)</sup>

### Background

For the 30% of Australians who reside in rural and remote locations, access to health services is a critical factor in addressing health inequities associated with accessibility to services, living conditions, social and geographical isolation, economic disparity and cultural diversity.<sup>(3)</sup>

Rural and remote Australians continue to be marginalised in their access to health professionals and care as a result of workforce maldistribution across urban, regional and remote centres. Access to Allied Health Professionals (AHP) in these settings is less than their urban counterparts.<sup>(4)</sup> AHP are a critical component of health service delivery to rural and remote residents. The steady increase in the number of AHP trained in Australia has to date failed to address shortages across disciplines in rural and remote locations. These

locations accommodate 60% less practicing professionals per 100 000 population base than metropolitan centres.<sup>(5)</sup>

A comprehensive body of literature identifies the challenges associated with Allied Health service provision in rural and remote locations. A lack of management support, resources, career structure, and recognition of role, professional isolation, and high workloads<sup>(6,7)</sup> are identified factors that influence intent to and length of practice within rural and remote locations.

The capacity to place students in rural and remote settings is impacted upon by these challenges, employer perceptions of decreased service delivery associated with clinical supervision requirements, and student factors such as financial implications of undertaking rural placements, accommodation availability, family influences, isolation and availability of experiences.<sup>(8)</sup>

The health reform landscape of Australia at a policy and practice level is placing increasing demands on universities and health organisations to be responsive to health policy shifts. The shift from illness orientated care in hospitals to community based primary health care delivery adds another layer of complexity to an already strained health environment. The need to ensure students have the capacity to integrate and respond to this changing landscape is critical.<sup>(9, 10)</sup>

The literature identifies linkages between students completing a rural placement and an increased likelihood of them returning to rural communities post graduation to practice.<sup>(8,11,12)</sup> Clinical fieldwork experiences in rural locations are an increasingly important element in contemporary educational experiences for health science students.<sup>(13)</sup> The challenge for rural and remote locations is to develop placement experiences that meet the needs of communities, health providers, students, universities, governments and professional/registration bodies.

In the development of the Allied Health Student Run Clinic Program (AHSRCP) the needs of the community were the driving factor. Communities within western New South Wales have traditionally experienced fragmented access to AHP, challenges in recruiting and retaining AHP, and a lack of capacity to place allied health students. These challenges are amplified in the regions remoter, predominately Aboriginal communities.<sup>(9)</sup> Prioritising and addressing identified community needs, limited or no access to allied health services, enabled the BHUDRH to work with partner organisations in the development of new models of community collaboration and student placement.

## Responding to community need

The concept of Towards Unity for Health was developed in the 1990s. This concept sought to improve the coordination of health service delivery through partnerships across community, health service providers, policy makers, health professionals and academic institutions.<sup>(14)</sup>

This concept reflects the 'Community First' approach, putting community health needs first.<sup>(15)</sup> This approach was utilised in the development of the AHSRCP. The Community First approach has resulted in the development of sustainable community partnerships that support the provision of education for health students on rural and remote public health needs whilst addressing priority health issues at a community and regional level. The community-academic partnerships that have evolved through this model have been critical in program progression.

Eight factors have been identified that facilitate the development of effective and sustainable community-academic partnerships. These include: (1) creation and nurturing of trust, (2) respect for a community's knowledge, (3) community defined and prioritized needs and goals, (4) mutual division of roles and responsibilities, (5) continuous flexibility, compromise and feedback, (6) strengthening of community capacity, (7) joint and equitable allocation of resources, and (8) sustainability and community ownership.<sup>(16)</sup> These factors underpin the AHSRCP.

The AHSRCP put community health needs first, working in partnership with involved agencies to jointly develop, implement and access quality projects reflecting a 'true' partnership approach. Practical community solutions to health issues and community academic partnerships emphasizing a 'community-first approach' provided opportunities to teach public health, benefit health in local communities, and prepare students for clinical practice in the 21st century.<sup>(15)</sup>

Formalisation of Community First approaches and community-academic partnerships has been achieved through the development of a Shared Governance framework.

