Student-led services in a hospital aged care temporary stay unit: Sustaining student placement capacity and physiotherapy service provisions

MADELYN NICOLE[1]
MICHELE FAIRBROTHER
SRIVALLI VILAPAKKAM NAGARAJAN
JULIA BLACKFORD
LYNDAL SHEEPWAY
MERROLEE PENMAN
LINDY McALLISTER
The University of Sydney, Sydney, Australia

Through a collaborative university-hospital partnership, a student-led service model (SLS-model) was implemented to increase student placement capacity within a physiotherapy department of a 150 bed Sydney hospital. This study investigates the perceived barriers and enablers to increasing student placement capacity through student-led services (SLS) and the outcomes for hospital stakeholders and the university. Using mixed methods design, investigators interviewed nine clinical educators and surveyed thirty-four students over a ten month period to identify perceived barriers and enablers, clinical supervision models, experiences, support, and strategic innovations to increase student placement capacity. Content analysis of the interviews and quantitative visual analogue scores were statistically analyzed. Results demonstrate that student placement capacity increased by 212.5% at this hospital. Barriers and enablers included: student and clinical educator characteristics; placement support; workload and SLS-model context. Despite the perceived barriers challenging SLS implementation, enablers facilitated the SLS-model to increase healthcare service provision and increase student placement capacity for physiotherapy students at this hospital. *(Asia-Pacific Journal of Cooperative Education, 2015, 16(4), 327-342)*

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For professional entry level undergraduate and graduate students in the Faculty of Health Sciences, (The University of Sydney, 2014), clinical placements provide students with opportunities to develop competence in the clinical setting. Clinical education settings for New South Wales physiotherapy students take place in government and non-government health and community agencies. Clinical placements are "an integral part of the overall learning experience for students", and are a "powerful situated learning environment in which students see, experience and learn to reproduce the physiotherapy practices" (Kell, 2013, p. 44). However, "there is currently no 'gold standard' model of clinical education" (Lekkas et al., 2007, p. 26). Two key elements for a quality clinical placement experience are evidence-based clinical placement frameworks (Recker-Hughes, Wetherbee, Buccieri, Timmerberg, & Stolfi, 2014) and collaborative pre-placement stakeholder consultation (Siggins Miller Consultants, 2012). Additional elements include exposure to best practice and diverse learning opportunities; positive learning culture; facilitative supervisory relationships; adequate facilities and resources; and innovative models to manage student placement capacity and quality (Health Workforce Australia [HWA], 2011a; Siggins Miller Consultants, 2012; Wright, Robinson, Kolbe, Wilding, & Davison, 2013).

LITERATURE REVIEW

Innovative clinical education models for health science students are being introduced to source and secure student placement capacity with clinical healthcare providers in both

[1] Corresponding author: Madelyn Nicole, madelyn.nicole@sydney.edu.au

government and non-government healthcare facilities, and this has required collaborative and robust university-hospital partnerships to meet the needs of all stakeholders (Siggins Miller Consultants, 2012; Wright et al., 2013). These stakeholders are students, patients, hospitals and universities. University-hospital partnerships are strengthened through collaborative research which delivers quality patient care (Davies & Bennett, 2008) and clinical education learning outcomes through the involvement of expert clinical staff at both the university and facility level (Hegge et al., 2010). This necessitates shared stakeholder planning, contribution, commitment, evaluation and acknowledgement of university-hospital partnership goals and outcomes (Jeffries et al., 2013). With the increase in university medical, nursing and allied health enrolments to support future workforce shortages (Health Workforce Australia, 2011b), to meet concurrent increases in aged and chronic care health service provisions (King et al., 2012), students now play an active part in quality patient care service delivery and reciprocally, clinical staff play an important role in clinical education.

An appreciation for collaborative clinical education models have been demonstrated where Student-Led Services have been implemented to address workforce shortages and challenges faced by clinical educators (CEs) (Frakes et al., 2011; Kent 2011). A diversity of student-led service (SLS) models are described, which aim to provide students with authentic clinical learning experiences (Lavelle & Tomlin, 2001; Block, Onslow, Packman, Gray, & Dacakis, 2005; Jimenez et al., 2008; Sheu et al., 2010; Palombar, Dole, & Lattanzi, 2011; Doucet & Seal, 2012; Tang & Stanwell, 2012; Bourn & Moyle, 2013; Kent & Keating, 2013; Gorrindo et al., 2014). SLS literature is attentive to anecdotal recommendations and outcomes (Buchanan & Witlen, 2006), advantages and disadvantages, but with limited attention to qualitative or quantitative stakeholder outcomes (Lekkas et al, 2007). Buchanan and Witlen (2006) and Gillis and MacLellan, (2010), suggest that, although SLS models are strategically pedagogical, inspire altruism, professionalism and can respond to needs for healthcare service provisions, ethical considerations need to be addressed for vulnerable patient groups (such as aged, homeless, indigenous and culturally diverse people who are often the recipients of SLS), as they should also be entitled to professional healthcare, not just that which is provided by students.

