

Beyond therapy: the multiple benefits of using a service-learning model to enhance paediatric therapy in a remote area school

An evaluation of physiotherapy student placements at a school for children with additional needs in Central Australia, 2019

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ISBN 978-1-925562-38-5

<https://doi.org/10.25957/5ee054c75d015>

Draft / Confidential

Acknowledgements

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The core group are grateful for the support from

Flinders NT – Narelle Campbell
Northern Territory Aged and Disability services – Michelle Foley, Tahlia Lee and Jane Hunter
Flinders University College of Nursing and Health Sciences – Chris Brebner, Lucy Lewis

We acknowledge the Northern Territory Primary Health Network (NT PHN) for their generous grant which enabled the project to go ahead

We would also like to acknowledge support from Territory Families in gaining consent for students.

The core project team would also like to acknowledge and thank:

- The parents and carers of the pupils at Acacia Hill School for trusting us to work with your children
- The staff of Acacia Hill School, including the valued enthusiasm and support from Sheina Truel, the Special Education Support Officers (SESOs) whose work is so critical in the lives of the students, the teachers who were willing to share their classrooms, class time, lunch time and tea room with the us
- The students from cohort one who were brave enough to take this leap with us
- The students from cohort two who continued and gave the service momentum

And most of all, the pupils of Acacia Hill School.

The authors would like to thank Valmai McDonald for her generous time and wisdom in developing the evaluation framework and input into the format of the report.

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List of Acronyms

ACU	Australian Catholic University
AEO	Aboriginal Education Officer
AFO	Ankle Foot Orthosis
AH	Allied Health (such as physiotherapist, occupational therapist, speech pathologist)
AHS	Acacia Hill School
ALO	Aboriginal Liaison Officer
APC	Australian Physiotherapy Council
APP	Assessment of Physiotherapy Practice
ARHEN	Australian Rural Health Education Network
ASD	Autism Spectrum Disorder
CAAC	Central Australian Aboriginal Health Congress
CAHREC	Central Australian Human Research Ethics Committee
CDT	Child Development Team (Alice Springs)
COS	Coordinator of Support (NDIS)
CP	Cerebral Palsy
CRH	Centre for Remote Health
DoE	Department of Education (Northern Territory)
ECEI	Early Childhood Early Intervention
FTE	Full Time Equivalent
IHI	Institute for Healthcare Improvement
LAC	Local Area Coordinator (NDIS)
NCCD	Nationally Consistent Collection of Data
NDIA	National Disability Insurance Agency
NDIS	National Disability Insurance Scheme
NT	Northern Territory
NT PHN	Northern Territory Primary Health Network
PE	Physical Education
RHMT	Rural Health Multidisciplinary Training program
SESO	Special Education Support Officer

Terminology

Students with additional needs

For the purpose of this report, the term ‘students with additional needs’ refers to “any student that may have additional needs in accessing the curriculum and achieving success in learning at school”, in other words, where their disability impacts on the student’s education (Milnes et al, 2018:v).

Pupils / Students

In order to avoid confusion, the Acacia Hill Students will be referred to as “pupils” or “school-aged children” and the University Students on placement will be referred to as “students”, “physiotherapy students” or “Flinders Students” throughout this report.

Service-Learning

Service-learning programs are “designed in such a way that ensures that both the service enhances the learning and the learning enhances the service” (Furco, 1996). In this project, the outcomes of the placement are intentionally beneficial to both the both service recipient (the children, families / carers and the school) and the provider (physiotherapy students). In this report, “service-learning placement” is used interchangeably with “student placement” to refer to the nature of the activity.

Indigenous

It is acknowledged that Indigenous people referred to in this report are from a number of different Aboriginal language and family groups from various regions of Central Australia. Due to sensitivities around identification of participants in this report, the Indigeneity of individuals will not be identified, and First Nations people will be referred to as Indigenous.

Participants

Given that the purpose of this evaluation is to reflect the perspectives of a range of groups involved in the program the term “participants” broadly refers to the school pupils, the physiotherapy students, the supervisors, the school staff and the parents/carers of pupils. Where participants are discussed it will be made clear which

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group is being referred to. Where it is not explicit, “participants” refers to all those mentioned above.

Parents/Carers

The terminology used for adults who are responsible for the care of the pupils is “parents/carers” to consider the diversity of care arrangements. Extended Indigenous family members may take responsibility for growing up children and primary care-giving is not always the responsibility of birth-parents. In addition, 35% of the students who attend AHS are in out of home care.

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Attribution of quotes

Participants who contributed to the evaluation were asked if they would like their names attributed to quotes or would prefer a pseudonym. This varied between respondents and hence, there is inconsistency in the means by which quotes are attributed.

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Purpose of project

In 2019, physiotherapy students in their final year of university study provided two four-week blocks of intense physiotherapy services at Acacia Hill School (AHS) in Alice Springs. This school is the only education facility which caters specifically for children with additional needs in Central Australia. Of the 93 pupils at the school, 67% of identify as Indigenous and 30% are in out of home care. These children are some of the nation's most vulnerable.

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This service-learning placement emerged in response to a dearth of physiotherapy services for pupils and their families at AHS. A lack of government-funded resourcing combined with a problematic transition for many families onto the National Disability Insurance Scheme (NDIS) had resulted in some school-aged children with significant neuro-disability not having had access to critical physiotherapy for up to five years.

To address this issue, Flinders University through the Centre for Remote Health (CRH) led a collaborative initiative between health and education staff who planned and designed the project. The first physiotherapy student placement occurred in May/June of 2019, and a second ten weeks later in September; each comprising of four students. Funding for the project was successfully sought from the Northern Territory Primary Health Network (NT PHN) and complemented using funds and in-kind support from the CRH and AHS. The three primary objectives of the project identified by the project's stakeholder committee were to:

1. Deliver a specialist, culturally safe and responsive paediatric physiotherapy service in an underserved area and population,
2. Immerse final year physiotherapy students in a complex practice area and expose these students to the challenges and rewards of remote area practice, and
3. Encourage physiotherapy students to consider returning to take up career opportunities as graduates.

The project provided a unique opportunity for these university students to enhance their practice skills and broaden their knowledge. Supervised by an experienced paediatric physiotherapist familiar with the context, the two teams of four students delivered 145 individual therapy sessions, 22 group therapy sessions, and completed 95 hours of reporting for 26 pupils who were assessed as having levels of disability which required regular physiotherapy intervention. The program had multiple positive impacts on pupils' mobility, enhanced their access to and use of specialised equipment,

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and hence improved their engagement in school activities and bolstered their capacity for learning outcomes.

Purpose of evaluation/methodology

This evaluation has been undertaken to assess how the project met its objectives, to explore the experiences and perspectives of the participants, and to collate a set of recommendations which can be used to inform future service-learning placements in the same and comparable contexts. A qualitative methodology was employed comprising primarily of semi-structured interviews with the physiotherapy students, administrative and teaching staff at AHS, and parents/carers of the pupils involved.

Key findings

This evaluation found that there were seven key dimensions of the project which enabled it to succeed in a context where programs frequently fail.

1. The project was grounded in strong interagency collaboration. The existing relationships between agencies, the long lead time allocated to consultation and planning, and the combined knowledge, expertise and passion, enabled the project to meet the needs of the diverse range of participants. The core project team met regularly, employing a reflective process to address concerns, amend the project design in response to participant feedback, and to navigate complex situations.
2. The students and their placement supervisor were based at the school and immersed in the same context as the “clients”. This enabled them to develop meaningful relationships with the school staff, pupils and parents/carers. This had three flow-on effects: 1. The opportunity to provide a holistic approach to care; 2. The students could draw on the expertise of parents/carers and teachers to deliver the therapy in a way that was meaningful to the pupils, and 3. The students were able to work alongside the school staff and demonstrate the skills required to deliver the therapy in the students’ absence. Ultimately, their presence embedded physiotherapy into the school system. As well as providing individual therapy to referred pupils, the students designed activities at a whole-of-class and whole-of-school level, an approach recognized in educational terms as a “Three-tier level” response to intervention.
3. The “pilot” nature of the program allowed the stakeholders, students and supervisors (the students had both an “on the ground” placement supervisor, as well as a university-based supervisor supporting them) a degree of flexibility and creativity in its implementation. This resulted in the process being grounded in the needs of the participants. For example, the cultural safety of the project was enhanced by contributions from parents/carers and school staff. Furthermore,

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the students' intimate involvement in rolling out the project gave them a wide range of opportunities to develop skills relevant to the complex social and cultural context of Central Australia.

4. The team approach employed by the project enabled students to provide each other with extensive support in what can often be a confronting and challenging social and cultural context. Working as a team of four alongside their supervisor, rather than as individuals, made possible some physiotherapy activities requiring more than one person to assist, for example hydrotherapy. Working as a team also contributed to their capacity to provide activities which enabled the "Three-tier" response to intervention which supports students with learning disabilities to reach their capacity through providing activities at three levels: individual, whole of class and whole of school.
5. The way the students conducted themselves in delivering their program resulted in feedback from school staff and parents/carers which drew attention to the following: 1. Their ability to deliver therapy in a fun and easy-going way that suited school-age pupils; 2. Their flexibility and respect for working within the school timetable; and, 3. A humble approach which indicated their willingness to learn about the clients from parents/carers and school staff – they did not come in as "outsider experts".
6. The project provided an opportunity for the physiotherapy students to undertake a placement in a social, cultural and organisational context which contrasted to their typical placements. The placement equipped the students with a set of clinical and professional skills which has expanded their career opportunities. The students all indicated that the placement had enhanced their interest in working in remote areas which typically struggle to attract allied health workers.
7. The project achieved sustainable outcomes. As well as their immersion into the school allowing the students to build the capacity of school staff, the sustainability of the program was augmented by each student developing plans and reports. The plans were easy-to-follow pictorial posters of activities which could be replicated by both classroom staff and parents/carers. Comprehensive clinical reports were written by the student team to document the intervention and the ongoing needs of each pupil. This contribution fulfilled a component of the students' university assessment. The reports also provided the parents/carers with official documentation that stated the physiotherapy requirements of their children which they were able to table as "evidence" in the development of NDIS plans.

Summary of recommendations

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Six key recommendations have emerged in this evaluation in response to the findings which reveal that a service-learning placement is a successful model for physiotherapy service delivery in an additional needs school in Central Australia.

1. Ensure collaborative planning and delivery of the project. Critical to the success of this model was the close involvement of Acacia Hill School in all aspects of planning, delivery and reflection;
2. Ensure the services provided by the students can be directed by and responsive to the needs of the placement site. Immersion of the physiotherapy team in the context and the understanding by the supervisor of the context and the importance of local ownership were critical factors in allowing this to happen;
3. Address process recommendations including 1. Lengthen placement by one week, 2. Commence pupil referral process earlier, 3. Provide administrative support to the placement supervisor, 4. Enable the placement supervisor to be the supervising adult at the school and 5. Reduce upfront costs of the placement for the physiotherapy students;
4. Deliver physiotherapy as a team of students. Being part of a team-enhanced confidence and capacity as well as enabled activities which required multiple therapists i.e. hydrotherapy;
5. Enhance opportunities for the physiotherapy students to return to work in Central Australia as graduates; and
6. Consider taking a multi-disciplinary approach to service-learning placements in schools such as AHS whereby teams of allied health students comprising of physiotherapy, speech pathology and occupational therapy are on placement simultaneously.



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Figure 1. Annie Farthing (Centre for Remote Health), Campbell Taverner (Flinders University), Julie Permezel (Acacia Hill School), Imogen Hardacre (Flinders University), and Heyson Hinge (Flinders University). Front row: Anne Bent (Centre for Remote Health), Jessica Kellett (Flinders University) and Sheina Treuel (Acacia Hill School)

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1 Introduction

1.1 Project objectives and anticipated outcomes

In 2019 Flinders University through the Centre for Remote Health (CRH) in Alice Springs and the Acacia Hill School (AHS) for children with additional needs developed a project to provide a final year placement for Flinders University physiotherapy students in a school setting. The project had three objectives:

1. Deliver a specialist culturally safe and responsive paediatric physiotherapy service in an underserved area,
2. Immerse final year physiotherapy students in a complex practice area and expose them to the challenges and rewards of remote area practice, and
3. Encourage physiotherapy students to consider returning to take up career opportunities as graduates.

Table 1 presents the anticipated outcomes of the project. These are categorised to reflect the Triple Aim performance framework. This is an integrated framework developed by the Institute of Healthcare Improvement (IHI) which simultaneously evaluates health improvement, participant experience, cost and sustainability (see Section...).

Health improvement	An increase in occasions of assessments and therapy provided by the student-learning placement will lead to demonstrated change for the AHS pupils in terms of: • Increase in function, • Increase in comfort, • Increase in mobility, • Increase in quality of life, • Increased ability to participate in school, home school and community activities, and • Increase in number of equipment reviewed and ordered. Successful completion of work integrated placement requirements for the physiotherapy students.
Participant experience	A positive experience for the pupils, parents/carers and school staff in terms of: • Provision of a culturally safe and responsive physiotherapy service in the school, • Knowledge translation with school staff and parents/carers regarding effective management of pupils' physical needs i.e. development of physiotherapy plans, • Effective communication within the service and with participants, and

	• Having an easily accessible service based in the school. A positive and fulfilling experience for the physiotherapy students in terms of: • Gaining clinical skills, • An opportunity to work closely with children with disabilities, • Acquiring skills to live and work in remote and rural areas, • Experience working in a non-clinical setting • Experience of supervision, • Experience working in a team, • Gaining an understanding of the importance of cultural safety in delivery of health services, and • Increase intention and likelihood of graduates returning to work in rural and remote settings¹.
Cost	To provide a service which is cost-effective to the families of pupils who receive the therapy. To provide an in-house therapy program which is cost-effective to Acacia Hill School. To provide an opportunity to the students to complete course requirements in a remote area which is affordable and potentially provides long-term financial benefit.

Table 1. Anticipated project outcomes.

1.2 Site of placement: Acacia Hill School

In remote and rural areas there are many potential barriers to accessing appropriate and culturally safe health services for people with chronic disease, injury and disability. This is magnified for people in Aboriginal and Torres Strait Islander communities who experience a significantly higher burden of disability than the wider Australian population. Australia-wide, Aboriginal children under 14 years of age are twice as likely to have a disability than non-Aboriginal children (AbSec, 2020). In low socio-economic regions such as Alice Springs, disability can add to the long list of social determinants of health, including inequities faced when accessing health care (McGibbon et al., 2008). Low educational attainment of clients combined with health services which are not grounded in culturally safe practices can result in those already at a disadvantage not

¹ Flinders NT are currently undertaking a ten-year observational cohort study assessing "Work Location Outcomes". The students who participated in this evaluation will contribute to the data which informs this longitudinal study.

being able to seek support. In turn, this can lead to greater difficulty in managing the conditions their family already face.

Recruitment and retention of allied health (AH) professionals in rural and remote Northern Australia is a significant problem of longstanding and there has been a history of struggling to meet needs of clients with disabilities in Central Australia. Lack of services and an inadequately trained workforce (with respect to cultural safety and strong professional support) has had harmful effects on both individuals and communities due to the limited means to prevent and minimize disability.

In the Northern Territory “students with additional needs represent approximately one quarter of the general student population” (cited in Milne et al, 2018:iv) and the NT has the highest proportion nationally of students with disabilities. Overwhelmingly, these students come from backgrounds characterized by disadvantage, poverty and minimal access to services. Consequently, they did not have the early intervention required to avoid their conditions increasing in severity or the surgery necessary to rectify deformities.