### Shared governance framework

Through placing the 'Community First' the BHUDRH has been able to establish shared health and education goals for rural and remote residents and health science students participating in the AHSRCP.<sup>(15)</sup> This approach has provided the foundation for sustainable partnerships through practical community solutions to unmet health needs.

The Shared Student Run Clinic Governance Model within Broken Hill and region includes all partner schools, NSW Department of Education and Training, BHUDRH, the University of Sydney, Greater Western Area Health Service, Remote Services (Far West NSW Local Health Network January 2011), Riverina Division of General Practice including the Barrier Division of General Practice, Maari Ma Health Aboriginal Corporation, Broken Hill City Council, residential and community aged care providers and disability sector.

The Shared Governance Model addresses barriers associated with traditional approaches to the delivery of health care and student placements across governments, educational entities, communities, private, and public health service providers. This model addresses power-sharing, funding allocation, relationships, accountabilities, and policy and practice in the delivery of effective long term health care to improve the health outcomes for communities in the region and student learning experiences.<sup>(17)</sup>

The model promotes the establishment of formal relationships and reflects a serious commitment across the region in the development and delivery of integrated health care. Regional stakeholders acknowledge the strategic readjustment and shift in organizational management and governance that was required to achieve these relationships.<sup>(17)</sup>

There is an expanding body of evidence on the effectiveness of Shared Governance Models and the application of these models in the Australian health care context, focusing on improved community health outcomes and regionally responsive and appropriate models to achieve this.<sup>(17,18)</sup>

The AHSRCP has driven the development of agreed governance arrangements between participating organizations in the sharing of resources, goals and outcomes. Promotion of sustainable integrated governance relationships that are focused on improving regional health outcomes is the critical uniting factor for this Shared Governance arrangement.

### Student run clinics

Student Run Clinics have operated successfully in the United States of America and Canada since the 1990s. These clinics were traditionally staffed by volunteer medical students with service provision directed at disadvantaged and underserved populations. Contemporary SRCP have evolved to encompass inter-professional practice models.<sup>(19-21)</sup>

SRCP offer participants leadership opportunities to expand their awareness of issues central to the inequities confronted by disadvantaged and underserved populations—rural and remote populations. The transition to inter-professional models has resulted in a paradigm shift from diagnosis and treatment to models that encompass primary health care approaches to service delivery and student learning.<sup>(20)</sup> A priority area identified in the Federal Governments National Primary Health Care Strategy.<sup>(9)</sup>

The goals of inter-professional Student Run Clinics include the provision of quality community-orientated health services to underserved communities using inter-professional teams, increased awareness of social, cultural, economic issues of underserved populations for partnership Universities and their health care community, promotion of an ethos of service in the University health sciences community, provision of service-orientated leadership experience to prepare students for a life of advocacy and 'real world work', and collaboration with community organisations to expand programs that are effectively serving the community.<sup>(20)</sup>

There is a growing body of evidence that identifies quality of service provision, client outcomes and client satisfaction with SRCP.<sup>(20,22-24)</sup> The development of quality care indicators for these programs will provide additional guidelines for achieving quality student practice and client outcomes.<sup>(20)</sup>

### The student run clinic model

The BHUDRH has 13 years experience in the development and delivery of student placement programs. This provided a strong foundation for the development of the AHSRCP. The BHUDRH facilitates health science student placements across all disciplines from over 20 Australian universities.<sup>(25)</sup> The majority of students seeking placement in the region are metropolitan in origin with limited or no rural and remote exposure.

Generic issues that are generally conceived of as barriers to clinical education experiences in rural and remote locations have been widely addressed. Students have free access to the BHUDRH student accommodation whilst in region, comprehensive application and placement processes, receive structured orientation and induction programs which integrate cultural education, professional resilience, primary health care practice, person centred care and rural and remote service delivery approaches. Adding strength to this approach is the provision of multiple tiers of clinical, academic, social and administrative structures accessible to students through the UDRH Program.