SLSs have been traditionally implemented by medical (Meah, Smith, & Thomas, 2009; Sheu et al., 2010; Schweitzer, & Rice, 2012; Zucker, Lee, Khokhar, Schroeder, & Keller, 2013), and nursing schools (Pipe, 2014; Nowakowski, Kaufman, & Pelletier, 2014) servicing medically underserved and/or indigent patients (Buchanan & Witlen, 2006; Gillis & McLellan., 2010). However, most medical and nursing SLS are voluntary and not part of the clinical placement curriculum upon which competency is assessed against specific learning outcomes.

Common terms used in the literature to represent SLS include 'role-emerging' clinics (Lekkas et al, 2007); 'service learning' (Jimenez et al., 2008); 'student-led clinics' (Tang & Stanwell 2012; Bourn & Moyle 2013); 'student-led beds' (Meek, Morphet, Hood, Leech, & Sandry, 2013); 'student-led interprofessional education clinic' (Kent & Keating, 2013; Kent, Drysdale, Martin, & Keating, 2014); 'student-run free clinics' (Sheu et al., 2010; Schweitzer & Rice, 2012; Zucker et al., 2013; Gorrindo et al., 2014); 'university on-campus student clinics' (Block et al., 2005; Doucet & Seal, 2012; Lavelle & Tomlin, 2001); 'student-led pro bono clinic' (Black, Palombaro, & Dole, 2013; Palombar et al., 2011); and 'student-led exercise groups' (Arkin, 2003). This paper will use the term 'student-led services' (SLS).

A non-traditional clinical education placement model termed the student-led service model (SLS-model) has been implemented within the physiotherapy department of a Sydney

metropolitan district hospital. This model was established through a collaborative university-hospital partnership which aimed to develop, increase and sustain student placement capacity by identifying physiotherapy service delivery gaps that could be facilitated by students on clinical placement. The model was rolled-out within the aged care Temporary Stay Unit (TSU) at this hospital. This paper presents the perceived barriers and enablers of establishing a student-led service model in the Temporary Stay Unit (SLS-TSU) at this hospital and the stakeholder experiences and outcomes of this model over a ten month period. Table 1 compares features of the SLS-model developed for this project with those of traditional medical and nursing SLS and interprofessional training wards that have been described in this review of the literature.

THE SLS-MODEL AND RESEARCH QUESTIONS

The SLS-model is supported by a university-based work integrated learning (WIL) academic, who facilitates both students and CEs. Unlike SLS described in the traditional and interprofessional models in Table 1, the SLS-model presented in this paper is not a service which has been developed external to, or in addition to existing services, but a model which developed from the mapping of unmet physiotherapy service provisions (or service gaps) which exists due to staff shortages and limited funding for this physiotherapy department. Clinical areas of unmet physiotherapy service provisions were in aged care and chronic disease. For this physiotherapy department, patients in aged care and chronic disease were categorized as high volume-low risk patients, whose physiotherapy healthcare needs could be provided within the context of a SLS. The 'high volume' enables the sustainability of SLS to be ongoing and provide additional student placement capacity throughout the academic year. As a result, the aged care TSU was chosen to introduce the SLS-model, and is the focus of this paper.

The TSU is a ward for patients who are awaiting aged care accommodation/residency. Patients are aged 60 years and over. Many aged care facilities such as nursing homes or hostels, experience extended periods of limited bed availability, which challenges the high demands for aged care facility placement. Additionally, it can take several months to process an aged care facility application. Therefore, patients can remain in TSU for lengthy periods of time, resulting in family/carer complaints regarding inadequate service provisions. Allied health services are not funded in TSU and referrals are considered 'low priority' against acute ward referrals.

SLS-TSU commenced in January, 2014. SLS-TSU was incorporated within core clinical placement curriculum for undergraduate (UG) and graduate entry masters (GEM) physiotherapy students. This ensured continuity of physiotherapy students placed at this hospital and ongoing services to patients would be met for 45-50 weeks of the year.

Students rotated weekly through SLS-TSU and were orientated and facilitated with patients for 1-3 days by the hospital based CEs and a university-based WIL academic. SLS-TSU does not require the provision of one-to-one supervision. The physiotherapy service of SLS-TSU is fully student developed and sustained. Students take turns to manage the ward for the week.