The primary site of this study, Acacia Hill School (AHS) was chosen as it is the specialised school which caters for students with additional needs in Central Australia. Geographically isolated from the rest of Australia, families have little choice of schooling for their children with complex additional needs; the closest alternatives are in Adelaide and Darwin, each 1500 kilometres away. The school offers an inclusive and intensive education for students from pre-school up to twenty years of age with a range of intellectual, physical, sensory, behavioural, emotional and multiple disabilities including cerebral palsy, autism, and genetic conditions (ACARA, 2020). The enrolment for AHS in 2019 was 99, with 71% of the students identifying as Indigenous. The school currently employs 20 teaching staff and 30 non-teaching staff and class sizes range between 4 and 7 students.

1.3 Physiotherapy needs of AHS pupils

Derived from the Student Needs Profile (see Appendix 1), Figure 1 indicates the functional independence of AHS pupils.

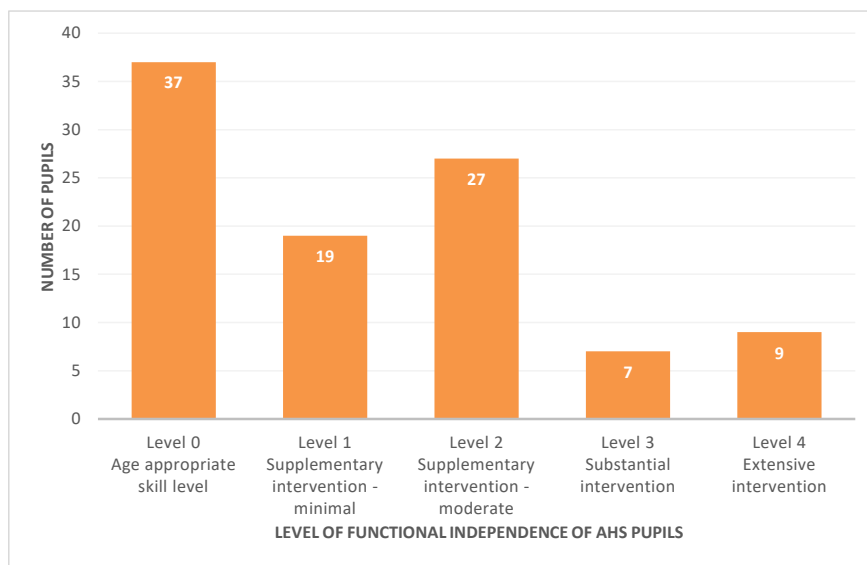


Figure 2. Gross motor and mobility skill levels of AHS pupils in 2019, adapted from the AHS Student Needs Profile (AHS) (see Appendix 1).

Of the AHS pupil population, 37% are assessed as having a gross motor and mobility ability at an age appropriate skill level. Pupils with substantial (Level 3) and extensive (Level 4) gross motor and mobility needs are determined as requiring regular and intensive physiotherapy input. The physiotherapy is in order to improve their function, mobility and overall quality of life; and to prevent further physical deterioration, potential deformity and consequent increased immobility, dependence and pain that occurs if the disabilities are not managed appropriately. Additionally, the purpose of this therapy is to 1. Enhance the pupils' capacity to complete motor components of daily living activities, including access to play equipment, classroom and toileting areas, 2. To provide and fit appropriate equipment, such as wheelchairs/standing frames/walking frames, and 3. Assistance for general movement or transfers. Such intervention can also have significant impacts on the parents/carers and school staff who are required to provide extensive support in order for the pupils to transact requirements of day-to-day living, including moving from one place to another, toileting, eating and learning.

It was the pupils categorised in Level 3 and Level 4 who became the focus of the project. The Student Needs Profile indicates that physiotherapy intervention is also recommended for students in Level 2, however, this project did not have the scope for one-on-one therapy for many of these 27 students and focused primarily on those requiring substantial and extensive intervention.

1.4 Why the school was willing to participate in the student placement project

The Principal and staff of the Acacia Hill School were willing to participate in the student placement project because the pupils' physiotherapy needs were not being met, they knew something of what services should be available, and they understood the difficulties of attracting appropriate health professionals to work in remote areas. The urgency to improve the nature of support for students with additional needs in Alice Springs is reflected in the concern of Wendy Haynes, the School Principal of AHS between 2012 and 2018. She shares her regret at not being able to provide this type of service to the AHS pupils and the inequity and injustice of it,

We didn't have the money to be able to do it and that was one of the things that really really bugged me, that the kids in Alice Springs didn't have access to the services that kids in other places do, particularly in cities (Wendy Haynes, Principal Acacia Hill School, 2012-2018).

In response of the lack of allied health services in Central Australia, the Principal introduced the idea of engaging university students on placement at AHS in 2014 to enhance support for staff and pupils. She liaised with Flinders University staff at Centre for Remote Health to recruit students doing a Development and Disability degree. The experience was overwhelmingly positive with the Principal reporting that it was great to have "young energy" in the school: they implemented a number of new projects, and the kids "absolutely loved them, they were all crying when they left" (Principal AHS 2012-2018).

The overwhelming success of this initial placement program led to future Flinders student placements at AHS including teaching students. The consequent relationship between AHS and the Centre for Remote Health, combined with an unmet need for physiotherapy services for school-aged children with disabilities, led to discussions between the school, the Community Development Team (CDT), Flinders University and the Centre for Remote Health regarding the possibility of final year physiotherapy student placements at AHS.

1.5 Physiotherapy services in Alice Springs and for AHS pupils prior to the student placement

Despite 43% of the students at AHS requiring physiotherapy intervention, prior to this project many had not received regular physiotherapy services for between two and five years. This was due to two issues: inadequate resourcing of allied health services in the

Government health services, and the challenges accessing physiotherapy services as AHS pupils transitioned onto the National Disability Insurance Scheme (NDIS).

Until the late 1990s, the Department of Education (DoE) employed a multi-disciplinary student services team including a physiotherapist, occupational therapist and a speech pathologist to work in all schools in Alice Springs. Their focus was inevitably on Acacia Hill School given the high need there. At the end of the 1990s, therapy positions in this service were transferred from DoE student services over to the Department of Health. Although the school still received a service, the physiotherapy positions were physically based at Flynn Drive with the Child Development Team (CDT). Previously the CDT staff only had responsibility for 0 to 5-year-olds, now they were expected to service all school-aged children. This move for the CDT to service all 0 to 18-years-olds with a disability had three significant long-term consequences, all of which were catalysts for the birth of the student-learning placement:

1. The move increased the client population and hence the pressure on a service that was already understaffed,
2. Older children missed out on services due to prioritising of younger patients. Early intervention for 0 to 5 years is generally regarded as likely to have a more significant impact and is considered more cost-effective for long-term gain, and
3. The relocation of allied health staff from the school to CDT meant there was minimal opportunity to structure children's therapy in collaboration with education staff in order to have holistic outcomes for the students.

Government resourcing of CDT became increasingly tight and by the end of 2018 CDT allied health staff were only able to provide brief and infrequent interventions at the school. Then came the roll out of the National Disability Insurance Scheme (NDIS). Despite "on paper" this being the potential answer to the dearth of physiotherapy services, this has not been the case in Alice Springs, and in fact, for most of the AHS pupils involved in this project, the situation became worse.

The National Disability Insurance Scheme (NDIS) was due to be comprehensively rolled out in the Northern Territory by June 30, 2019. CDT ceased providing services to all children (0-18) with disabilities who are eligible for the NDIS from then, meaning alternative services were required. However, at the time of transition, there were no other specialist paediatric physiotherapy services in Alice Springs. The consequences of this change were largely unknown, however anecdotal evidence from parents whose children had transitioned to the NDIS expressed concern that they were no longer receiving any, or only very minimal, allied health services.

The context into which the physiotherapy student-learning placement at Acacia Hill School thus emerged was informed by two significant contextual factors:

1. Inadequate physiotherapy services for AHS pupils, from both the Government health services and the NDIS, and
2. School concerns about the wellbeing of their pupils and the impact of the lack of physiotherapy on their learning.

The concerns held by the school were exacerbated by the obvious inequity and disadvantage for these AHS pupils compared with the allied health services available to school-aged children with additional needs elsewhere in Australia. An example of an integrated allied health service is at the Glenallen School in Victoria which caters for children with complex needs and multiple disabilities. They celebrate a transdisciplinary team of teaching staff, allied health staff, nurses, wellbeing staff and a music therapist in order to holistically support the intellectual, social, physical and emotional needs of the students. With a student population of 155, a team of five physiotherapists and one physiotherapist assistant provide a wide range of physical programs that focus on gross motor development, mobility, respiratory management, positioning, gym programs and access to equipment to be used at both home and school.

1.6 Student placements in Central Australia

AH professionals include physiotherapy, speech pathology and occupational therapy. The major challenges associated with remote area practice within allied health include "Professional isolation, large caseloads with limited number of service providers, and reduced access to resources, equipment and professional development" and "lack of supportive management systems" (Bent, 1999:203). It is of note that this research published 20 years ago is still relevant today.

In order to assist in addressing this dearth in health professionals, the Centre for Remote Health facilitates and supports health students from 30 universities to undertake field experience through the Rural Health Multidisciplinary Training program (RHMT). The RHMT program is designed to encourage the recruitment and retention of rural and remote health professionals by:

- Providing effective rural training experiences for health students;
- Developing an evidence base for the efficacy of rural training strategies in delivering rural health workforce outcomes;
- Supporting rural health professionals to improve Aboriginal and Torres Strait Islander health;
- Increasing the number of rural origin health and medical students; and
- Maximising the investment of program funds in rural, regional and remote areas for the maintenance of well-supported academic networks to enhance the delivery

of training to students and to support the provision of medical services to communities (Department of Health, 2017).

Previous experience through the CRH indicated that student-learning healthcare services can be used as a strategy to improve health professional retention by exposing students as practitioners to the population and its region-specific health complexities. This strategy is twofold in that it a. Trains the future health workforce in regions that they potentially could serve and b. Addresses health professional shortages in populations with poorer general health status, higher levels of chronic disease and disability, and reduced access to health care (Liu, 2007).

A long-term physiotherapist at CDT indicated her support of a service-learning project in response to her concern for recruiting AH professionals to Central Australia,

I really think it's a great idea. I think it's been a success and it would be great to see it keep going...the kids in Central Australia are really disadvantaged when it comes to access to allied health so any more that we can bring them [is great]. And we're having huge issues in recruitment so any way that we can improve recruitment [is worthwhile] (Tahlia Lee, Team Leader and Physiotherapist, CDT).

It is a requirement of Australian physiotherapy programs that students complete 30 weeks of supervised clinical practice. Establishing the project in Alice Springs provided an opportunity for physiotherapy students to gain experience in a context that vastly differed from their other placements, primarily in clinical settings. The characteristics of this placement lent it to being a *service-learning* placement. In the planning of the project, the objectives were purposefully designed in order to benefit both the school and the physiotherapy students. Service-learning is described by Furco (1996),

Service-learning programs are distinguished from other approaches to experiential education by their intention to equally benefit the provider and the recipient of the service as well as to ensure equal focus on both the service being provided and the learning that is occurring" (Furco, 1996 p5).

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The AHS placement in Alice Springs was one of five placements required to complete their Masters or Bachelor of Physiotherapy. In describing what she hoped the students would get out of the program, the previous AHS Principal stated,

One of the things that I wanted to happen was that the Flinders students understood what it was like to be a student in a school like Acacia Hill,

that they make connections with young people so that they understood what they had to do in practice and know another side of young people. Rather than just being a clinician and seeing somebody in a [clinical] room (Principal, AHS, 2012- 2018).

The existing relationship between the Physiotherapy School at Flinders University and the Centre for Remote Health was crucial to the establishment of the project. The long-term relationship of these organizations was grounded in their operation of existing student placements in other health disciplines. A core team of stakeholders was established as a project committee with representatives from relevant organizations (see Chapter 3), and funding was successfully procured from The Northern Territory Primary Health Network (NT PHN) as part of their Future Workforce development program.

The initiation of this project fortuitously occurred at a time when the Flinders College of Nursing and Health Sciences “wished to increase their footprint through the Northern Territory” (Tracey Radford, University-based Supervisor, Flinders University) and thus it melded well with the aims of the College. Following the successful employment of an appropriate placement supervisor, Anne Bent, and the recruitment of physiotherapy students, two groups of four students undertook intensive four-week blocks of assessments and physiotherapy at Acacia Hill School. The first placement was in May/June of 2019, and the second, ten weeks later in September. These were referred to as the “first cohort” and “second cohort” of students.

1.7 Purpose of the evaluation

The evaluation aimed to gather a range of perspectives from those involved in the project. The evaluation process intended to:

- Enhance organizational learning by reflecting on what was done effectively and on what processes need to change,
- Contribute to the growing body of knowledge of the value of student-learning placements in underserved areas, and
- Inform external bodies about how the project was undertaken.

The evaluation set out to provide the participants with an opportunity to reflect on and celebrate the many positive outcomes of the project that are revealed in this report. Additionally, as noted by some of the participants, the opportunity to retrospectively discuss the project enabled them to reflect on their experience, gain “greater clarity” on events, and come up with constructive suggestions for future student placements, a planning process which was well underway by the time the evaluation commenced (Stringer, 2014:103).

Additionally, the evaluation of this project plays an advocacy role. The lack of access to services for the pupils involved consistently arose as an issue of concern in this research. Hence, this evaluation is written through a social justice lens and with anticipation that it may have a positive impact on policy, programs and service delivery for children with additional needs in Central Australia. One of the fathers describes his motivation to share his story,

We're definitely happy with telling Gracyn's story [about her experience with the physiotherapy students]. Because of what she's got [her condition], we just want everyone to know as much as they can because there isn't much information about it and the more people know the better it is and the easier it is for them to be able to help out other people with the same problems and the same symptoms (Matt Johns, Parent/Carer).

A further impetus of the evaluation is for comparative purposes. The planning and undertaking of this project occurred in tandem with two other student-learning school-based placements in the Northern Territory, one in Nhulunbuy and the other in Katherine. Similar methodology was applied to each project in order to achieve comparative data. The Centre for Remote Health was closely connected to the integrators of these projects which were also managed by Flinders University staff in these sites as part of the RHMT program in the Northern Territory, and shared regular correspondence regarding progress, reflection and feedback on the process.

Throughout the project there was considerable interest in the success and impact of the student physiotherapy placement at AHS from other Central Australian schools, schools in the Top End of the Northern Territory and from the administrative arm of the DoE, surrounding health services and the National Disability Insurance Agency (NDIA). This report has been written with the aim of providing a deep insight into the process, benefits, outcomes and recommendations that were considered during reflection on the design and delivery of the program, and throughout the course of the evaluation. Hence, it can inform these stakeholders and potentially enable other schools to consider a similar approach to “immersed” allied health service delivery.

Reflected in many participants' accounts, this evaluation emerged at a time of lack of direction and uncertainty in the transition to the NDIS (see [Section...](#)). Illustrated by experiences quoted in this report, various publications have described the scheme in negative terms as being characterised “by bureaucratic bumbles, inconsistent support packages, rejected applications, underfunded plans” (Stevenson & Howie, 2019), and compared to an “unbuilt plane taking off” (Skatssoon, 2019). In remote areas such as Alice Springs these shortfalls of the scheme are exacerbated by decision-making authorities commonly being based interstate or distant from the client (Stevenson &

Howie, 2019), an example of which is provided in [Section....](#) The transition to NDIS in Alice Springs is discussed in greater detail throughout the report and it is anticipated that the information provided will be beneficial to NDIS staff and providers as the scheme continues to evolve in Central Australia.