In 2008 concerns were raised by local primary school Principals in Broken Hill about delayed early childhood development and the lack of access to allied health services.<sup>(26)</sup> The BHUDRH was well positioned to respond to these concerns. In 2009 the BHUDRH developed and trialled a clinical education and service delivery model for final year Speech Pathology students structured around Student Run Clinics in the primary school setting. The success of this program has resulted in discipline expansion and transference of the model to the aged and disability sectors.

Extensive discussions across key stakeholders during the developmental stage of the program explored areas of clinical supervision, student numbers and cohort approaches, student competency requirements to undertake placement experiences in new sites, communication requirements across multiple stakeholders and capacity of host sites to accommodate student numbers. An extensive literature search was undertaken to identify evidence based models of practice.<sup>(27-30)</sup>

The literature identified a wide variety of allied health clinical education approaches at a national and international level. What was evident in the literature was the growth in models of clinical education that challenged traditional Australian models of supervision, a single educator working face to face with one or small numbers of students.<sup>(29,31)</sup>

These newer models identified alternative supervisory approaches using a variety of modalities. These included direct and in-direct contact with discipline specific clinicians, direct and indirect contact with non-discipline specific clinicians, peer supervision, and non-discipline-non clinician supervision from senior staff in non-traditional placement sites such as schools with teachers taking on a supervisory role in the classroom.<sup>(10,27,29)</sup>

The literature also highlighted challenges to current curriculum content and skills acquisition necessary to prepare allied health students for work in the contemporary Australian health arena. An understanding of primary health care, team work, health technology, and cross cultural competence were identified as expected attributes of new graduates. The development of generic competencies that prepare students to meet employer expectations upon graduation were identified as critical although, concerns about this approach and scopes of practice and professional association expectations were identified.<sup>(31)</sup>

What was evident was that there is currently no 'gold standard' model identified for the clinical education of Allied Health students.<sup>(27)</sup> Key stakeholders involved in the development of programs need to explore the evidence base and support the integration of this evidence into the clinical education experience.<sup>(32)</sup> Currently the decision regarding which clinical education model(s) to implement rest on the consideration and interpretation of the evidence.<sup>(27)</sup>

## Program structure

Based on community need and available evidence the AHSRCP implemented in Broken Hill has the following structure:

- Placement of students in cohorts (4–6 students depending on discipline)
- Intake of cohorts across each school term for school based programs (4 cohort intakes annually) and across the year for aged care and disability sectors (4-5 cohort intakes annually)
- Placement of students in pairs (peer support)
- Promotion of extended lengths of stay for students (6 weeks plus or extending to a 2<sup>nd</sup> placement opportunity)
- Delivery of structured education across the placement period (induction/ orientation linked to placement preparation, inter-professional learning opportunities, clinical discussions and debriefs)
- Development of generic learning outcomes relevant to rural and remote practice
- Continuity of student placement across host sites
- Utilisation of flexible models of clinical and non-clinical supervision (peer, discipline specific clinician, non-discipline specific clinicians, non-discipline non-clinical supervision, on and off site supervision).

## Multidisciplinary curriculum responsiveness

Ensuring appropriate, safe and rewarding education and training experiences for participating students is critical. Extensive discussions are undertaken with discipline specific academics and relevant University Schools of Health Science and Faculties to ensure that student experiences are linked to curriculum requirements. Prior to the integration of disciplines pilot programs are delivered to identify connectedness of curriculum to learning experience. These discussions also involve host sites to further ensure that the role of students and curriculum requirements are responsive to identified areas of need. Findings from these pilot programs are used to inform the development of comprehensive program and service delivery strategies.

AHSRCP participants are also integrated into structured inter-professional learning (IPL) sessions delivered through the BHUDRH. Timetables of student placement dates are maintained to assist in the scheduling of IPL sessions that are relevant to students from a range of disciplines who are on site at specific times within the calendar year. The Federal transition to multidisciplinary and team-based practice<sup>(9)</sup> underpins the importance of student participation in IPL activities that are both relevant and authentic to their placement location.