TABLE 1: Overview of Student-Led Services: SLS-model compared to Traditional SLS and Interprofessional Training Wards

	Student-Led Services Model	Traditional Student-Led Services	Interprofessional Training Wards / Clinics
Students	• Physiotherapy students UG / GEM	• Medicine or Nursing students UG / GEM	• Interprofessional healthcare students UG / GEM
Curriculum Context	• Core Clinical Placement Curriculum 5 week placement	• Voluntary	• Voluntary • +/- Elective Curriculum
Services & Patient context	• Within hospital services • Hospital Unit/ Ward based • Low Risk – High Volume patients Aged Care Primary Care Chronic Disease	• External or additional to hospital services • Community 'on-site' in patient environment On-Campus Indigenous or medically underserved	• Within or additional to hospital services Aged Care Primary Care Chronic Disease Ambulatory Care
Support	• Hospital: Physiotherapist & Nursing Unit Manager (NUM) • University: Work Integrated Learning (WIL) Academics	• University: Faculty School of medicine or nursing academics	• Hospital: clinicians • University: Academics across participating disciplines • HETI: Funding

This involves prioritizing patient lists and new patient referrals, developing and running a daily exercise program, arranging assistance from therapy assistants or other students, communicating with the nursing unit manager (NUM) and other nursing and medical staff. Students have to develop and consolidate their time management skills to manage the TSU caseload. Students managed 12-20 patients per day, and were supported by ward nursing staff. Physiotherapy CEs were available by pager. The university-based WIL academic provided weekly onsite visits whereby tutorials, reflective practice and placement support were provided for students. Support was also provided to the CEs through workshops and mentoring. Placement planning meetings were held with the Head of Department and all physiotherapy staff. No additional infrastructure or set-up costs were required to implement the SLS-model on this ward. Essentially, students had the opportunity to experience working as ward physiotherapist in a similar capacity that they would as an intern-physiotherapist.

This paper reports on the university-hospital partnership experience in establishing a SLS-model in the aged care TSU at this hospital. The aim of the research was to investigate the following questions:

1. What are the clinical educator and students perceived barriers and enablers to increasing student placement capacity through a SLS- model?
2. What are the outcomes for hospital stakeholders and the university in implementing a SLS-model as measured by student placement capacity and healthcare service provisions?

METHODS

The research, using case study methodology (Yin, 2014) with mixed-methods, was conducted with the physiotherapy department of a 150 bed Sydney hospital. University Human Research Ethics was approved (Project No: 2013/1009). This project took place during 2014.

Participating CEs were recruited from the partnering hospital, and were categorized into three groups: (i) primary CEs (staff whose primary role includes clinical education and clinical assessment of students; n=4); (ii) assisting CEs (staff who assist the primary CEs, but do not complete the clinical assessment of students; n=5); and (iii) interested in becoming CEs (staff who would like to assist in clinical education; n=0). Only physiotherapy students from the University of Sydney were recruited and only if they were allocated to the study site for a 5 week clinical placement in 2014. Only UG Year 3 & 4 and GEM Year 2 students participated in the study, as clinical placements assessments for the these students are competency based using the Assessment of Physiotherapy Practice form (Dalton, Keating & Davidson , 2009).

Nine physiotherapists (Table 2a) and thirty-four of the forty-one students who rotated through SLS-TSU (Table 2b) consented to participate. Data collection for this study was over eight 5-week clinical placements blocks for the 2014 physiotherapy clinical academic year. Placement blocks will be referred to as Block 1 through to Block 9. Student and CEs data collected during the Block 9 period was excluded from the data analysis as the clinical placement was a mentored observational placement for UG Year 2.

TABLE 2a: Participants: Physiotherapy CEs (Blocks 1-8 2014; n=9)

Physiotherapy Staff (Clinical Educators)	Number of Staff at the study site	Total Staff Participating in Study	Total Number completed Surveys over B1-8
Primary Clinical Educators	5	4	16
Assisting in Clinical Education	5	5	6
TOTAL	10	9	22

TABLE 2b: Participants: Physiotherapy students (Blocks 1-8 2014; n=34)

Students	Total No. of students who participated Blocks 1-8	Total Number of Student Responses to Surveys
Undergraduates (UG)	27	22
Graduate Masters Entry (GEM)	14	12
TOTAL	41	34

Twenty-two CE interviews and thirty-four student surveys were collected by the university-based WIL academic, the principal author of this study. These were conducted at the end of each block. Four primary CEs and five assisting CEs participated in the interviews. Thirty-four out of forty-one students completed the surveys. The interviews and surveys comprised of seven open-ended questions addressing enablers, barriers, clinical education models and workload; and four visual analogue scale (VAS 10 point scale) items investigating perception of stress, satisfaction, department support and university support with clinical education while using the SLS-model. Interview and survey questions were developed by the study authors who are university WIL academics. The interviews and surveys did not define stress, satisfaction and support but aimed to scope perceptions of stress, satisfaction and support as experienced by CEs and students. The VAS score of 0 indicated no perceived stress, satisfaction or support, whereas a VAS score of 10 indicated maximum perceived stress, satisfaction or support.