The information that has emerged in this evaluation can also provide an evidence-base for how well-supported student placements can contribute to strengthening elements referred to in the 2018 [Review of Policy and Practice for Students with Additional Needs](#). The review was undertaken in order to develop an evidence base and provide recommendations for the NT Department of Education (DoE) and the NT Government more broadly to “plan, measure and improve how students with additional needs are supported” (Milne et al, 2018:v). The review emphasizes the need for the DoE to frame their support in response to the socially and geographically unique context and is grounded in three critical elements: 1. Strengthening shared decision making, 2. Improving professional practice and 3. Enhancing an evidence-led system.

1.8 Guiding frameworks for the student-learning project design

1.8.1 Triple Aim Framework

The true value of student-learning healthcare services is unknown, with little evidence to demonstrate whether they are a worthwhile investment. Introduced previously, the ‘Triple Aim’, developed by the Institute of Healthcare Improvement (IHI), is a performance framework to guide health systems towards improved health quality and reduced costs⁹. The Triple Aim uses an integrated framework to simultaneously evaluate three dimensions: 1. Health improvement, 2. Participant experience, and 3. Cost.

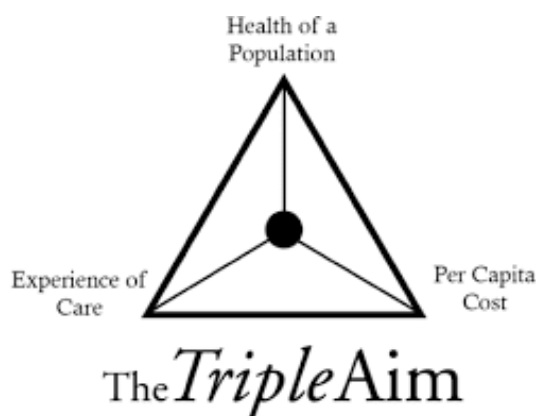


Figure 3. The IHI Triple Aim Framework (Institute for Healthcare Improvement, 2019).

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The framework is underpinned by the understanding that efforts to improve the health of the population require consideration of the experience and outcomes for the patient, and efforts to reduce the per capita cost for the benefit of communities:

The Triple Aim framework serves as the foundation for organizations and communities to successfully navigate the transition from a focus on health care to optimizing health for individuals and populations (Institute for Healthcare Improvement, 2012).

The key tenants of the framework have been applied to assess the value of the student-learning physiotherapy services in Acacia Hill School and its impact on the participants (see Table 1). For example, the framework was used to guide the objectives of the project, frame the interview question schedules and has influenced the methodological approach of the evaluation. Each aim is considered in the conclusion chapter of this report.

1.8.2 International Classification of Functioning, Disability and Health (ICF)

As noted above, one of the key objectives of the project was to provide effective physiotherapy intervention for the AHS students in order to address a range of criteria that would ultimately have a positive impact on their quality of life. These criteria are guided by the World Health Organisation's (WHO) International Classification of Functioning, Disability and Health (ICF) (WHO, 2020). The ICF framework, see Figure 3, provides a system for interpreting 'disability' relating to a person's specific health conditions. The system is described using terminology as explained and described in Table 2 with additional descriptions and sub-categories to make the terminology relevant to the AHS pupil population. This terminology was considered in the development of the evaluation and was incorporated into the question schedules for the focus groups and semi-structured interviews for all participants (see Appendix 2).

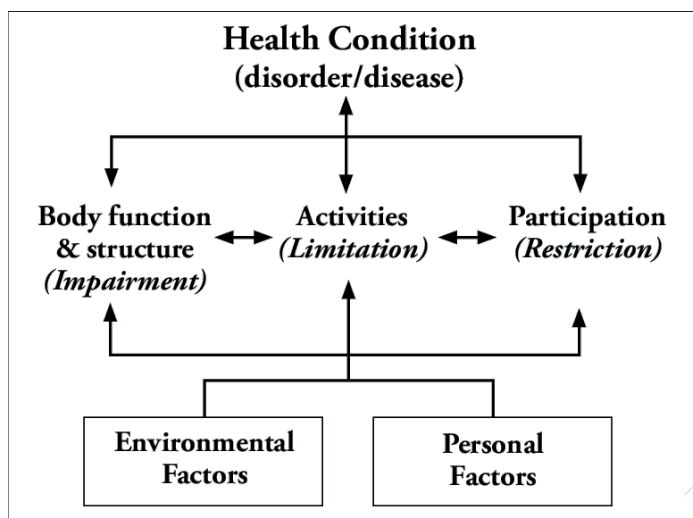


Figure 4. World Health Organisation: International Classification of Functioning, Disability and Health (World Health Organisation, 2002).

The ICF framework enables recognition that a specific impairment or primary diagnosis will not necessarily affect different people in the same way. By separating impairments, activities and participation, the ICF framework identifies the true impact of a condition on an individual. This is especially so in the context of Acacia Hill School where many of the pupils have a range of disadvantaging environmental factors, including lost opportunities for development of motor skills due to a paucity of physiotherapy services in the past.

Health Condition	Underlying diagnoses.
Body Structures	Are anatomical parts of the body such as organs, limbs and their components.
Body Functions	The physiological functions of body systems (including psychological functions).
Impairment	Diminished body function or damaged body structure such as a significant deviation or loss.
Activities (Limitation)	The execution of a task or action by an individual. A Physiotherapy functional assessment would look at a person's gross motor function, including mobility and their limitations in being able to perform an activity: e.g. assess a person's ability to rise from sitting to standing independently or a child's capacity to pull to stand against furniture or cruise along furniture; and capacity to mobilise with or without aids. For children with more severe levels of cerebral palsy (CP) their functional levels might be quite low and they may have limited head and trunk control; they may not be able to roll from their back to tummy or get into prone on elbows.

Participation (Restriction)	Refers to a person's engagement with family, educational, recreational and community activities. In terms of the AHS pupil population, 'participation' can refer to the way in which a child might move or mobilise within the classroom and school environment to access the school curriculum and activities. It also includes the way a child can be part of family activities in their home environment, and for Indigenous children maintaining connection with their Indigenous heritage of culture and language. Restrictions are the factors which prevent participation e.g. the inability to sit independently in a chair restricts the child's ability to participate in a family meal or classroom activity. The provision of supportive seating removes this restriction.
Environmental Factors	Make up the physical, social and attitudinal environment in which people live and conduct their lives e.g. family make up, access to housing
Personal Factors	Personal factors relate to the impact of person's attributes upon their impairment(s) and to some extent have links with the person's character and personality. Time is often needed to get to know the person behind 'the face of their disability' especially if they are non-verbal.
Management by Parents/Carers	This term incorporates all the care activities that parents/carers may need to provide, including physical care activities such as bathing, dressing, feeding as well as emotional support. These physical activities can include transfers or lifting from one position to another (e.g. assisted sit to stand from a chair to sitting in a wheelchair or a transfer from a wheelchair to a shower chair); positioning in a wheelchair and pushing the wheelchair from one place to another; positioning in a car seat; positioning in bed with change of position during the night; use of a hoist if the child cannot take weight through their legs; management of these handling issues if the child has had surgery and is in a cast.
Comfort/Pain and Discomfort	Comfort refers to the sum total of many factors including but not limited to: the feeling of physical security (ie adequate support), trust in the way in which the child is manually assisted in being transferred from one position or place to another; the absence of localised pressure areas and/or pain; being at the right temperature (not too hot or too cold), having adequate nutrition and not feeling hungry. Pain/discomfort is to be avoided. Remaining in the same position for a long time can be uncomfortable due to body pressure being concentrated over bony parts if a child cannot change position or move by themselves. Stretches are needed to provide comfortable positioning. Stretches aim to maintain muscle length and joint range of movement to counteract the effects of the increased muscle tone associated with CP, which tends to tighten muscles and restrict joint range of movement.
Quality of Life	A very broad term meaning a situation in which a child (or adult) has optimal opportunities to participate in chosen activities, such as communicating with people (especially those of most importance to them), or enjoying their immediate surroundings and in community activities of choice.

Table 2. Terminology relating to disability (Anne Bent & Annie Farthing, 2019, *pers. comm*; WHO, 2002).

This chapter has provided an insight into the background which led to initiating the student-learning physiotherapy project at AHS, the project objectives, the purpose of the project evaluation and guiding frameworks which have been applied to the project. The next chapter presents the methodology of the evaluation.

2 Evaluation Methodology

This evaluation aims to present the perspectives of the different stakeholders involved in the student-learning project at Acacia Hill School to gauge a deep understanding of its impact on the lives of those involved, what worked and recommendations for future similar projects. The methodology has been designed with consideration of the minimal allied health services available to the AHS pupils despite their high needs, many of whom come from very disadvantaged backgrounds. Hence, it takes into account the need to foreground the voices and views of participants in a context where people are typically poorly represented or misrepresented in the literature. Specific activities of the evaluation included:

- Systematically collect information which has been generated through the life of the project,
- Reflect on decision making and governance processes,
- Note unexpected outcomes which otherwise may have been overlooked,
- Provide recommendations for future collaborative student-learning service development and evaluation,
- Assess the project's "value for money",
- Meet reporting requirements, and
- Provide a clear evidence-based story which can provide direction, recommendations and a pathway for future initiatives.

The evaluation process took a strengths-based approach to data collection, data analysis and presentation of results which thus emphasizes self-determination and the strengths of the participants' and their community (Kickett-Tucker et al (2017)). This approach recognizes the adversity many of the participants faced within the context of delivering health and education services to a group of high-needs pupils with diverse physical, neurological and cultural needs. These complexities are exacerbated by the remoteness of Alice Springs and hence difficulties in accessing human and material resources to support program delivery. Focus on assets throughout the data collection process enhances the resourcefulness and resilience of participants which in turn may reinforce these strong qualities and positively impact ongoing participation in the project as described by Kickett-Tucker et al (2017),

The emphasis on the strengths held by the community that have proven to be effective is an important factor that can inform future and current initiatives. Applying this approach means that people will be more inclined to work towards the goals they have identified because they have a sense of ownership and engagement in the process and they know what will and will not work (Kickett-Tucker et al, 2017:101).

2.1 Positioning of the evaluation researcher

The researcher engaged in this project has had fifteen years experience in community development and public health work, primarily in Indigenous communities including Tennant Creek, the Torres Strait Islands and the Ngaanyatjarra Lands in Western Australia. Most recently, she completed a PhD in community development. She has two children, the youngest of whom was with her during many of the conversations with participants which have featured in the research. From the researcher's perspective, having her son alongside her during data collection contributed to the ease at which she was able to build rapport and trust. Although there are also many challenges of "Mothering in the field", the researcher believes there is merit in considering the values of enmeshing motherhood and fieldwork, a consideration of Muhammad & Neuilly (2019),

We have to fundamentally rethink the delineation between public and private spheres and between the supposedly opposed objective rigour required by science and the emotional work involved in nurturing children and oneself (the researcher) (Muhammad & Neuilly, 2019:4).

The researcher has extensive experience in qualitative data collection and is enthusiastic about employing creative and collaborative methods in order to most effectively represent and privilege the voices and perspectives of participants. Currently residing in Alice Springs, she is passionate about social justice issues for families in Central Australia and has gained an insight into the context of local primary schools through her partner who is a primary teacher.

2.2 Participants

The participants involved in this research and the nature of their contributions are summarised in **Table 3**, bearing in mind the pupils were minors and did not participate in the data collection process. In addition to school staff, parents/carers and the physiotherapy students, two student supervisors and two CDT health staff were approached as key stakeholders to provide accounts to enhance the narratives in the evaluation.

Participants	No.	Semi-Structured Interviews	Focus Group	Survey
School pupils referred to service	26			

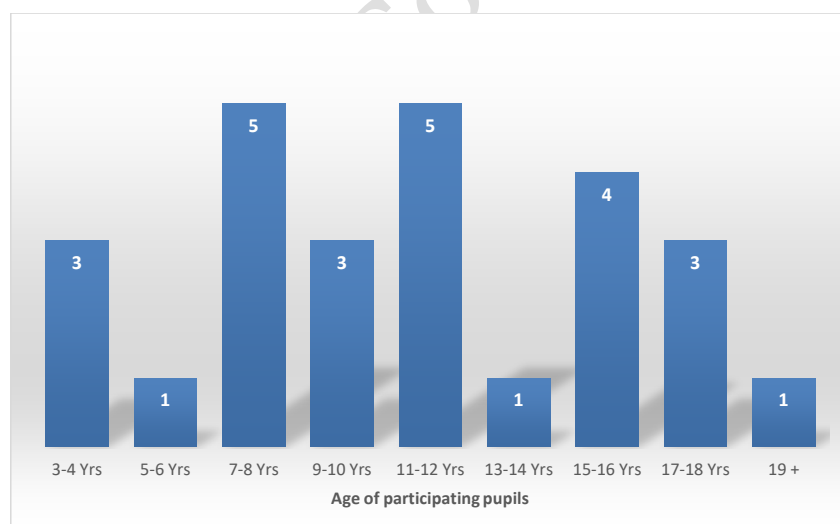
Physiotherapy Students	8 (4 female, 4 male)	8	1	8
AHS administrative, teaching and support staff	7	6 (one collaborative interview)		
Parents/Carers of referred AHS pupils	5	3		1
Supervisors	2	5		
CDT staff	2	2		

Table 3. Participants, informants and data collection methods

2.2.1 Pupil profile

The 26 pupils who participated in the project were referred from 10 of the 17 classes at AHS, 4 classes at Bradshaw School and 2 remote schools. The physiotherapy students provided services to a broad age range as indicated in Figure 5. A little over half of the total pupils involved in the project were Indigenous, as seen in Figure 6 and 31% female and 69% male, see Figure 7. This over representation of male pupils reflects the distribution of disability in the general population (pers. comm. Anne Bent, 2019).

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**Figure 5. Age of pupils who received therapy from the physiotherapy students**

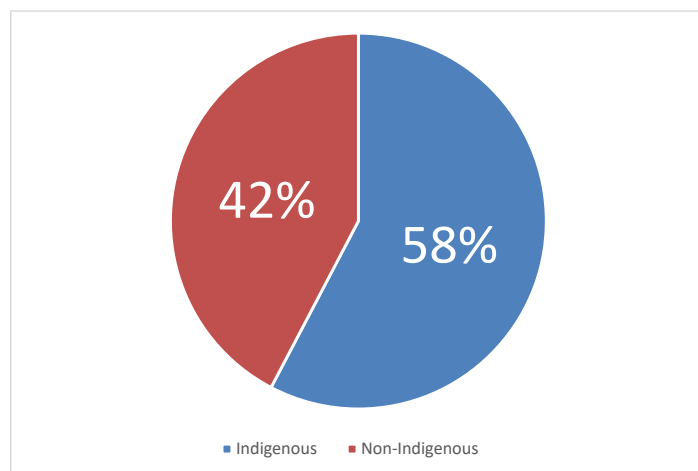


Figure 6. Indigenous & non-Indigenous pupils participating in project

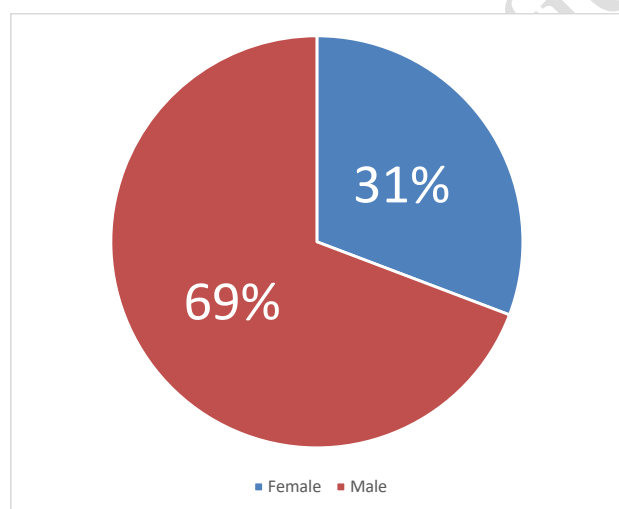


Figure 7. Gender of pupils participating in project

2.3 Multi-method approach to gathering data

A wide range of data collecting methods were used in this research. This “multi-method” approach contributed to grasping subtle variations in the experience of the participants and allowed for a nuanced insight into the project outcomes and impacts. Data from a

diverse set of participants and multiple sources provided the opportunity for data triangulation whereby perspectives can be complemented or challenged by different methods of data collection. Triangulation enhanced the credibility of the research which was also done by member-checking the data with the participants (Lincoln & Guba, 1985). Methods included observation, semi-structured interviews, a focus group, a survey and the collection of secondary data relevant to the investigation.