## Social support

The AHSRCP structure also supports the social integration of participating students. Lack of social supports for students undertaking rural and remote placements has been identified as a deficiency in the rural placement system.<sup>(33)</sup> Students are supported through multidisciplinary approaches to student accommodation, structured social contacts with BHUDRH staff, families and community organisations, and access to community social and sporting events.

## Shared governance model

Strategic meetings of key stakeholders, including participating students, were held on site in Broken Hill on 3 occasions in 2010. These meetings focused on program development, communication strategies across partners, community needs, student needs, placement processes, pilot group findings, scopes of practice, evaluation and research, and future planning. These meetings allow metropolitan academics to visit host sites, hold discussions with local clinicians and students on placement, whilst familiarising themselves with the region and health inequities confronted.

## Impact to date 2009-2010

Discipline	Schools	Aged care	Education delivery	Structured education	Resource adaptation/ development
Speech pathology	22 students 167 K Children Screened. 64 Children receiving tmt 8 partner schools	2 students 15 Aged Care Clients assessed 4 Disability clients assessed 4 Residential Aged Care partners 1 Disability Service partner	8 sessions delivered in schools (Common Speech and Language Issues and interventions) 1 session delivered in Aged Care (Thickened Fluids)	Comprehensive orientation/ induction Weekly clinical discussion IPL Program Debrief session	Consent forms Clinical Assessment Tool Data collection tools Referral Forms
Occupational therapy	1 OT Student 25 K Children Screened. 18 children displayed poor balance. 21 children appeared awkward in coordination. 1 pilot school		1 Session Role of OT (It was identified that the school system had limited knowledge of the role of OT)	Comprehensive orientation/ induction Weekly clinical discussion IPL Program Debrief session	Consent forms. Clinical Assessment Tool Data collection tools. Referral Forms
Physiotherapy	2 Physio Students 33 Yr 2 Children screened 12 Children identified with hamstring tightening, 3 identified with decreased lower limb strength 4 referred to Physio Dept for additional assessment. 2 pilot schools			Comprehensive orientation/ induction Weekly clinical discussion IPL Program Debrief session	Consent forms Clinical Assessment Tool (Outback Schools Program-C-C Scale of Gross Motor Assessment in Children) Data collection tools Assessment Report Referral forms

## 2011 program expansion

Discipline	Student numbers		Host sites		
	Schools	Aged Care	Schools (BH)	Aged care/ disability (BH)	Remote outreach
Speech pathology	18	8	9	5	Menindee Wilcannia
Occupational therapy	12	9	8	5	Menindee Wilcannia
Physiotherapy	12	9	8	5	Menindee Wilcannia
Dietetics	9	6	3	5	
Orthoptics	6	6	2	5	
Exercise physiology	6	6	3	5	
Pharmacy		6		5	

## Participant evaluations

To date evaluation has been undertaken with all participating students, principals, on site clinicians and relevant academics. Findings have been used to improve the program at a strategic, process, and social level. All parties and participants have identified a high level of satisfaction with the AHSRCP. Although this high level of satisfaction provides a positive foundation for progression of the program the need to develop comprehensive and robust research relating to this service and clinical education model is acknowledged.

## Resource implications of placement model

The literature relating to clinical education models for allied health students identifies the lack of evidence associated with the resource implications across varying stages of placement for students.<sup>(27)</sup>

The Shared Governance Model associated with the AHSRCP is underpinned by sharing of resources, knowledge and skills across all partner organisations. This approach ensures that one partner is not left with a burden of resource expenditure. In contrast the Shared Governance Model enhances access to funding opportunities across a range of Federal and State entities. This has been reflected in the success of the partnerships in submissions associated with the development, expansion and consolidation of the SRCP through Health Workforce Australia.