The qualitative interview and textual survey data were analyzed with conventional content analysis (Hsieh & Shannon, 2005). Quantitative VAS items were analyzed using, means, confidence intervals, t-Tests ($p \leq 0.05$) and correlation coefficients, to investigate any significant correlations between participant groups and their experience with the SLS-model. CEs pre-SLS-model (Block 1) and post-SLS-model (Block 8) VAS scores were also analyzed. Microsoft Excel software for statistical analysis was used for the data analysis.

RESULTS

Barriers and Enablers

From the content analysis of the CEs' interviews and student surveys, five main themes where identified: (i) student characteristics; (ii) clinical educator characteristics; (iii) placement support; (iv) workload and (v) SLS-TSU context (see Table 3)

Additional perceived barriers to SLS-TSU included staff shortages and limited interprofessional collaboration from other allied health staff. Conversely, perceived enablers included staff support from the university, communication between staff, students and the university and quality of care provided by students. CEs reported that student participation in SLS-TSU services enabled students to successfully develop graduate skill/competencies required for employment. All students successfully attained competency for their clinical placement. Taken together, the results support our finding that SLS-TSU has contributed to the increased and sustained student placement capacity at this study site and has met the health service provisions required by the aged care TSU.

Perceptions of CE Satisfaction, Stress and Support

Figure 1 graphically represents pre- & post-average VAS scores of primary CEs for satisfaction, stress, departmental support and university support. The level of CEs stress decreased from 4.8 to 2.4 and perceived satisfaction with their clinical education role increased from 6.4 to 8.9 during the study period. However, these increases were not statistically significant, possibly due to the small sample size.

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TABLE 3: Barriers and enablers identified from CE interviews§ and student surveys‡ (B1 – B8 2014)

Theme	Enablers	Barriers	Sample Quotes
Student Characteristics	▪ Feel supported & satisfied with experience ▪ ‡Feel valued & part of team ▪ Opportunities to develop professional identity & role responsibility ▪ Positive contribution to patient care & service provision	▪ §Poor attitude, responsibility or commitment to placement & patients ▪ Theoretical application of knowledge clinically ▪ Not attending placement ▪ ‡CALD communication limitations ▪ Limited administrative knowledge & application ▪ §Poor response to CE feedback to improve performance	Barriers: ▪ §… PT Students represent our service in TSU – a poor attitude and commitment close down the open lines of communication… ▪ §… difficult to have students committed to student led services when they appear disinterested and show no enthusiasm…
Clinical Educator Characteristics	▪ ‡Good communicators ▪ ‡Supportive and provide constructive feedback ▪ Clinical knowledge & expertise ▪ ‡Approachable, honest & patient ▪ ‡Encourage work readiness	▪ §Assisting CEs lacking confidence ▪ §Caseload stress when students are underperforming or lack enthusiasm ▪ §CEs clinical education knowledge	Enablers: ▪ §… being able to relate easily to students as I have recently graduated … ▪ §… identifying and working with student weaknesses. Then working with them in an open manner to overcome this….
Placement Support	▪ Supportive networking & communication in the department ▪ University support ▪ Interprofessional staff support (nursing and therapy assistants)	▪ Supervision & assessment of students ▪ Managing underperforming students ▪ §Confidence of assisting CEs to seek support ▪ §Risk Management	Enabler: ‡… I felt very responsible and proud as well when TSU NUM and senior nursing staff of TSU referred me one of the patients in TSU … Barrier: §… not being able to complete or worried about the workload for the day if the student require a lot of close supervision (and) assistance…
Workload	Supportive - ▪ networking & communication ▪ physiotherapy department ▪ workforce development	▪ §Caseload complexity ▪ §Managing Referrals ▪ §Balancing Clinical load and administrative duties ▪ §Staff shortages	Barriers: §… time restraints due to own … complexity of caseload … restricts available time for adequate feedback sessions…. ‡… I think the student physio service will be really effective once handovers week to week flow well…
SLS-TSU Context	▪ §No set-up costs ▪ Patients readily available ▪ ‡Team-teaching (PT & NUM) ▪ University support	▪ §Perceived Patient Risk (IIMS) ▪ §Consistent & reliable service delivery ▪ Need for other healthcare students	Enablers: ▪ §… student services (TSU) have been appreciated by staff & patients … in some cases it has created a culture and impression that physio would be a regular occurrence – this does become an issue when students aren't here. A complaint was made by a patient's family regarding no physio when students aren't around… ▪ ‡... overheard family members telling their loved one that exercise is really important so it seems families really value the student physio input…