2.3.1 Observation

The researcher had a window to undertake participant observation in the final week of the second cohort's placement. Close liaison with the school staff, the students and the placement supervisor provided an opportunity to spend a few days at the school during which she was able to sit in on therapy sessions, observe a hydrotherapy session, casually become acquainted with the physiotherapy students and the school staff, attend a school assembly and be an audience member in the final presentation delivered at CRH by the students to a public audience. This enabled the researcher to build a picture of the life-world of those involved, gauge an understanding of the context of the project and develop a preliminary understanding of how the project impacted the participants. Time spent on the "institutional turf" (Eversole, 2012) of the participants also provided the researcher with the opportunity to develop initial relationships with school staff who later contributed to the evaluation and invited her to present at a School Council meeting. Observations, which included sitting in on core project team meetings, provided a strong foundation for contextualizing the information that emerged from the subsequent interviews and focus groups.

2.3.2 Semi structured interviews

The primary source of data collection for this project was undertaking semi-structured interviews with the different participant groups: parents/carers, school staff (including a previous principal), and the physiotherapy students. In order to gauge a deeper insight into the process and background of the project, the researcher also had conversations with the supervisors and staff from the CDT.

Interviews allowed participants to explore and describe the main features of their experience. In order to ensure the context of the interview was comfortable for the participants, they were able to designate the time and place. Some interviews needed to take place over the phone, for example, with the University students who had returned home or were on another placement by the time the interviews commenced. Some interviews were done collaboratively, for example, two staff members or both pupil's parents. At each stage of the process the researcher was sensitive to the busyness and challenges of many participants' lives.

Prior to the interview, participants were provided with information about the project and a consent form, each of which had been written purposefully for each group of participants (see Appendix 4). The interviewer also provided the interviewee with a verbal explanation of the purpose of the research, the confidentiality of the information being shared, and the member-checking process. Following this introduction, the researcher requested permission to record the interview on a Dictaphone in order to record exactly what was being said in the “respondent’s language, terms and concepts” (Stringer, 2014:110). In cases where respondents did not wish to be recorded, the researcher took detailed notes. The interviews lasted between 25 and 90 minutes and as the conversation progressed, the researcher checked in with the respondent to ensure that they were happy to continue or would prefer to cease.

The researcher commenced each conversation with a grand tour question which encouraged the participant to frame the conversation on their own terms and “provide focus without giving direction or suggesting responses” (Stringer 2014:107). These were followed by “typical” and “specific” questions from interview schedules which were developed as part of the stakeholder committee’s evaluation plan specific to each participant group i.e. parents/carers, students, school staff (see [Appendix 2](#)). The questions were designed to address the aims of the project, gather as much relevant information as possible and to meet ethics criteria. These questions the interviewer wove into the discussion as the opportunity arose, often suggesting participants provide an example or consider hypotheticals for deeper exploration of the experiences, events, setting and activities.

2.3.3 Focus Groups

One focus group was undertaken with the second group of students in their last week of the placement. The same consent process was followed as with the interviews. The focus group provided an additional opportunity beyond one-on-one interviews for the students to describe their experience and present their perspectives on their terms. Unlike the semi-structured interviews, the focus group provided a group forum to collaboratively discuss and reflect on their placement.

2.3.4 Documents, Records, Reports, Meetings and Photos

Other forms of data which have contributed to the evaluation include documents, records and reports. These include correspondence between stakeholders, reports and plans prepared during the placement, PowerPoint presentations done by the students in both cohorts, DoE reports, and minutes from stakeholder committee meetings. Where necessary, the researcher observed the need for confidentiality regarding documents and conferred with the relevant participants where clarity was required in

understanding documents. Where photos appeared in any of these resources and were considered for this report, the necessary procedures were followed to gain consent for their inclusion with support from the AHS staff.

2.3.5 Student Placement Survey

The Centre for Remote Health hosts students from 30 universities from a range of health disciplines on placements in Central Australia. At the conclusion All 8 students were given the opportunity to fill in the student satisfaction survey developed by the Australian Rural Health Education Network (ARHEN) with six completions (3 female and 3 male). The survey included questions about their levels of satisfaction with the placement, comparison of their Alice Springs placement with other placements they've done, what they enjoyed about doing a remote or rural placement, if they had received training in Indigenous cultural safety/awareness on their placement, and how they felt about the supervision on their placement. The data from the survey results have been triangulated with data collected in semi-structured interviews and focus groups.

2.3.6 Data Analysis

Central to the data analysis process used in this research was application of the verbatim principle in order to ensure accounts adequately represent participants' meanings, experiences and perspectives. Hence, focus group and interview data was transcribed verbatim with the assistance of a professional transcriber. A categorizing and coding process identified "the significant features and elements that make up the experience and perception" of the participants involved (Stringer, 2014:139). In order to enhance this process and for ease of organization of the extensive data set, the data was entered into NVivo software which allowed for information to be themed into nodes and sub-nodes. Critical to this process was ensuring that the nodes and sub-nodes adequately represented the meanings inherent in the information provided by the participants, a process that gained credibility through the member-checking process (see below). These nodes or categories of meaning informed the framework of this report.

2.3.7 Member checking

The purpose of member checking is to provide participants with the opportunity to review the data derived from the research process. Quotes used in the report were emailed to the participants with a request for them to review the quotes, and an opportunity to amend or request the text not be used. Member-checking ensures that the text adequately represents the participants and enables them to "clarify and extend information related to their experience" (Stringer, 2014:93). During this process,

participants were asked if they would like their names used or would prefer a pseudonym; this varied between respondents.

2.3.8 Ethics

An ethics application (approval number CA-19-3359) was submitted to and considered by the Central Australian Human Research Ethics Committee (CAHREC) who responded with minor amendments. The ethical approach to this evaluation was guided by the key values outlined in the National Health and Medical Research Council's *Ethical conduct in research with Aboriginal and Torres Strait Islander Peoples and communities: Guidelines for researchers and stakeholders*.

2.3.9 Limitations

Limitations of this evaluation are offered to both highlight the challenges in gathering data in the context of the project, and to provide recommendations for future projects with comparable objectives.

First, the late arrival of the evaluation researcher to the project minimized opportunities for relationship building with participants during the course of the project. This was overcome by employing a snowballing method whereby the researcher asked informants and stakeholders to assist in recruiting others through existing networks. This was enhanced by the close working relationship the researcher had with CRH staff.

Second, power differentials and "white privilege" continue to be problematic in representation of Indigenous voices in research (Foley, 2006; Anderson, 2004; Smith, 1999). Efforts were made to engage Indigenous parents/carers for interviews, however, a number of contextual barriers arose. As advised by AHS staff, the Indigenous families of AHS pupils involved in the project often had complex lives, exacerbated by the challenge of supporting children with additional needs. Parents/carers (many who have family in remote communities) were reported as "moving around a lot" and an Indigenous staff member advised the researcher that there was "a lot going on" in their lives at the time the interviews were taking place. This was reinforced by feedback provided by parents/carers who took part in the evaluation, each of who shared with the researcher the time-consuming demands of supporting their children. Hence, representation of Indigenous voices in this report is unfortunately minimal.

Third, given that the data collection took place following the completion of the project, the information provided by the participants was retrospective rather than being shared "at the time of the event" (apart from the students in cohort two who provided their accounts during and immediately after their placement). Significant periods of

time between participants' experience and their recollection of events can potentially cloud their recall. However, there were two benefits of this. It provided the participants and stakeholders with a period of time to observe and reflect on sustainable outcomes of the project (see Section...). It also enabled students to reflect on the benefits of the placement; often in comparison with the other typically clinical placements they were doing (all eight physiotherapy students had embarked on their final placement at the time interviews took place).

2.4 Dissemination of evaluation results

Timely and accessible dissemination of results from this report will take place with relevant audiences through school forums, conference presentations and information sessions delivered to interested stakeholders. A report will be prepared for the school and the broader school community, as well as for the NT PHN as per the contract and will be available online for other interested parties. A corresponding information sheet summarizing the report will also be available for ease of reference. At least one manuscript suitable for publication in a peer-reviewed health journal will be prepared and submitted for publication.

2.5 Findings and Discussion

The findings and discussion of this evaluation are presented in the following three chapters. Weaving the findings and discussion together allows the voices of the participants to be heard in the discussion and reflection on the project. The first findings/discussion chapter, Chapter 3, explores and reflects on the strategies and actions applied to design and deliver the project, sometimes referred to as 'process evaluation'. Chapter 4 provides a deep insight into the nature of the physiotherapy service which emerged during the students' placement, the niche it filled and the impact it had on pupils, staff and parents/carers. Three case studies illuminate pupils' and families' experiences which emerged during the evaluation. Chapter 5 presents the students' experiences and reflections on their placement, and how their time in Central Australia expanded their horizons regarding physiotherapy practice and career opportunities.

3 Findings One: Strategies and actions applied to meet the project objectives

3.1 Introduction

Extensive planning for the project's design and implementation was undertaken to execute this project given that nothing of its type had previously been trialled in Central Australia. This Chapter explores strategies and actions used to achieve the project objectives, and considers lessons learnt along the way. The chapter commences with a description of how the project's governance structures were established, including the membership of the core project team. The chapter then describes the processes executed leading up to the placements including identifying and referring school pupils to participate, recruitment of University students, considerations around cultural safety and identifying an appropriate placement-based supervisor². Other process considerations discussed are the duration and timing of the placements, resourcing of the project, communication between and within the different parties, and the inclusion of other schools as sites for student intervention.

3.2 Planning and governing the project: a collaborative approach

High staff turnover and the challenges of working within the complex social and cultural domain of the Northern Territory are major factors which make planning and development of meaningful and sustainable programs in the Central Australian region difficult. It is notable that this project was dependent on a number of key people who brought a crucial set of skills, experiences and relationships to the table:

1. Long term and varied experience delivering physiotherapy programs in the Northern Territory,
2. Previous experience with student-learning programs in schools, health contexts and tertiary settings, and
3. Experience and knowledge of how school-based allied health programs work.

Hence, members of the core project team had a solid foundation for understanding the cause for the gaps in physiotherapy services, as well as for identifying potential

² The placement-based supervisor supported the students on their placement in Alice Springs. The students also had a university-based supervisor who supported them leading up to the placement and then in a remote capacity once they were in Alice Springs.

solutions. Additionally, their familiarity with the context provided them with the relationships and networks necessary to ensure all relevant stakeholders were involved and consulted in the planning of the project. Consequently, close collaboration between experienced health and education stakeholders was a strength of this project from the start. The expertise of the stakeholder committee also ensured that the project objectives encompassed the range of needs of the participant groups: AHS pupils, parents/carers of the pupils, school staff and the University students. This is described by the Flinders University-based student supervisor,

The idea was that it was a win win for everybody. Our idea was to provide services to an underserved area, as well as getting a placement for our students. We did not want it to be a group of southerners coming in just to tick of their placement and then leaving again. It's really important that the community have got something out of this that they may not have had otherwise (Tracey Radford, University-based Supervisor, Flinders University).

The Triple Aim performance framework which guided the methodology of this project recognizes the need for cooperation between different but complementary agencies and services involved in the health deficits under investigation. The framework's methodology is grounded in the approach that, "no single sector has the capacity to successfully pursue improving the health of a population" (Steifel & Nolan, 2012). Such an approach by the stakeholder committee for this project was enhanced by the close-knit "small-town" nature of Alice Springs which heightened opportunities for regular information sharing between stakeholders, both in organized settings and during informal, opportunistic ["supermarket aisle"] chats. The relationships that consequently emerged between the school and other stakeholders aligns with key recommendations in the 2018 DoE *Review of Policy and Practice for Students with Additional Needs* which calls for strengthening partnerships with between schools and other stakeholders, including health practitioners, to enable shared decision-making grounded in best practice research (Milnes, 2018:41-42; 48).

3.2.1 Stakeholder Meetings

The Centre for Remote Health (CRH), a campus of Flinders University NT, was the instigator and integrator responsible for both guiding an appropriate governance structure and evaluation process of the project. Located in Alice Springs, the Centre for Remote Health is a [University Department of Rural Health](#) which provides both tertiary education and a research presence in Central Australia. The key priorities of the CRH are improving the health status of rural and remote populations alongside appropriate establishment and growth of the health workforce through enhancing recruitment and retention of staff to the Northern Territory, a region which is typically challenging to

recruit to. The CRH staffs' intimate knowledge of the context, prolonged presence in the region and hence existing networks and relationships with other services contributed to the identification of relevant stakeholders to govern and guide the student-learning project. Monthly meetings to plan the project were coordinated and chaired by Annie Farthing (CRH) and commenced in November 2018.

The core project team who participated in monthly meetings and were involved in the ongoing planning and delivery of the project were:

- Annie Farthing, Centre for Remote Health, Flinders University
- Julie Permezel, Acacia Hill School Principal (from start of 2019)
- Wendy Haynes, former Acacia Hill School Principal (2012-2018)
- Cheryle Edwards, Aboriginal Education Officer, Acacia Hill School
- Glenn Irvine, Indigenous Special Education Support Officer, Acacia Hill School
- Tracey Radford, Flinders University Clinical Educator of Physiotherapy
- Anne Bent, Placement Supervisor, Centre for Remote Health, Flinders University (commenced January 2019)

Stakeholders who were invited to meetings and attended less frequently were:

- Manager, Northern Territory Office of Disability (Michelle Foley)
- Child Development Team staff, Northern Territory Office of Disability (Tahlia Lee, Jane Hunter)
- Dean (Education), College of Nursing and Allied Health, Flinders University (Chris Brebner)
- Course coordinator, Master of Physiotherapy, College of Nursing and Allied Health, Flinders University (Lucy Lewis)
- Academic Leader, Engagement and Social Accountability, Flinders University (Narelle Campbell)

Typical agenda items at the meetings during the planning phase of the project included recruitment of a placement-based supervisor, selection of physiotherapy students, when the placements would take place, the schools' role in supporting the students, the consent process for participants, evaluation planning, and issues which may arise such as the building works anticipated at Acacia Hill School during the first cohort's placement.

Recognizing that the project was navigating a complex and sometimes sensitive domain, the core project team incorporated a reflective process at all stages of planning. Represented by the reflection cycle in Figure 7, there were continuous efforts to revise components of the program in order to modify it to most effectively suit the needs of the participants, meet the requirements of the organisations involved, and gather relevant

data for the evaluation. Separating the two student placements by three months provided an opportunity to respond to these reflections and modify practice accordingly; examples of which will emerge in the report. The evaluation became a key component of this process and provides a cumulative evidence-based deliberation on the project as a whole.