## Ethical implications for student run clinics and patient care

Student Run Clinics need to balance service provision roles with education and training requirements, competency and confidence levels of participating students. The benefits for students participating in Student Run Clinics in rural and remote locations include cross cultural communication skills through interactions with clients from socio-economic, racial, and cultural backgrounds different to their own, exposure to primary health care principles and practice, experiencing first hand the challenges associated with health care access, and community driven program interventions.<sup>(34)</sup>

Students need to be provided with the opportunity to reflect upon and interpret their experiences. This will assist in diminishing harmful stereotypes that may be reinforced through less structured and supported experiences.<sup>(34)</sup>

The preparation of students prior to commencing their placement is an essential element of the program. The extent and quality of preparation will impact on the quality of care provided and educational experiences retained.<sup>(34)</sup>

One of the biggest challenges associated with Student Run Clinics is to address perceptions that this model supports the delivery of lower quality care to socio-economically disadvantaged people. This can be addressed through the development of quality care indicators that provide a benchmark and expectation of level of service that will be provided and accessible to clients participating in these programs.<sup>(23,35)</sup> These indicators will enable effective benchmarking to occur and external auditing to be undertaken. The BHUDRH and partner organisations will commence the development of these indicators in 2011.

The critical aim of Student Run Clinics is to put the clients served as the priority of the program. It is essential that client benefits are not compromised by the needs and interests of other parties.<sup>(34)</sup>

## Program evaluation

This program aims to address the current lack of evidence associated with clinical education models for allied health students, specifically within a rural and remote context. A meaningful and robust study is being developed to inform policy and practice in education. Access to sound evidence associated with clinical education models is an acknowledged priority across allied health disciplines.<sup>(27)</sup> Research is needed to find the evidence of whether a community driven, Student Run Clinic model provides quality approaches to education and training for students, quality health outcomes for clients, rewarding interactions for clinicians and academics, and strong foundations to progress additional Community First health initiatives.<sup>(29)</sup>