§ = only reported by CEs ; ‡ = only reported by Student
IIMS = Incident Information Management System (NSW Health)
PT = Physiotherapy NUM = Nursing Unit Manager; CALD = Culturally And Linguistically Diverse

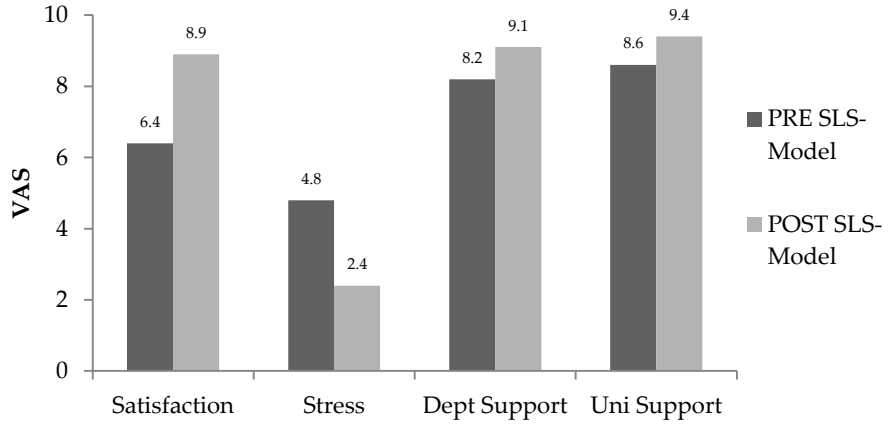

FIGURE 1: Pre-SLS-model & post-SLS-model primary CE average VAS scores for satisfaction, stress, department support, university support (pre=B1, post=B8)

Figure 2 shows primary CE and assisting CE average VAS scores for satisfaction, stress, departmental support and university support over the study period. Comparisons were statistically significant ($p \leq 5$) for stress (0.01), satisfaction (0.00) and department support (0.05). The assisting CEs perceived twice as much stress than the primary CEs, they were not as satisfied with their CE role, and perceived less university support compared to experienced CEs. Table 4 lists the common causes of stress reported by CEs at this study site. For assisting CEs, stressors included managing both students and their caseload especially when students were underperforming.

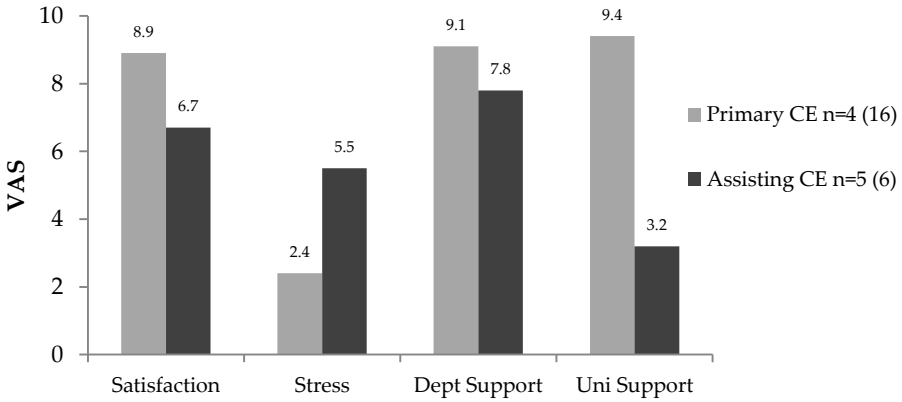

FIGURE 2: Primary CE & assisting CE average VAS scores for satisfaction, stress, department support, university support (B1– B8 2014)

Correlation coefficient analysis was completed for VAS scores. For both primary and assisting CEs, perceptions of satisfaction and department support were positively correlated (0.63 and 0.87 respectively). Conversely, perceptions of satisfaction and stress (-0.75 and -0.76 respectively) and stress and department support were negatively correlated (-0.77 and -0.67 respectively). Department support and university support were positively correlated for primary CEs (0.70), but decreases in university support increased primary CE stress (-0.78).

TABLE 4: Common causes of stress reported by clinical educators and students

Clinical Educators	• Underperforming students* • Managing students, own case-load and referrals* • Case-complexity • Pressure to produce a quality placement experience • Late sourcing of students and student allocation errors • Lack of confidence to educate students*
Students	• Challenging patients (CALD) • Assessment • Supervision* • Time management* • Poor attitude or lack enthusiasm*

*Common assisting CE stressors

Perceptions of CE and Student Satisfaction, Stress and Support

Generally, both CEs and students were satisfied with the clinical placement experience and felt supported by both the physiotherapy department and university. Figure 3 graphs the average CE and student VAS scores for satisfaction, stress, departmental support and university support. There was no statistically significant difference ($p \leq 5$) between CE and students' perception of the SLS-model for stress, satisfaction, department support and university support.