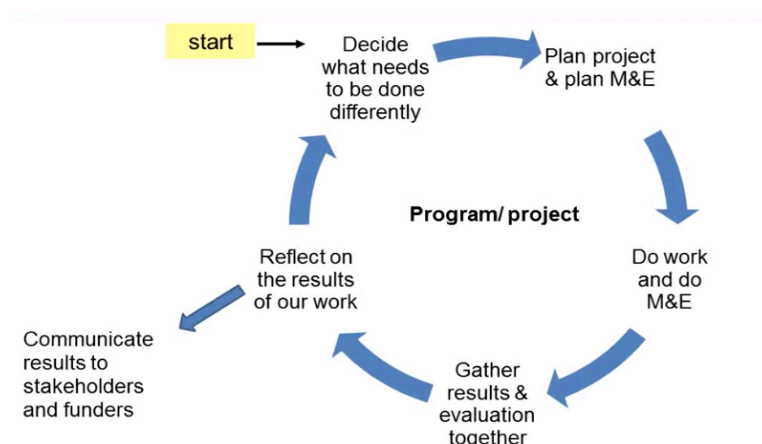


Figure 8. “What is good monitoring and evaluation?” (Dart, 2020).

The next section addresses the processes implemented by the stakeholder committee in order to get the project off the ground.

3.3 Project planning

The stakeholder committee undertook a comprehensive series of tasks prior to the arrival of the first cohort of students. Each core committee member who provided support to the project also had very heavy workloads. As noted by the Flinders University unit supervisor, the time and energy required to get the project off the ground was underestimated,

Establishing this program was a really big job and like all of these things, much bigger and more challenging than anyone ever thinks when we're doing it on paper. I don't think any of us really knew how much work [it would be], you never do when you start these things. I think from our end (the stakeholders) we probably underestimated the time it took to get things established (Tracey Radford, University-based Supervisor, Flinders University).

This section addresses these components. Where possible, they are presented in chronological order, however, many also happened simultaneously.

3.3.1 Referral, reach, access to health records, and gaining consent

Parents/carers and school staff were the key people who referred AHS pupils to the student-learning placement. All parents/carers were informed by letter about the program and were invited to refer their children. However, the school staff primarily instigated the referrals, probably as a result of their understanding about the project due to their regular interaction with those leading the project at the school. The supervisor provided a form which requested detailed information pertaining to the pupils' physical problems, issues they had in the classroom, best ways to communicate and behavioral concerns (see [Appendix 5](#)).

The AHS staff member whose role is was to coordinate the program and to act as an "interface" between the students and the school commented on the process of selecting pupils,

Every classroom was offered and asked "Who do you think your priority is?" and that's what we worked with. We did that effectively with both [cohorts] but there were some pupils who were obviously requiring services from the first cohort and still in the second cohort but then there were also five or six new ones in the second cohort (Glenn Irvine, SESO, AHS).

One of the teachers noted that *all* of her students could in some way benefit from physiotherapy intervention. However, clearly this was not within the capacity of the placement. Hence, pupils were prioritized and most of those referred to the service were identified as being at Level 3 or Level 4 of the student needs profile ([see section...](#) & Appendix 1).

Throughout the course of the two placements, 26 students accessed one-on-one therapy from the student team. This included 20 students from Acacia Hill School, 4 from Bradshaw School, and 2 from the remote school in Ti Tree, one of whom occasionally attended AHS when she was on respite in Alice Springs (see [Chapter 5](#)). This does not take into account the many AHS students who benefitted from the student-led activities that reached whole classes and those who were indirectly impacted by the whole of school professional development opportunities which took place (see [Section...](#)Three Tier model).

3.3.1.1 Conditions of referred pupils

Table 4 provides a breakdown of the conditions of the AHS pupils and those from other schools which made them eligible for the physiotherapy service. It is demonstrative of the range of diagnoses the students were becoming familiar with during the placement.

Primary Condition	Number of Students
Cerebral palsy	8
Genetic	1
Neurological conditions (other than cerebral palsy)	3
Orthopaedic condition (including 1 with post-burns conditions)	5
Intellectual impairment resulting in delayed development	9

Table 4. Conditions of pupils who received therapy during the student-learning placement

Cerebral palsy (CP) is an umbrella term that covers a range of conditions where control of body movement is affected due to damage to the developing brain during pregnancy. CP is the most common disability in childhood and is lifelong. CP is characterised by delayed motor development, abnormal patterns of movement and abnormal muscle tone. Movement difficulties can be mild or severe and if severe, are frequently associated with epilepsy and cognitive impairments. There are many other neurological and orthopaedic conditions that can benefit from physiotherapy services to assist with the management of activities of daily living and the prescription and provision of equipment for mobility and positioning. In paediatric disability, a multi-disciplinary approach is usually very beneficial for the child's optimal development and therefore referral to and liaison with other allied health services is important. Such services include occupational therapy, speech pathology and orthotists to provide lower limb splinting (orthotics) to assist a child's walking.

Following the referral process for AHS pupils, existing health records of identified children were sought from the CDT. As described in the Introduction, there were varying periods since pupils had last been seen by CDT due to issues in staff resourcing within the Government health service, but also due to the introduction of the NDIS.

3.3.1.2 Consent

A critical step in the AHS pupils' involvement in the program was to gain consent from their parents and carers. There were two levels of consent required: first the school sought permission for the children to be involved in the provision of physiotherapy services by the students. Second, consent was sought for Flinders University to use

information gathered by the evaluation process for both promotional purposes, to meet reporting requirements of funding bodies and for publication. A team of administrative staff from the school, including the Aboriginal Education Officers (AEOs), were tasked with contacting parents/carers to gain consent. However, there were a number of barriers to the process which ended up “holding things up a bit” (Sheina Treuel, Assistant Principal, Acacia Hill School) and consent was still being sought when the first cohort of students arrived in May.

Barriers to gaining informed consent for AHS pupils were challenging, time consuming and “frustrating” (Sheina Treuel, Assistant Principal). Acquiring consent was compromised by difficulties identifying and locating the appropriate person to sign the forms, high transience of families between bush communities and town, complex family lives, and language and cultural barriers that impeded understanding of the project’s intent. Many of these factors were overcome by the involvement of the school’s AEOs who had strong existing relationships with families. However, the process still took much longer than anticipated and in response to this, more time was allocated to the task leading up to the second cohort’s arrival, as described by the Assistant Principal,

I'm just new to Alice Springs and the Territory way of doing things, and I think one of the biggest things that has really hit me is the difficulties in getting informed consent...You would think it would be really easy to go and get a consent form. It hasn't been, and it still continues to be a problem. And I think there's a cultural overlay that sits in underneath...whether it's a level of mistrust or it's just the difficulty in locating someone who can be the official person to sign the form. It has taken huge amounts of time, to the point that we've probably missed the boat a little bit in accessing those services which is just heart wrenching...We learned a lot [by] the second prac (Sheina Treuel, Assistant Principal).

Referring AHS pupils, accessing their health records and gaining consent for their participation was a significant component of the project process leading up to the student placements. A parallel component of planning was taking place: recruiting and preparing the university students to come to Alice Springs, a town and context all but one of them had not previously experienced.

3.3.2 Student recruitment to the placement

Following a call for an expression of interest at the end of the 2018, 14 Flinders students were interested in the Acacia Hill School placement out of a cohort of 40. In order to apply, the students were required to write a piece about what they would bring to the placement, what they hoped to get out of the placement and their background. The

applicants' Assessment of Physiotherapy Practice (APP) marks were also considered. The Flinders University Clinical Educator of Physiotherapy identified appropriate candidates and information pertaining to the students' motivation to come to Alice Springs was distributed to the placement-based supervisor, the CRH project coordinator and the AHS Principal.

Four Flinders students (Jessica, Imogen, Tom and Campbell³) were selected for May/June placement and three Flinders students (Kirsty, Anna and Jesse) for the second placement in September. There was a drop in interested Flinders applicants for the second placement attributed to work obligations and the financial strain of the placement (see Section...). Hence, the invitation was extended to Australian Catholic University (ACU) students, and Daniel joined the team on the second placement. Following the selection process, an introduction of the students was provided in the school newsletter which is distributed to AHS staff, parents/carers and the school broader community.



The header of the newsletter features the Northern Territory Government logo on the left and the Department of Education logo on the right. Below these is the 'Acacia in Action' title in a large, stylized font. Underneath the title are five green icons representing values: Respect, Collaboration, Integrity, Understanding, and Adaptability. To the right of these icons is the date '10th May 2019'. On the far left, there is a small circular logo for 'ACACIA HILL SCHOOL'.

Dear Parents and Carers

Next week we will have Speech Pathologist, Fran Liepa, with us, and we will welcome the four Flinders physiotherapy students, Campbell, Imogen (Imy), Jessica and Keyson, along with their supervisor, Anne Bent. Anne has already been to the school and met the teachers and some of the students.



Flinders second year Masters Physiotherapy students:
Campbell Taverner, Imogen Hardcore, Jessica Kellett and
Heyson Hinge.



Anne Bent

³Pseudonyms were used for some students where preferred.

Figure 9. Introduction of students and supervisor in Acacia Hill School newsletter, May 2019

3.3.2.1 Student preparation for the placement

Given that the students were in their final year of their Physiotherapy degree they had all had previous experience doing placements. However, many aspects of their placement at AHS were unique compared to their previous placements (see Section...). None of the students had worked in paediatric disability and with one exception, students had not experienced working in a remote location. Hence, it was important that the students were well prepared in order to make their entry into the context as comfortable as possible for them, but just as importantly, to ensure they were sensitive to the social and cultural requirements of the AHS context: a remote additional needs school with a significant Indigenous population, including families from disadvantaged backgrounds, and limited resources. This was a stark contrast to, for example, a private physiotherapy sports clinic in the city.

The stakeholder committee initiated a number of steps to in order to most effectively prepare the students for their arrival in consideration of the needs of all participants:

1. The students worked with their supervisors on preparing "Placement learning plans" in order to determine their goals for the placement and ascertain that they had an understanding of the types of physiotherapy they would be required to practice at AHS,
2. The students were provided with pre-placement information developed by CRH and Flinders staff. The placement-based supervisor provided suggested reading materials and information relevant to their placement. This was grounded in her existing knowledge of the context having worked extensively in Central Australia (see Section.),
3. The students undertook training on Mandatory reporting of Child Abuse and Neglect in the NT and Mandatory reporting of domestic and family violence,
4. The students applied for a 'working with children check' in order to receive required Ochre Cards to work with children in the NT, and
5. The students had 2 days of hydrotherapy training as a component of their course. This contributed to their understanding of hydrotherapy, however, "it was very different" to the hydrotherapy sessions they did with pupils at AHS (Kirsty, Student).

Overall, the students reported that they felt very well supported regarding preparation for their placement in Alice Springs, including the logistical elements such travel, accommodation and items to bring,

I felt well prepared in terms of what the placement would be like. I feel like they [stakeholder committee] explained everything and introduced the school well. I think everything was quite easy to organise in terms of getting to Alice Springs. It was clear what we needed to do ourselves and what would be organised for us (Jessica).

However, many of the students reflected that they did not feel adequately prepared for the complex neurological conditions and social situations they were confronted with on their placement. As noted earlier, none of the students had previously worked in locations with comparable “complex social situations” that they were presented with in Alice Springs. One of the students notes that she would have been better prepared had she had more forewarning in this regard,

I knew it would be very different than what I'm used to obviously being in Central Australia...I guess it didn't upset me so to speak...it just shocked me a little bit... It would have been nice to have a bit more explanation about what we were actually going to be doing and the types of kids that we were going to be seeing, and maybe a little bit more around something to prepare us for the complex social situations (Kirsty, Student).

Jessica felt that gaining an understanding of the complex neurological conditions was something that they needed to learn “on the job”,

I think in terms of paediatric physio skills I was lacking because we don't do a lot of that at uni. This wasn't a massive problem, it was okay to learn those skills once we were on the placement with [our supervisor]. Everyone who was there obviously was quite motivated [in paediatrics] so would do their own research. In terms of knowing what the actual placement would be like, I was happy (Jessica, Student).

The students also noted that it would have been useful to have an understanding of why it was beneficial for the AHS pupils to have therapy delivered *at school* rather than at home. This became evident to Kirsty during the placement but having had an understanding of the complex living conditions for pupils prior to commencing would have assisted the students with both their preparation and the initial therapy they delivered at the school,

It would have been nice to have a little bit of preparation, little bit of pre warning so that we knew that when we went in we weren't making programs for these kids to do at home, we were making stuff that they could [only] do at school (Kirsty, Student).

Although they were given some readings to do prior to the placement, most did not feel that they were prepared for the complex conditions they were presented with. Very few of the students had had any experience with paediatrics and it was noted that paediatric physiotherapy was not something they focused on in their course. Hence, they felt they were “going in a bit blind” (Anna) and would have liked more pre-placement preparation in regard to specific conditions. Kirsty explains for which conditions specifically,

Cerebral Palsy, autism spectrum disorder, they're probably the main two. Because all the others, they were sort of obscure ones that weren't super common. And there was only one kid with each of them whereas ASD and CT, there were multiple kids with those and it would have been nice to prepare for them a little bit more. Especially the ASD kids, to learn communication strategies and redirecting strategies for if they come up to you and grab you or something like that (Kirsty, Student).

The Flinders students in cohort two noted the benefits of learning about the placement from their peers in the first cohort. In preparation for anticipated placements in 2020, the Flinders University-based supervisor organized for two students from the first cohort to present to the first-year students in the Masters of Physiotherapy program. During this presentation the students emphasized the “benefits and rewards” of the placement, as well as what a unique placement it was and the “diversity of clinical experience” it offers (Tracey Radford, University-based Supervisor, Flinders University).

3.4 Cultural safety

Ensuring cultural safety was a key focus in preparing the University students and within the broader planning and implementation of the project. AHS is a culturally diverse space with both pupils and staff coming from several different cultural and ethnic backgrounds. As noted above, 80% of the pupils at the school are Indigenous and from family groups within the Alice Springs region and surrounding communities (see map on page...). Almost 60% of the pupils who participated in the project were Indigenous. It was essential that the project was delivered within a framework of cultural safety, and that the visiting students had an awareness of safe cultural practices including principles of intercultural communication and key elements of Aboriginal culture.

Cultural safety is a reflexive process of understanding the potential unequal power relationships which can commonly occur in healthcare settings perpetuated through the privileging of dominant western healthcare practices by health professionals and systems (Ramsden, 2002). Such power imbalance can result in systems and services which fail to meet the needs of patients and clients from culturally diverse

backgrounds. Developing culturally safe models of healthcare is core to the values and training provided by the Centre for Remote Health, the integrator responsible for delivering the project, hence, was a key consideration in the design of the student-learning project.

Recognising most students are unfamiliar with Central Australia and working with Indigenous people, CRH runs a mandatory one day workshop, *Introduction to Central Australian Aboriginal Cultures and Context*, based on National Aboriginal Community Controlled Health Organisation (NACCHO) Cultural Safety Training Standards (NACCHO 2011, see page 24). The students participated in the workshop on the day prior to commencing their placement at the school. Aimed at students and others undertaking employment in Central Australia, the course “explores cross cultural communications and introduces the concept of cultural safety and Indigenous Cultures in Central Australia. It also outlines the health status of Indigenous peoples, the social determinants of health and how health influences all aspects of life” (Centre for Remote Health, 2020). This was described by the students as “really helpful” given that the Indigenous components of their Masters are broad and not specific to Alice Springs region,

It [The CRH Cultural Awareness Course] was really helpful actually. We do Indigenous health topics at uni but this one was really good because it was so specific. What we do at uni obviously has to be quite broad around Indigenous health, so it was good to get a bit more insight into the culture and issues specific to Central Australia, and to be provided with specific expectations and guides on behaviour. When we started the placement, we were also able to learn more through talking to the pupils' families (Jessica, Student).