## References

1. HWA. Health Workforce Australia 2010: Clinical Supervisor Support Program—Discussion Paper. Health Workforce Australia. Adelaide 2010.
2. Litaker D, Tormolo A, Liberatore V, Stange K, Aron A. Using Complexity Theory to Build Interventions that Improve Health Care Delivery in Primary Care. *Journal of General Internal Medicine* 2006;21:S30-4.
3. Sadkowsky K, Hagan P, Kelman C, Lui C. Health Services in the City and the Bush: Measures of Access and Use Derived from Linked Administration Data. Occasional Papers. Canberra: Commonwealth Department of Health and Aged Care; 2001.
4. DoHA. Report on the Audit of Health Workforce in Rural and Regional Australia. Department of Health and Ageing. Canberra: Commonwealth of Australia; 2008.
5. AIHW. Health Worker Numbers Higher in Cities than Regional Areas. Australian Institute of Health and Welfare. Canberra: Commonwealth of Australia; 2001.
6. Struber J. Recruiting and retaining Allied Health Professionals in Rural Australia: Why is it so Difficult. 2004; 2(2).
7. O'Toole K, Schoo A, Stagnitti K, Cuss K. Rethinking policies for the retention of allied health professionals in rural areas: A social relations approach. 2008; 87.
8. Turner J, Lane J. Early Barriers for University Rural Clinical Placements. *Education for Health* 2006;19(3):375-9.
9. DoHA. Building a 21st Century Primary Health Care System. A Draft of Australia's First National Primary Health Care Strategy. Department of Health and Ageing Canberra: Australian Government; 2009.
10. McAllister L. Issues and innovations in clinical education. *Advances in Speech-Language Pathology* 2005;7(3):138-48.
11. Lee S, MacKenzie L. Starting out in rural New South Wales. The experiences of new graduate occupational therapists. *Australian Journal of Rural Health* 2003;11:36-43.
12. Causby R. Facilitating recruitment of podiatrists to rural health in South Australia through a joint academic-clinical placement. *Journal of Rural and Remote Health* 2003;3:165-71.
13. Liaw S, McGrath B, Jones G, Russell U, Bourke L, Hsu-Hage B. A compulsory experiential and inter-professional rural health subject for undergraduate students. *Journal of Rural and Remote Health* 2005;5:460.
14. Art B, Deroo L, Maeseneer JD. Towards Unity for Health Utilising Community-Orientated Primary Care in Education and Practice. 2007; 20(2): Available from: <http://www.educationforhealth.net/>.
15. Carney J, Hackett R. Community-Academic Partnerships: A 'Community-First' Model to Teach Public Health. Brief Communication. 2008; 21(1): Available from: <http://www.educationforhealth.net/>.
16. Wolff M, Maurana C. Building Effective Community-Academic Partnerships to Improve Health: A Qualitative Study of Perspectives from Communities. *Academic Medicine* 2001;76(2):166-72.
17. Jackson C, Nicholans C, Doust J, Cheung L, O'Donnell J. Seriously Working Together: integrated governance models to achieve sustainable partnerships between health care organisations. *The Medical Journal of Australia* 2008;188(8):S57-S60.
18. DoHA. Connecting Government: A Whole of Government Responses to Australia's Priority Challenges. Department of Health and Ageing. Canberra 2004.
19. Bennard B, Wilson J, Ferguson K, Sliger C. A Student-Run Outreach Clinic for Rural Communities in Appalachia. *Academic Medicine* 2004;79(7):666-71.
20. Moskowitz D, Glasco J, Johnson B, Wang G. Students in the community: An inter-professional student-run free clinic. *Journal of Interprofessional Care* 2006;20(3):254-9.
21. Simmons B, DeJoseph D, Diamond J, Weistein L. Students Who Participate in a Student-Run Free Health Clinic Need Education about Access to Care Issues. *Journal of Health Care for the Poor and Underserved* 2009;20:964-8.
22. Simpson S, Long J. Medical Student-Run Health Clinics: Important Contributors to Patient Care and Medical Education. *Society of General Internal Medicine* 2006;22:352-6.
23. Meah Y, Smith E, Thomas D. Student-Run Health Clinic: Novel Arena to Educate Medical Students on Systems-Based Practice. *Mount Sinai Journal of Medicine* 2009;76:344-56.
24. Ellett J, Campbell J, Gonsalves W. Patient Satisfaction in a Student-run Free Medical Clinic. *Family Medicine* 2010;42(1):16-8.
25. Lyle D, Morris J, Garne D, Jones D, Pitt M, Walker T, et al. Value Adding through regional coordination of rural placements for all health disciplines: The Broken Hill Experience. *Australian Journal of Rural Health* 2006;14(6):244-8.
26. NSW DoH. Report of the Chief Health Officer, NSW. NSW Department of Health. Sydney. 2006.
27. Lekkas P, Larsen T, Kumar S, Grimmer K, Nyland L, Chipchase L, et al. No model of clinical education for physiotherapy students is superior to another: a systematic review. *Australian Journal of Physiotherapy* 2007;53:19-28.
28. Ferguson A, McAllister S, Lincoln M, McAllister L, Owen S. Becoming familiar with competency-based student assessment: An evaluation of workshop outcomes. *International Journal of Speech-Language Pathology* 2010;12(6):545-54.
29. Cruice M. Common issues but alternative solutions and innovations. *Advances in Speech-Language Pathology* 2005;7(3):162-6.
30. Pickering M. Issues and innovations in clinical education: A view from the USA. *Advances in Speech-Language Pathology* 2005;7(3):167-9.
31. McAllister L. Issues, innovations and calls to action in clinical education: A response to Kathard, Lincoln and McCabe, Rose, Cruice, Pickering, Van Dort and Stansfield. *Advances in Speech-Language Pathology* 2005;7(3):177-80.

32. Guyatt G, Cook D, Haynes B. Evidence based medicine has come a long way: The second decade will be as exciting as the first. *British Medical Journal*2004;329:990-1.
33. NRHA. A Quality Rural Placement System for Health Students. National Rural Health Alliance Inc.: 2004.
34. Buchanan D, Witlen R. Balancing Service and Education: Ethical Management of Student-run Clinics. *Journal of Health Care for the Poor and Underserved*2006;17:477-85.
35. Ryskina K, Meah Y, Thomas D. Quality of Diabetes care at a student-run free clinic. *Journal of Health Care for the Poor and Underserved*2009;20(4):969-81.