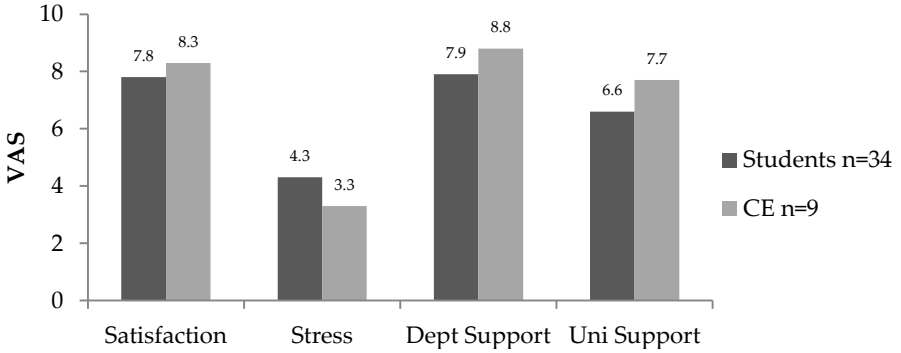

FIGURE 3: CE and Student average VAS scores for satisfaction, stress, department support, university support (B1 – B8 2014)

Perceptions of Student (UG and GEM) Satisfaction, Stress and Support

There was no statistically significant difference ($p \leq 5$) between UG and GEM students' perception of the SLS-Model as measured by stress, satisfaction, department support and university support. Figure 4 graphs students' satisfaction and stress VAS scores. Ninety percent of students were satisfied with their clinical experience and 55% reported perceptions of stress (≥ 5); however students commented that this was mainly during the first one to two weeks of the placement. Correlation coefficient tests for student groups were insignificant.

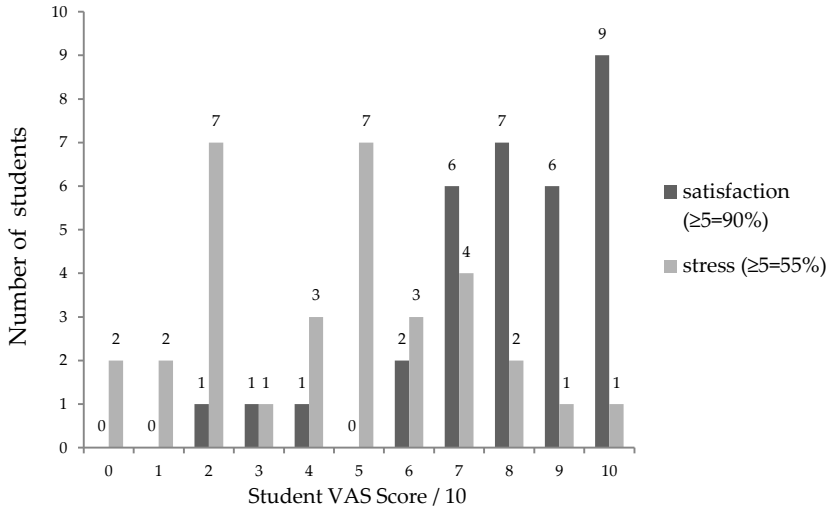

FIGURE 4: Total student (n=33) VAS scores for stress and satisfaction (B1 – B8 2014 n=33)

Physiotherapy Service Provisions

SLS-TSU delivered a consistent physiotherapy service to the TSU through the sustained increases in student placement capacity at the study site for the 2014 clinical academic year. Outcomes for hospital stakeholders from the results demonstrate that patients in TSU now have access to daily physiotherapy service provisions through the SLS-TSU. This service was not available to the patients prior to the implementation of SLS-TSU. The collaborative university-hospital partnership central to the SLS-model has been an influential enabler of the establishment of a student led service in TSU.

TABLE 5: Student placement capacity for Block 1 to Block 9 placement period from 2012 to 2014 at study site

Student Capacity	2012	2013	2014	Total Increase in Capacity since 2012 Block 1-9 (gross)
Block 1	3	4	7	
Block 2	0	3	6	
Block 3	2	4	6	
Block 4	2	1	7	
Block 5	3	3	7	36 students
Block 6	7	3	7	(212.5% increase)
Block 7	2	3	8	
Block 8	6	6	8	
Block 9	7	8	12	
Total Capacity: Blocks 1-9	32	39	68	

DATA SOURCE: University of Sydney: Sonia Clinical Database

Student Placement Capacity

Table 5 lists the increases in student capacity for the block 1 to block 9 placement period from 2012 to 2014. In comparison to the same nine block period in 2012, student placement capacity increased by 212.5% (36 students) in 2014 at the study site. Outcomes for university stakeholders from these results include sustainable student placement capacity at the study site.