As noted by this student, another source of cultural information was through the parents and carers of pupils with whom they interacted. Discussed later in the report (see Section...), some parents met with the students to provide them with background information about their children in order for the students to gain an holistic insight into the pupils' lives and consequently be better able to plan and deliver effective therapy. During these conversations and home visits to deliver therapy, further information emerged which deepened the students' knowledge of the cultural context for the pupils and their families.

The close involvement of the school Aboriginal Education Officer (AEO) and one of the Special Education Support Officers (SESO) was essential to guiding and monitoring the cultural safety of the project. These two Indigenous staff members played a crucial role in supporting the consent process, liaising with families of referred pupils, mentoring the students and participating in the core project team.

Commented [RB8]: Annie – do you think it's ok to identify them as Indigenous?

Commented [AF9R8]: This might be a question for Sheina. I think it adds weight to the report

The students' immersion in the school context during their placement and their continuous learning from a variety of sources further enabled them to modify their practice and personal approach to working in a culturally safe way. Other elements in the design of the project which emerged as contributing to students' awareness of cultural safety included opportunities to observe the way the school staff interact and communicate with the pupils and families, a placement-based visit to a remote community, and working together as a team which provided them with regular opportunities to discuss and share what they had learnt regarding cultural safety i.e. cultural awareness and cultural sensitivity. An important contribution to the project being delivered in a culturally safe way was the recruitment of a supervisor who was familiar with the social and cultural context of Central Australia.

3.5 Supervision

3.5.1 Recruitment of an appropriate supervisor

The placement-based supervisor was a key role in the design of this project. Unlike student placements in clinical settings such as hospitals or sports clinics (see Section...Student section), the school was not a clinical environment and hence did not have an existing physiotherapist to provide supervision. Additionally, in contrast to other AH professions, for example, speech pathology, physiotherapy students require close contact supervision throughout their placement. This was critical given the complex paediatric and neurological conditions of the Acacia Hill pupils, conditions which were not typically seen by students on their other placements.

A consideration in the recruitment process was the multi-layered nature of the candidate's role. The program required the supervisor to both operate as a physiotherapist specialised in paediatrics responsible for delivering a clinical service, while simultaneously operating in a supervisory and teaching role for the students. In typical student placements the supervisor has an ongoing role "on the ground" and hence can weave the supervision into their existing duties; but neither the school nor the DoE currently hosted such a role. Thus, an important component of the position was the need to sensitively create a new niche in the school and build rapport with the school staff.

The complexity of the role presented two barriers: recruitment challenges associated with the complex social and cultural conditions which deter health workers coming to the NT (Hall, 2012; Bent, 1999) and the pilot-nature of the project which meant there were lots of "unknowns" as to how the project would unfold. Thus, the following criteria were identified by the stakeholder committee for an appropriate placement-based supervisor:

- A strong clinical background and experience in paediatric physiotherapy experience,
- Knowledge of the Central Australian context,
- Experience working in a school,
- Skills in supervising tertiary students,
- A strong knowledge of how services interact and complement each other, and
- Links with other services involved in the wellbeing of AHS pupils i.e. Health services, DoE administrative staff.

An additional hurdle in locating an appropriate supervisor was the limited existing local capacity in regard to physiotherapy services in Alice Springs. Student placement supervisors are commonly recruited from the placement site. As well as there being no school-based physiotherapists in Alice Springs, the services which employ physiotherapists (the Alice Springs Hospital, the NT Government community health service, Aboriginal Health Services and a private practice) are at saturation and could not afford to let go of any of their staff for five to six-week blocks to supervise the students. A further complication was finding a supervisor who was available for two blocks of time in a calendar year.

Drawing on their networks and combined knowledge of the Central Australian allied health scene, the core project team overcame these barriers and identified a supervisor six months prior to the first placement taking place. Anne Bent came into the role with over thirty years' experience in paediatric disability including working in Central Australia. For seven out of the ten years she worked in Alice Springs, she was employed by the Department of Education as part of the "student services team" who provided therapy services and advisory teaching services to Alice Springs schools, including Acacia Hill. As well as extensive clinical experience, she had worked as a clinical educator for a tertiary physiotherapy program and as a subject coordinator for allied health students. In addition, she had extensive experience over many years supervising and mentoring students in clinical settings. This suite of relevant skills materialized as being a key strength to the overall success of the student-learning project.

3.5.2 Supervision of the students

The primary role of the placement-based supervisor was to work alongside the students and transfer her skills as appropriate. This took the form of her demonstrating the practice, and then handing over to the students who became increasingly independent in undertaking the various tasks throughout the four-week placement. The supervisor saw her role as one by which, *"in simple terms my role was to teach them the trade and be ultimately responsible for anything the students did"* (Anne Bent, Placement Supervisor).

The typical activities the supervisor undertook with the students alongside the school pupils included:

- Demonstrating assessments and physical handling,
- Instruction on the facilitation of normal patterns of movement to promote motor development,
- Showing the students ways to use games to make therapy interactions “fun”,
- Demonstrating ways to inhibit abnormal movement patterns,
- Demonstrating ways of providing physical stability to the child,
- Assessing the need for specialised equipment to assist a child’s function and development and prescribing appropriate postural and mobility aids according to the pupil’s needs and size,
- Supervising and editing student reports for each ‘client’ and reviewing the physiotherapy programs detailing ongoing intervention to be provided by the school staff, and
- Where necessary, act as a liaison between the students and the other services relevant to a pupil’s needs e.g. the Orthotic Clinic at the Alice Springs Hospital.

The supervisor was aware of the skills the students brought with them and their minimal experience in five key areas relevant to the placement: paediatrics, neuro-disability, providing physiotherapy services in a school context, working and living in a remote area, and working with clients from Indigenous and disadvantaged backgrounds. Hence, she framed her supervision in a way that supported the students accordingly. For example, offering background and contextual information about pupils provided a rationale behind the required approaches to therapy. This gave the students an understanding of, for example, the limited time some parents/carers have to devote to a child’s physiotherapy activities at home due to limitations and demands on families caring for children in challenging socio-economic circumstances.

During their contributions to the evaluation, the students, staff and parents noted the strengths of the supervisor. They commented on her expertise, passion, commitment to social justice, her strong capacity to teach and how the students benefited from her deep knowledge of the context which contributed to their skills beyond clinical roles. The students recognized the supervisor for her ability to boost their confidence while practising their trade in an unfamiliar context,

She was a good educator in a way that encouraged you to not be afraid to do things in a different environment. You can sometimes be a bit uncertain, doing stuff [somewhere] like that versus when you are in a familiar clinic or hospital (Campbell, Student).

Tom also drew attention to Anne's gentle approach to supervision, noting that he felt comfortable asking questions throughout the placement,

She was really approachable. You could ask any question. Some people would say, "No question is a dumb question", but she really made that clear and didn't imply that you should know the answer. She is such a great educator. She always spoke through why this could be happening, the background of this condition, how that affects this aspect and that aspect and so on (Tom, Student).

As the following student describes, the context enabled the students to have a more "personal" relationship with their supervisor in comparison to clinical placements. This contributed to their positive experience,

She's so knowledgeable and has so much experience but was also so passionate about her work which was great to see. Because of how passionate she is she was really interested in our learning and our knowledge and trying to help us improve. I thought she was fantastic. She wanted us to enjoy our time in Alice as well - she and her husband took us camping one weekend and we had a great time. It was really nice to be able to have more of a personal relationship. And we still keep in contact - she was one of the best supervisors I've had (Jessica, Student).

Another student draws attention to how the supervisor assisted them to "think clinically". She also notes how the students felt comfortable being "open" with her, a further indication of the supervisor's capacity to mentor,

I think she was really good at answering our questions and making us think clinically, and also showing us how to do an assessment. We were pretty open with her saying, we don't know where to start with an assessment with the really younger ones, the three year olds and four year olds, so she was quite good showing us that and then letting us then do it with her, with her supervision (Imogen, Student).

School staff and parents were also complimentary of the supervisor's approach and the way she both fitted in at the school and supported families. Her previous experience working in schools in Alice Springs provided her with a strong understanding of the context and how to respectfully work within the school environment, a suite of skills and knowledge that was invaluable given the pilot nature of the project.

3.5.3 Dual nature of supervision role: supervisor and school physiotherapist

As the placements progressed it materialized that there was a great deal of administrative work to do as part of the supervisor role. Although extensive support was provided by the school, the expertise of the supervisor was often required for liaison with other relevant agencies and families. This often required her to be “in two places at once”. Due to the nature of the placement whereby it was mandatory for the supervisor to be close at hand for the students to undertake assessments and therapy, this occasionally left the students in the lurch while the required documentation or communication was occupying the supervisor, for example, trying to organise specialised equipment. The students were patient and understanding of the need for the supervisor to attend to these other responsibilities. However, they suggested it would have been beneficial to have an additional person working closely with the supervisor to carry out administrative tasks in order for them to have more one-on-one time with the supervisor for support and supervision, as described by the following students,

I think one of the hardest parts...it would have been good to have more time with [the supervisor] rather than have her worrying about so many other things. I feel like it decreased our exposure a lot, because we spent a lot of time waiting around for things to happen, because [the supervisor] had to make them happen before we could do anything, which was quite frustrating (Anna, Student).

And,

It was hard for her to supervise and give as much focus as you'd get on other placements just because she was having to spend so much time trying to chase down people for consent forms and get equipment and things like that, and we were spread out all across the school at different times. [However] I think considering how hard it was, it was very good supervision (Campbell, Student).

A key member of the stakeholder committee acknowledged that the complexity of the supervisor's role had not been anticipated leading up to the project's implementation,

I think we didn't pay her enough for all the stuff that she did. She couldn't go in there and just supervise students. I think that was one thing we didn't realize when we were setting this up. The service that she has provided - not only to our students, but also to a range of other situations, with the school, with other schools and also helping out other

*services - it has just been too good to be true really in that regards
(Tracey Radford, University-based Supervisor, Flinders University).*

3.5.4 University-based supervision

In addition to their day-to-day supervision at the school, the students liaised with their clinical educators based at their respective universities while on placement. As well as being key in the planning and design of the project, Tracey Radford, the Flinders University clinical educator in the Master of Physiotherapy program described her role as a “support person and liaison” for the students while they are on placement. She also offered support to the placement-based supervisor and ensured she was conversant with the university requirements for the students which was appreciated,

It was a great support for me as the placement supervisor on the ground to have Tracey (the Flinders University supervisor) available in Adelaide as a sounding board for the many queries and puzzles as the placements rolled out. I very much appreciated her prompt responses to my phone calls and emails during both placements and always felt that she made the time to listen carefully. Most of the issues were fairly minor but she always provided thoughtful and helpful advice and it was good to know that she was there to answer any query and confirm or support a specific course of action (Anne Bent, Placement Supervisor).

The students reported the Flinders clinical educator was very receptive to their needs, quickly responding to any issues which arose. Given the small size of the cohort, the clinical educator was able to offer personalized “pastoral care-type” support to the students⁴ (Tracey Radford, University-based Supervisor, Flinders University). The University-based Supervisor’s role included coordinating a teleconference for each group at the end of their second week during which she offered support, discussed issues they found confronting or challenging, provided an opportunity to share clinical experiences, and offered a reminder that they could access the university-based student counselling service. Suitability to her support role was enhanced by her knowledge and passion for the context,

I had a bit of an attachment to the Territory and then when I started working with CRH [Academic Lead] I started to develop much more of a love for Alice Springs. I'm very interested in the concept of student-led services for underserved communities and I know the Territory has a lot of trouble with getting staff and services for rural and remote locations.

⁴ To encourage the camaraderie of the group, the ACU student joined the Flinders students in the support sessions with the Flinders-based supervisor.

We just wanted to see if we could be part of a solution for that (Tracey Radford, University-based Supervisor, Flinders University).

3.6 Duration of placement: A four-week block of service delivery

The placements were planned as four-week blocks where the students worked full time to both fit in with the university's timetable and the schools schedule, and be cost effective. Typically student placements are designed as four days a week over five weeks. However, shortening it to four weeks reduced costs for the supervisor and regarding student accommodation. It also made it more feasible for the students who took unpaid leave from jobs in Adelaide and Sydney.

For those unfamiliar with the practice of physiotherapy it may be asked, "Are four week blocks of therapy beneficial to the AHS pupils?" However, as will emerge in the rest of this report, the students were able to achieve a great deal in four weeks with significant outcomes for the pupils involved including increased function, mobility and enhanced participation in school activities. This is noted by the students,

We were only there for four weeks but there were quite a few things that changed significantly, even in such a short time (Jessica, Student).

And,

Your initial thought would be, "What's the point of giving someone intense therapy for four weeks and then going?" But there is evidence to say there is a benefit from it which just makes it [the placement] more worthwhile (Anna, Student).

Kirsty Jackson, one of the Flinders students in cohort two, addressed this issue as a component of her assessment during the placement. She researched the question "Do intensive periods of physiotherapy input produce worthwhile long-term benefits for children with cerebral palsy?" Her findings are included here to support this aspect of project design.

She found two studies of projects (Hendershot, Ferrante, Baranet, Carey & Heathcock, 2017; Trahan & Malouin, 2002) which provided intense intervention over four weeks and consequently demonstrated improvements in gross motor skills, fine motor skills and cognitive outcomes in groups of children with cerebral palsy. Additionally, Trahan & Malouin (2002) "showed that the participants not only made improvements during

the intensive physiotherapy periods but that they also maintained them in the 8-week rest periods” (Jackson, 2019). An additional study which the student sighted,

...showed that in the long term intensive physiotherapy produced similar improvements in motor function to routine physiotherapy treatment. Although intensive physiotherapy sessions initially produced greater improvements, by the 6 month re-assessment both groups showed similar improvements (Bower, D, Michell, M, Burnett, M Campbell & D Mclellan. 2001 cited in Jackson, 2019).

The research undertaken by Kirsty presents an evidence base to suggest that four-week blocks of intervention for the AHS students can potentially fill a gap in regular physiotherapy. Four weeks was also flagged as a manageable “finite period” in which parents/carers, school staff and the pupils themselves could focus on particular aspects of the children’s needs without losing momentum and motivation. However, it should be noted that the conditions for delivering the therapy at AHS did not equate to the consistency of services referred to in the studies. The lack of consistency was influenced by pupil non-attendance at school due to transience, illness and other factors. Although there were some significant improvements over the four weeks as will emerge in the following chapters, the supervisor indicated that minor improvements were more likely and highlights the importance of the ongoing intervention in the period *between* the blocks of therapy,

So the focus of the four weeks is handling, mobilizing, and in some instances, providing daily interventions so that it was possible to see some minor improvements e.g. improved head control. I wouldn't dream of saying in four weeks significant advances can be made, but because of the gap between the first and the second placements, those programs were continued to some degree by the school staff and that's where you hope that there will be some motor skill building of the pupils. And when the second group came along, then they were able to provide that hands-on work (Anne Bent, Placement Supervisor).