DISCUSSION

Results demonstrate that over the 2014 academic year, SLS-TSU has contributed to the increased student placement capacity and has addressed physiotherapy service gaps in aged care at the study site. With the implementation of SLS-TSU at this study site, TSU patients have access to daily group and individual physiotherapy services. The first aim of the study was to investigate the CEs and students perceived barriers and enablers to increasing student placement capacity through a SLS-model. From the interview and survey data, five main themes were identified: student characteristics; CE characteristics; placement support; workload and SLS-model context. Similar themes and subthemes of barriers and enablers (listed in Table 3), are also reported by Davies, Hanna, & Cott, (2010), Wright et al. (2013), and Lloyd et al., (2014), from their studies investigating barriers and enablers of clinical education models and workplace learning. Like this study, barrier themes reported by these authors describe that when hospital staff are required to facilitate clinical education opportunities, perceptions of increased stress, increased workload and decreased productivity are raised. Such perceptions then deter clinical placement offers and suggest that clinical placements are not valued by staff. Authors anticipate that the enabling themes raised in this study may inform future directions for the SLS-model at this hospital as there is the potential for SLS-TSU to expand into an interprofessional SLS. Additional barriers to an interprofessional SLS in TSU are that the other allied health CEs work part-time or across facilities and still utilize traditional clinical education models. The SLS-model presented may provide a pathway for allied health CEs to explore as a means to support student placement capacity demands.

The key elements of quality clinical education placements have been addressed by the SLS-model. Firstly, the SLS-model is an evidence based clinical framework based on three clinical education models: (i) teacher as manager model (Romanini & Higgs, 1991), establishing clinical placement structure and management outcomes; (ii) peer learning (Ladyshewsky, 2010), enabling student directed learning outcomes; and (iii) critical companionship model (Titchen, 2001) to develop university mentoring and support outcomes for CEs. The university WIL academic support in this model aims to facilitate CEs to manage student groups (4-6 students) and network with ward and allied health staff to provide learning opportunities, complete student clinical assessments, and encourage students to develop sustainable peer learning resources for future placements. Additionally, university support enables CEs to address challenges faced on placement regarding the immediate service delivery needs of patients and learning needs of students. The results show a general trend that CEs and students are satisfied with the SLS-model, and that primary CEs perceive more support by the university than assisting CEs or students.

The second aim of this study was to identify the outcomes for hospital stakeholders and the university in implementing a SLS-model as measured by student placement capacity and healthcare service provisions. From the results, outcomes for this hospital and university are

service provisioning where gaps in services previously existed in aged care and sustainable increases in student placement capacity of 212.5% in 2014. The SLS-model demonstrates how a collaborative university-hospital partnership can function to meet stakeholder outcomes of student placement capacity and healthcare service provisions. The physiotherapy department that participated in this study has doubled the student placement capacity over one clinical academic year after introduction of the SLS-model. Additionally, service provisions and productivity have increased as a result of SLS-TSU. With students available to service the TSU, CEs have time to service complex cases and or complete their own clinical or administrative workload. The SLS-model supports the findings from the literature that students increase productivity when collaborative clinical education models are implemented (Holland 1997; Ladyshewsky, 1995). Meek et al. (2013), also demonstrated how student-led beds in an emergency department increased service provisions and productivity. Future research of the SLS-model will include the collection of hospital key performance productivity indicators such as occasions of service and length of stay, against the participating hospital's environment of staff shortages, high clinical workloads, caseload complexity, limited funding and workplace culture contexts (Wright et al., 2013).

One of the aims of the physiotherapy department at the study site was to sustain student placement capacity and not cancel student clinical placements due to staff leave. The data in Table 5 reflects this achievement. There were several periods of staff leave during Blocks 1-8. The availability of assisting CEs has discouraged the usual cancelling of student placements, and has enabled a constant intake of students per block. This facilitates university placement planning across the year.

The results of this study show that, CE stress increased when physiotherapy department support decreased. Staff reported increased perceptions of stress during periods of staff leave. Perceptions of stress also increased if students were underperforming during periods of staff leave. In addition, the comparative results of primary CE and assisting CEs in this study showed that assisting CEs are more stressed and less satisfied with the clinical education role. Four of the assisting CEs who participated in this study were junior staff who rotated within the hospital and to other hospitals over the year. Although clinical education workshops were provided for the physiotherapy staff by the university support staff over the year, the results suggest, that more planning is required to ensure that all staff, especially junior staff, have access to clinical education workshops and CE professional development.