In addition to being supported by the literature, the “gap” between “bursts” of therapy provided the staff and parents/carers with an opportunity to participate in the therapy. This was beneficial in terms of the pupils having close and ongoing relationships with these adults, but also, as noted by Imogen, it enhanced the sustainability of intervention given the minimal access to physiotherapy services for many of these pupils,

I think there is benefit from short periods of therapy. It gives the teachers an opportunity to be able to implement [the therapy]. It'd be great to have a physio there all the time but I think it could almost be of more

benefit to have the teachers and the [AHS] pupils in charge of their own therapy and the parents be involved, rather than relying on a service that's there all the time, because then they finish school and they're without that service (Imogen, Student).

As well as the possibility of clinical improvement over four weeks, consistent and regular therapy by the *same* group of students provided an opportunity for pupils and therapists to build the rapport necessary for effective treatment. One of the parent/carers describes her appreciation for the intense long-term intervention of the students,

Four weeks is massive. But also, even when the first lot left I felt like I knew them and when this [second] lot left, I felt like I knew them too. Somebody said to me, "it's only four weeks", but it feels like so much longer because of the interaction and how excited they were to see us. I went in to the school one day. The students were there to look at another pupil and I walked in and someone said, "Anne-Marie's here!" and they all came around and went "Hi!" That kind of stuff is really lovely...because [as a parent/carer] you get caught up in these ruts and jobs like, "I've got to sign something here" and "I've got to take someone to the doctors", all that kind of stuff, that's your headspace. It [the response from the students] was really lovely (Anne-Marie Temple, Parent/Carer).

The manager from CDT also commended the duration of the placement, noting that it provided the students and pupils with the necessary time to establish positive and trusting relationships,

It's four weeks of really intensive relationship building which is really good for any therapeutic relationship. As a therapist, we want to have that really nice relationship with kids and with their families where we can or in this case, with their teachers (Manager, CDT).

How the project was able to ensure sustainability beyond the two four-week placements is discussed further in [Chapter...Section...](#)

4 Transition between cohort one and cohort two

A key consideration in the planning of this project was the transition between the first and second cohort, both in terms of sustainability and addressing concerns or issues which arose in the first placement. The first cohort was essentially a "pilot group" for

the project and hence, they had foundational work to implement and teething issues to overcome. However, the time between placements enabled the stakeholder committee to address concerns from the first round. For example, funding was found to employ the supervisor for an additional week prior to the second group's arrival. This enabled her to address logistical and administrative tasks which had previously reduced supervision time. Additionally, there were fewer delays associated with gaining consent for cohort two as anticipated by a cohort one student,

The second group of students are probably going to have a better experience with that because they would have been able to pick up with a lot of the stuff we were doing and [then] wouldn't have had so much initial set up and trying to identify student needs and stuff like that (Campbell, Student).

Hence, there was a greater deal of preparation, readiness and "knowing what to expect", with the arrival of the second cohort. While it was the job of the first group to establish the foundations for the project, the second group were able to build on those foundations: continuing one-on-one therapy, reminding and reinforcing plans the first group had established for school staff, and finding new ways of improving the activity and function for the participating pupils.

The ten-week gap between placements contributed to a longevity of the project which, rather than resulting in a gap in services, enhanced the participants' experience. For example, the gap provided time for the teachers and parents/carers to practice implementing the plans set in place before the second group arrived. This was reported to have provided a purpose to the activity and motivation to be able to demonstrate an improvement in function and mobility to the second cohort and the supervisor.

As well as observations by the supervisor and school staff who had the opportunity to see the "improvements" between and during both cohorts, the students discussed and reflected on their achievements. Imogen from cohort one describes how it was great to hear stories from cohort two's experience,

I heard from the second group that went [that] one of the boys is walking with a frame now and the other boys [would] roll around and play a bit more, which I feel if we didn't go and we didn't start that process then it never would've happened (Imogen, Student).

Furthermore, the 'gap' between placements provided some much-needed time for equipment requests and orders to be fulfilled. For example, a standing frame, which had been ordered earlier in the year, arrived during the 'gap' between placements. Hence, the second group were able to adjust it for the pupil's use and advise school staff on its

use within the classroom. Additionally, due to school renovations, the hydrotherapy pool was not accessible for use by the first group. Consequently, they focussed on 'land-based' programs, whereas the second were able to make extensive use of the pool which had reopened by September. This variation gave the AHS pupils access to different sets of experiences and opportunities between cohorts.

In summary, the strategies put in place to ensure that there was an effective transition between cohorts one and two included:

- Writing detailed formal reports for each pupil which were handed over to the incoming group,
- Sharing the therapy and activity plans with the incoming group,
- Including a set of recommendations for therapy to be delivered by cohort two e.g. progressing mobility, making sure the recommended stretches are still effective or need to be advanced, reassess where necessary,
- Consistency of supervisor for both groups,
- Sharing of information between Flinders-based students in between placements, and
- Regular meetings by the stakeholder committee to address and improve on issues that had arisen with the first group.

4.1 Other schools' interest in the program

Stories about the positive impacts of the first placement at AHS made their way around town and between members of the core project team. Interest from other schools in Alice Springs resulted in conversations and consultations leading up to the second placement and the project was extended to provide physiotherapy services for another school.

Liaison with the Special Education teacher at Bradshaw Primary resulted in the students doing a series of group therapy sessions with four pupils at the mainstream government primary school. Student feedback about the opportunity to expand their services into Bradshaw focused on the benefits of being able to work with pupils with a different set of conditions to those at AHS. Additionally, they were exposed to another school context which further broadened their insight into physiotherapy practice in schools.

Due to limited opportunities for staff and parent interviews, thorough discussion about the experience of Bradshaw school is beyond the scope of this report. However, the interest and consequent involvement of other schools in the program indicated that the project model "got people talking and thinking about how to do things, which is just fantastic" (Tracey Radford, University-based Supervisor, Flinders University). This was

further evidenced by receipt of invitations to CRH staff to meetings in Darwin with Department of Education staff who were interested in learning more about the model and how it could be applied to schools in the Top End of the Northern Territory. In early 2020, the NT Department of Education released a small amount of grant funding that schools could apply for to support allied health student placements in schools.

4.2 Resourcing, funding and support of the project

There was minimal “cash” outlay associated with this project with significant support found from within Acacia Hill School and the Centre for Remote Health. Funding received from the NT PHN was allocated to support accommodation and salary for the supervisor. Once it became clear the amount of time required by the supervisor had been underestimated, CRH redirected internal funds to ensure the salary. CRH also provided:

- Subsidised rent for students
- A one-day workshop on Cultural orientation
- Use of bikes and a vehicle for the students
- A vehicle for the supervisor
- Free internet in the accommodation
- Office space and IT support for the supervisor
- Meeting space and video-conferencing facilities for the students

Other costs included additional hydrotherapy sessions for the students prior to coming which were facilitated and paid for by the Flinders School of Physiotherapy, and the cost of the evaluation report which came from RHMT funding through CRH.

Although it was primarily the School Principal who was initially involved in the planning of the placement, it quickly became clear that she didn't have the capacity to offer the daily support and administration required. AHS chose to allocate 0.5 Full Time Equivalent (FTE) of one of the Special Education Support Officers (SESO) whose role was to *“broadly co-ordinate the interface between the students and the supervisor and the school”* (Glenn Irvine, SESO, AHS). This included touching base daily with the students and supervisor, facilitating the consent process, supporting relationships between staff, parents, students and the supervisor, attending stakeholder meetings, liaising with school staff regarding the programming of therapy sessions, and being the primary point of contact for any issues which may arise. Necessity of this position *“dropped considerably”* with the second placement *“because the processes and the structure was in place”* (Glenn Irvine, SESO, AHS). Additional administrative time and time in planning, implementation and evaluation was provided by the School Principal. The Assistant Principal also had a key role in supporting the program which benefited from her deep knowledge of the students, teachers and the school programming.

Feedback from the students and the supervisor indicated that they were incredibly satisfied with the support they received from AHS. They reported that everyone at the school was consistently warm, friendly, welcoming, accepting and supportive of the student placement, and “*did everything they could*” (Kirsty) to enable the students to undertake their therapy sessions; indicative of the value the staff placed on having the student placement in the school. The students were very dependent on the school staff to inform them about pupils and processes in order to be able to design and deliver an effective service. As one of the students recalls, a particular staff member who was an essential “knowledge bank” about the kids assisted in enthusing the pupils about the student service,

She [one of the SESOs] was really good because right at the start we were sitting in on different classes to work out who we thought would be high priority for physio and she was fantastic just involving us in the lessons and telling us about all of the kids. Her relationship with the students was fantastic [and] it was just really nice seeing how much she cared and how much she knew about the students. It was really helpful just being welcomed like that and she was such a good knowledge bank about the kids and really good at getting them excited and enthusiastic for physio (Jessica, Student).

The school provided a base and internet access for the students. There were a few logistical challenges regarding these resources due to significant building works during the first placement. However, as indicated by the Principal, the student team were very understanding and happy to work within the school’s means. In fact, the students observed that the necessity for them to be based in the staffroom during the first placement resulted in greater opportunity for interaction with the staff which in turn contributed to the effectiveness of introducing the project to the school.

An ongoing challenge throughout the project raised by both the staff and students was access to space for undertaking therapy. The school was full to capacity and there was no “allocated space” to conduct therapy as indicated by the following two students,

It would have been really good had we had our own space a bit more. There isn't really too much they can do about it because they only have limited room, but it also would have been really great to have a different room to do therapy in because doing therapy in the classroom is pretty tough when there's other students around (Anna, Student).

And,

Another thing that was challenging was there wasn't a therapy space for us to use, and I guess because something wasn't already established we had to try and work between empty classrooms and with the teachers for what times worked best for those students, when to do therapy and when to do assessment (Imogen, Student).

Hence, the team needed to liaise closely with classroom and admin staff in order to identify the most appropriate places to conduct therapy; in empty classrooms, or in classrooms alongside the other children in the class. Feedback from teachers indicated that the students were very respectful in the way they organized this, and likewise, the students noted the support of the school staff who would sometimes arrange an alternative activity for the other children during therapy sessions. Not having a separate “therapy room” also had benefits such as close observation of the therapy by school staff, and exposure to the regular classroom activities for the students.

Although the students received support in the way of subsidised rent, transport around town, and a university-funded stipend, they were required to cover costs of flights and rent upfront and reimbursed on completion of their placement. This put financial pressure on some of the students, especially as they had to take unpaid leave from jobs back in Adelaide and Sydney, as described by Campbell,

It's probably one of the biggest detractors from going on a project like that, that you're going to have to pay for all your living expenses out of pocket. Alice Springs was better than most in that you get a small stipend and your accommodation [paid] back but it's still a lot of financial pressure to have to live with a reduced income or no income while on placement...a lot of the others said it was really tough - having to pay the rent in Alice Springs plus the rent in Adelaide at the same time so their funds were being drained twice as fast as they normally would... I think there were a couple who were getting very close to zero dollars in their bank accounts (Campbell, Student).

Another student had back-to-back rural placements so it was “a good ten weeks” away from her casual job,

It was just hard because it was quite expensive right at the start. There's a big cost upfront to buy your flights and pay for the accommodation and the bond. This was reimbursed, but I didn't get it back until two or three weeks after I got back to Adelaide...By the end of it I didn't really have any money left (Jessica, Student).

The School Principal noted that the financial pressure on students to do their placement at AHS was an indication of their commitment and enthusiasm to the placement.

4.3 Communication

Given the pilot nature of the project and the collaboration required to “get it off the ground”, establishing effective means of communication between all parties was a critical element of the process. Communication between stakeholders, within the student team, and between the student team and school staff was reported as being effective, pleasant and reliable. Email, phone calls, one-on-one meetings, presentations and stakeholder committee meetings were all used to plan and prepare for the placement.

The main period in the placement in which participants noted challenges regarding communication was the start of the first placement when all were finding their feet and the school was getting used to having a new service operating on their turf. As one of the school staff noted,

[We only knew] the physical ways it would work. We didn't know because we hadn't done it before. That took a little while to resolve itself. [For example] some classrooms prefer interaction at a certain time of day or at a certain level. Those things had to be worked out but [the supervisor] was really good at backing off when she needed to and going forward when it needed to be done. Not everything worked and [the supervisor] occasionally came to me and was quite frustrated. I encouraged her not to be too worried about that, that's the way that it goes, and she took that on board. I think it was a good relationship that we had, we trusted each other that we'd do the right thing. I'm confident that that was a good thing for the program because we spoke very frankly with each other and we listened to each other when things were going either right or wrong (Glenn Irvine, SESO, AHS).

An issue from the students' perspective was that school staff did not fully understand the role and the potential of the student-learning physiotherapy service. However, as relationships developed and therapy commenced communication improved,

I think when we first got there, there was a bit of a misunderstanding about what services we could provide and which kids would most benefit from the style of placement, as a short intensive block, but I think that improved a lot by the end (Imogen, Student).

One student attributed the organizational challenges during the first placement to the pilot-nature of the project,

I think they did a pretty good job of preparing us given it was a difficult situation but it seemed like there was a decent amount of information that hadn't got through to us but also hadn't got through to the supervisor, staff at CRH, or even to the Principal of the school. There was a bit of uncertainty about how we'd actually be going about doing stuff, [who] we would be treating, and would we have a therapy space to treat people in? Would we be seeing people in a classic physio clinic where you have half hourly or hourly appointments, or would we be more vaguely integrated into the school? There was a lot of uncertainty about that, but we found when we actually got there it was because they were still trying to figure out how things would actually work because [they had] never done it before. We were given a heads up, but it was still surprising at times how chaotic it was with pretty much half the school out of use because of construction (Campbell, Student).

Another student from cohort one provided some feedback on how they overcame these initial struggles with communication between the student team and the school staff in order to make things run more smoothly,

The first couple of weeks I took it under my wing to make a bit of a timetable for our days; what kids were free at what times and what worked best for the teachers. Then we were making the most of our day. Otherwise we were all running around planning and without putting anything on [paper] it was all pretty messy. I think making a therapy timetable, as such, which could change day to day or week to week, and getting good communication between the teachers about what worked best was probably the biggest thing that got the ball rolling (Imogen, Student).

As described in Chapter Five, the uncertainty of how the project was going to unfold provided the physiotherapy students with experience in project management and implementation which none of them had gained on previous placements.

The project team suggested the students do a presentation about their work to both the school staff and a public audience towards the end of their placement. This provided an opportunity for the students to reflect on their experience, to enhance their presentation skills and for the audience to gain a deeper insight into the impact of the placement. Although the presentations received positive feedback, there were some comments made indicating that the staff were unaware of the potential of the student-

learning service. One of the students suggested that a presentation to school staff earlier in the placement (or even before) would have been beneficial to gauge staff expectations, inform staff of the potential services and *“then maybe some better goals could have been set throughout the placement”* (Imogen, Student).

4.4 Timeline of project and evaluation (funding?)

Date	Event
2014	AHS worked with CRH to establish and support student placements for Development and Disability students from Flinders University.
2015	Annie Farthing (CRH) approached AHS School Principal regarding the possibility of Physiotherapy student placements.
September 2018	Stakeholder committee meets for the first time, following which they had monthly meetings.
December 2018	Supervisor is recruited.
January 2019	New Principal commences at AHS. CDT commences transitioning eligible children to NDIS and gradually ceased providing services to children with disabilities.
February 2019	Evaluation plan developed by Flinders and CRH staff and reviewed by the stakeholder committee. Physiotherapy student application process closed and selection commences. AHS students in need of physiotherapy identified by school staff.
March 2019	Information about the project for parents/carers and staff at AHS is distributed. Students introduced in the AHS newsletter.
April 2019	Information and consent forms distributed to AHS parents and carers of referred students. Ethics application is submitted to Central Australian Human Research Ethics Committee to publish results of evaluation.
13 th May 2019	Introduction day for first cohort of students at CRH.
14 th May – 7 th June 2019	First cohort of physiotherapy students at AHS.
4 th June 2019	Cohort one students presented to the AHS staff meeting about their work in the school.
5 th June 2019	Cohort one students did a public presentation at CRH about their work at AHS.