SLS-TSU provides a daily ward based physiotherapy service for patients that was not previously available. These additional service provisions have reduced the CEs workload, enabling them to allocate more time for student feedback and facilitating underperforming students. The CEs oversee the students in SLS in a consultative mentoring role. Students have also developed work-readiness skills (Caballero, Walker, & Fuller-Tyszkiewcz, 2012) such as effective time management, resilience, organizational awareness and interpersonal orientation. Students experienced opportunities to develop rapport building-skills with the families of TSU patients and practiced interprofessional communication and teamwork skills. For the interview question "What do you think are the most important goals you are aiming for in the student's learning experiences with you?" CEs responded that the most important goal they were aiming for students was work-readiness. At this site, CEs' perception of work-readiness included that students would develop the ability and capacity to work as graduate entry physiotherapists. In such instances, the student was able to demonstrate

patient-centered care by managing a ward caseload and communicate effectively interprofessionally. The work-readiness skills preferred by CEs at this site mirrored those reported by Caballero et al., (2012) which include skills such as effective time management, resilience, organizational awareness and interpersonal orientation.

The aged are a vulnerable patient group. Healthcare professionals, including students, are required to be active in advocating their needs. Although students servicing TSU patients are not supervised directly by a physiotherapist, the NUM and nursing staff are always present, overseeing patient care and patient safety. Prior to attending the placement, the university-based WIL academic provides each student with a TSU manual. This manual contains resources, worksheets and reflective discussion informing TSU student preparation. Topics included: falls risk and falls assessment; communicating with dementia patients, pressure area and wound care in aged care; exercise programs for aged care; and patient assessment, monitoring and outcome guidelines. At placement commencement, the CE: orientates the students to TSU; provides work health and safety tutorials; and individually assesses each student with patients, determining the level of support the student requires and thus their ability to work with minimal supervision. Students who require additional support will either complete the TSU rotation within the final week of the placement or with another student.

In this study, 90% of students were satisfied with the SLS-model clinical experience. UG & GEM students' perceptions of satisfaction, stress and support were positive. Stress experienced by students during the initial weeks of placements had usually reduced by the end of the 5 week placement and was mainly attributed to not having the same one-to-one level of supervision that was experienced on more traditional placement models. Students who were dissatisfied with the model reported in their survey responses that they were not interested in the role of physiotherapy in aged care. This is possibly attributed to a limited understanding and knowledge base in this clinical area (Hobbs, Dean, Higgs, & Adamson, 2006). Future research for the SLS-model will investigate students' perceptions of the importance of the role of physiotherapy in aged care and chronic disease.

The SLS-model enabled the commencement of additional elements of quality clinical placements. These include the establishment of a positive learning culture for healthcare staff and students, and shared supervisory relationships between physiotherapy CEs and NUMs. NUM feedback was not investigated in this study, but will be a component of future work for this model. University-based WIL academics enabled the provisions of student resources and orientation material to prepare students for SLS-TSU. Resource content was established through collaborating with healthcare staff and students to adequately prepare them for the SLS.

The findings of this study further support SLS research (Kent, 2011; Frakes et al., 2011; HWA, 2011a; Wright et al., 2013), by demonstrating that SLSs provide patients with access to healthcare services; build student placement capacity; provide interprofessional student training opportunities; and facilitates students to develop work-readiness skills.

LIMITATIONS AND FUTURE RESEARCH

This study and data analysis was limited by its small sample size. Additional limitations include that data collection did not include the perceptions of other healthcare professionals, such as NUMs or therapy assistants, or that of the patient. Additionally, productivity data

(that is, occasions of service for patients) was not collected. The potential to successfully implement the SLS-model in other physiotherapy departments cannot be determined from this study as the model reflected the needs of the participating physiotherapy department and hospital. Future plans are in place to investigate stakeholder outcomes in detail, and will include collection of data regarding patient and productivity outcomes and the 'real time' (Lachmann, Ponzer, Johansson, Benson, & Karlgren, 2013) student experience of the SLS-model.

CONCLUSION

Results from this investigation suggest that the SLS-model supports sustainable student placement capacity and addresses physiotherapy healthcare service provision for this study site. Despite the perceived barriers challenging SLS implementation, enablers facilitate the SLS-model to increase healthcare service provision and increase physiotherapy UG and GEM student placements for this participating physiotherapy department. Study results also identified the barriers and enablers of the SLS-model and addressed the key elements of a quality clinical education placement, which may inform future SLS-model development. Future research will investigate the SLS-model's impact on student and patient outcomes. SLS initiatives require stakeholder collaboration to develop robust research evidence to ensure elements of quality clinical placements as well as patient care are being delivered.

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