30 th June 2019	Transition from CDT to NDIS to be completed for all eligible AHS pupils.
26 th August 2019	Introduction day for second cohort of students at CRH.
26 th August 2019	Acacia Hill School building renovations completed and officially opened.
27 th August – 27 th September 2019	Second cohort of physiotherapy students at AHS.
16 th September 2019	Evaluation officer employed to commenced evaluation.

Figure 10. Timeline of project planning and delivery

4.5 Conclusion

This chapter has provided an insight into the process applied to the project, including the planning and the logistics of its roll out. Reflective and regular feedback mechanisms, transparency, and effective means of communication assisted in addressing issues pertaining to the pilot-nature of the project, and modifying them in response to participants' needs. The next chapter presents the findings and discussion around how the student-learning placement provided a physiotherapy service in an underserved area

5 Findings Two: Delivering a specialist paediatric physiotherapy service at Acacia Hill School

5.1 Introduction

The student-learning placement at AHS provided an intensive block of physiotherapy intervention which had a profound impact on the pupils, as well as on their teachers and parents/carers. In addition to providing a service during the four weeks the students were “on-the-ground”, measures for sustainability were woven into the program. By the end of the two placements, the student team had undertaken 145 individual therapy sessions over 147 hours. This included 16 home visits with therapy assessment and intervention to four different homes, including two visits to pupils residing in remote communities. As will emerge in later discussion, in addition to individual therapy, the students initiated a series of group therapy sessions in the school and over the two placements provided 23 group sessions. The students also undertook 95 hours of reporting in which they wrote reports and developed comprehensive plans for the pupils to encourage ongoing therapy by the school and families (see Section...). This data is presented in Table 4.

	Individual sessions	Home visits	Group sessions	Therapy time (hours)	Reporting time (hours)	Referral to other service	Accompanying pupil to another service
Cohort One	87	12	19	125	49	5	
Cohort Two	58	4	3	79.5	46	10	1
TOTAL	145	16	22	204.5	95	15	

Table 5. Physiotherapy intervention by cohort

Overwhelmingly, the feedback provided about the program from participants, particularly school staff and parents/carers, was that the placement provided a much-needed service in the school which had previously been absent, as described by the Assistant Principal,

I think the biggest benefit has to be the fact that the pupils are having some form of service...having this sort of program where we've got some intense therapy happening with a very clear strong focus helps us meet the needs that are specifically related to the school situation (Sheina Treuel, Assistant Principal).

This chapter will describe and discuss the means by which the student-learning placement delivered a specialist physiotherapy service at AHS. It focuses on the values of the service to the pupils and the school more broadly, the ways in which the parents/careers appreciated the service, how the students positioned themselves in the school, and the measures which were taken to enhance the sustainability of the service in order for it to have an impact beyond and between the two placements.

5.2 Value of the student-learning service to the school

5.2.1 Meeting the Three Tiers “Response to Intervention” (RTI) model

Within the design and planning phase of the project, the anticipated outcomes were grounded in one-on-one physiotherapy intervention for the referred AHS pupils. However, the immersion of the students into the school context for four weeks had an unanticipated outcome: the potential for them to have an impact beyond individual therapy. The students’ presence and the way in which they positioned themselves in the school (see Section...) resulted in strong and trusting relationships with pupils, staff and parents, and they gained a deep insight into the context which enhanced their knowledge around effective ways they could apply their skills. These assets resulted in the development of a physiotherapy program that met the objectives of the “three-tier” model, an approach valued by schools for its educational and learning outcomes at the individual, class and whole of school level.

The three-tiered approach to learning, also known as a “response to intervention”, supports students with learning disabilities to reach their capacity. Within this model (see Figure 10) it is understood that:

- 80% (first tier) of students require a level of intervention whereby the school’s pedagogy is the main focus,
- 15% (second tier) of students require additional support, and
- 5% (third tier) of students require intense intervention which is typically one-on-one.

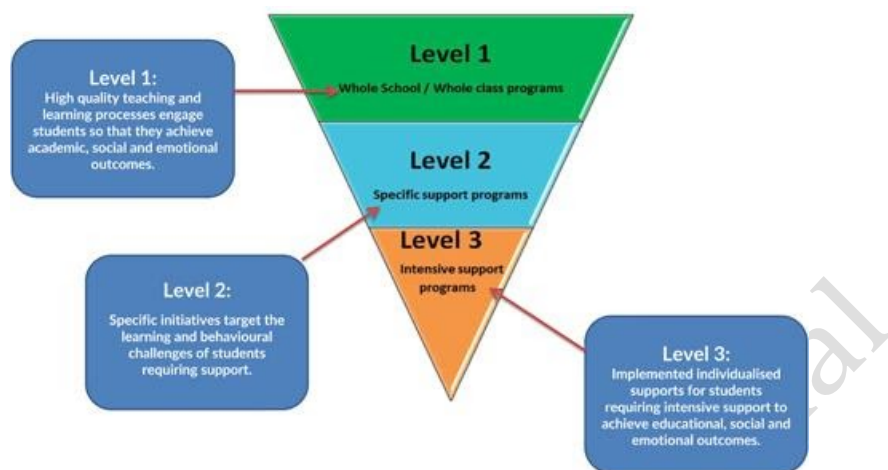


Figure 11. Disability response to intervention levels (Northern Territory Department of Education, 2020)

As noted by the School Principal, it is typically just the “pointy end” or third tier that receive treatment from visiting health professionals such as physiotherapists. However, the conditions created by the student-learning placement resulted in a service delivered at all three levels as commended by the School Principal,

The [individual] physios who come in, they're working just at that tip, the top level. The thing with the physio students and the supervisor is that they could work with the whole school, such as delivering a PD [professional development] to all staff. Then they also did activities with a whole class - the second tier. Hence, the service was not just for one student, it was also for groups of students (School Principal).

The following cases present an overview and examples of the student intervention at each level; other examples will emerge throughout the chapter.

5.2.1.1 Whole of School

Transferring their skills from work in hospital settings, the students noted some key behavioural changes that could enhance the safety, health and wellbeing of staff and pupils. They observed that with some brief training and encouragement, these skills could be “easily implemented into the school” (Imogen). As well as training staff alongside one-on-one therapy for the pupils, they also instigated whole of staff professional development sessions. For example, the students observed that manual

handling of students could be enhanced to be safe and effective and hence, incorporated this into their training, as described by Campbell,

We tried to train the teachers in manual handling to prevent them from injuring themselves because we noticed a decent number of the teachers at times would pick the kids up in a way that was easier to move them rather than doing it in a safe way. Sometimes it was kids who were 17 or 18 years old, not just five-year-olds that they were lifting (Campbell, Student).

As well as demonstrating the best ways to move pupils such as transfers from chair to floor, or wheelchair to plinth for changes, they also incorporated this information into a PowerPoint they delivered to the whole of school staff (see Figure 12). For example, with a student refusing to get out of the hot sun, they delivered information on the way to use slide sheets and other equipment that the school had but were “not using to the best of their abilities” (Imogen, Student).

One of the students raised a second issue with the Assistant Principal, regarding regular use of alcohol gel for hand hygiene. Noting that it was such a “shared environment” and that a few of them had “got the sniffles along the way” (Imogen, Student) the students encouraged its use throughout the school, especially with the manual handling of children.

Manual handling

- Maintain natural curves of the spine
- Be stable yet flexible with base of support: legs apart, soft knees, core active
- Use power from legs not arms and back- bend your knees, squat
- Avoid twisting and turning through trunk - pivot through your feet
- PLAN AHEAD
- Use support/equipment when able
- Communicate - READY, SET, GO



Figure 12. PowerPoint slide from presentation delivered to AHS Staff by cohort one students.

The students also recognized the value of structured and targeted activities for the AHS pupils during their recess and lunch breaks when they were outside. They casually joined the pupils and staff on yard duty during these breaks and initiated activities with the kids, drawing on their physiotherapy skills in order to structure the intervention in ways that met the pupils' physical needs. Activities included ball sports, as well as quiet sensory activities such as Connect 4 or sand toys. One of the students noted the dual value this had: both providing an opportunity to enhance their relationships with the pupils, and taking the pressure off school staff who have limited time to "play" with the kids.



Figure 13. Students playing with kids during recess and lunch breaks

5.2.1.2 Whole of Class

A senior class was identified by teachers as potentially benefitting from physiotherapy intervention. The five male pupils in the class were described by the supervisor as "very sedentary and with significant intellectual impairments who lacked the motivation to do anything physical" (Anne Best, Placement Supervisor). However, given that the needs weren't "severe" they were not referred to one-on-one therapy. Instead the students, supervisor, staff and a speech therapist who was providing services to the school initiated a daily physical program for the class which incorporated "sensory elements, physical activity, coordination and turn-taking" (Mitchell, 2019). Explained by the supervisor, "it's important to engage in energetic group activities which will benefit cardiorespiratory and musculoskeletal fitness, as well as the social enjoyment of a shared activity" (Anne Best, Placement Supervisor). As described by the students, the purpose of the activities were to:

- To have a positive effect on fitness, gross motor skills, self-efficacy, challenging behaviours, social skills and concentration,
- Improve cardiovascular fitness,
- Improve coordination,
- Improve focus in the classroom at the end of the activity, and

- Practice working in a group and waiting turns.

The “classes” took place first thing each morning. Using resources the students located at the school, they designed the program each day and did activities such as running, throwing, catching and shooting balls, kicking balls, quoits, beanbag toss and bowling. To end the sessions the students would take the group inside for a finishing activity such as musical statues or a dance. Repetitiveness of activities was deemed important in order for the pupils to become familiar with them and know what to expect. Noted by one of the students, it took some time for the pupils to get used to the program but by the end they were really engaged,

So the first time we did it, it just felt like it was a disaster, none of the pupils were interested and a few of them were quite upset. They didn't seem sure who we were and what we were doing. It was a bit confronting because we felt, “Oh, I don't really know what I'm doing”. Then the difference by the end...we had got to know the pupils more, which helped, and we could have everyone standing together in a circle, kicking a ball to each other, with everyone pretty happy to participate (Jessica, Student).

The benefit of the program was recognised by the SESO who was involved regularly in supporting the senior class,

Certainly, just getting the guys moving was a huge thing, you know, and it improves the rest of the day. It really, really does make a difference (Glenn Irvine, SESO, AHS).

Additionally, the students delivered the sessions alongside the classroom teacher and SESO. This built staff capacity and confidence for ongoing delivery of the program which continued following the students' departure.



Figure 14. Senior class doing morning activities with the physiotherapy students.

5.2.1.3 Individuals

One-on-one therapy is the typical or common practice for physiotherapists. Individual therapy was the focus of the students' previous placements and in the planning of the project, this was anticipated to be the main activity. As noted above, the scope of the student's role evolved to be much broader. However, individual therapy with referred pupils was still a key dimension of the students' placement. The activities that the students (alongside their supervisor) incorporated into their therapy were:

- Promoting normal patterns of movement,
- Inhibiting abnormal patterns of movement,
- Promoting postural control and thereby independence,
- Facilitating fine motor control,
- Preventing deformity due to imbalance of muscle action around a joint by optimal positioning,
- Strengthening weaker muscle groups, and
- Assessing, adjusting and locating specialised equipment to promote independent movement.



Figure 15. Individual therapy with AHS pupil Xander with Imogen (Flinders University student) and Anne Bent (Supervisor). Movement on gym ball to promote head control and weight bearing through arms.

The placement-based supervisor describes the aims of individual therapy for the student intervention at AHS and the approach she encourages the students to implement when they are working with the children,

Your aim is to promote development of strength and motor control and assist a child into a position that they can't get themselves into. For example, by facilitating a roll whereby you can assist with half the movement so that a child can complete the last half of it. So as physios, we take it part way and let the child complete the task. And then of course, they can be quite enthused that they've done something, they've achieved something. If a child is encouraged and assisted and the physios are working on what the child can do you can increase their motivation. If it's repeated and repeated and a child is making more volitional movements that is helping drive a new pathway in terms of neuroplasticity (Anne Best, Placement Supervisor).

The following example presents a detailed insight into how the individual therapy had a positive impact on a preschool aged pupil and those supporting him in the school.

5.2.2 Case Study One: Individual therapy for a pre-school aged boy with cerebral palsy

Braxton is a preschool student with the primary impairment of cerebral palsy and secondary impairments in communication, swallowing, gross and fine motor movements. He was referred by his classroom teacher and his parents/carers supported this decision as it had “been a while” since he’d received physiotherapy (Teacher and SESO). His most recent physiotherapy involvement at the school had been three months prior in March. The student assessment identified that Braxton had significant mobility restrictions and is dependent for all transfers.

Both cohorts of students worked with him during their placements, delivering 14 sessions of therapy including two visits to his home. The students undertook therapy with Braxton to address his motor and function limitations. This included ideas for movement and stretching, tummy time, use of an exercise ball, and for supported sitting; these were also recorded in an easy to follow plan for the teachers. The intensity of the intervention resulted in more normalised muscle tone (decreased hypertonus) in all four limbs and improved head and neck control.

As well as focusing on therapy to address his motor and functional limitations, the student team identified that the standing frame previously provided no longer fitted. The teachers reported that he was using it 8 to 10 minutes a day, and, after that time his bottom began to sag and they assisted him out of it. His apparent discomfort put them off using it too often. One of the students recalls,

They had a little poster in the classroom explaining how to set it up and it just didn't look – it didn't look quite right and he didn't look right when he was in it so we just talked to our supervisor about it and she had a look and she said, “No, no, it's not set up right, he wouldn't be comfortable in it” (Jessica, Student).

Together, the students adjusted the frame to ensure he was safe and comfortable in it and to identify some of the activities he could undertake in the frame. To do this they took his measurements, made the relevant adjustments to the frame and tightened some of the screws. While they were making the adjustments and fitting Braxton in the frame they mentored the staff to show them how to set him up, what to look for in the settings and showed them the screws which were susceptible to coming loose. As a consequence of the students' intervention and adjustments to the frame, Braxton was able to be comfortable in it for extended periods,

With the professional advice and the adjustment of the standing frame we were able to extend the time from 8 - 10 to 25 - 30 minutes. Now we feel more confident in using it for extended times. The frame helps to strengthen his body and it has a tray so we can put things on there for him to interact with. We can tell that he's happy in the frame from his relaxed body and the way he laughs and smiles (Teacher and SESO).

The students developed a photographic plan for display in the classroom, outlining the required set up of the frame for the staffs' reference (see Figure 16) in order to bolster the teachers' confidence in using the frame on a regular basis. As well as enhancing their knowledge and confidence regarding use of the standing frame and physical exercises for Braxton, his teachers also noted that the

Chapter Three: Strategies and actions applied to meet the project objectives

student team had two particularly helpful suggestions: 1. Recommendations for optimal positioning the frame in the classroom, and 2. Timing his exercised following hydrotherapy sessions as this was when Braxton was most relaxed and flexible.

One of the students noted the impact they felt they could have on younger students with cerebral palsy such as Braxton,

I think some of the other big changes we made were with some of the little ones with cerebral palsy. A lot of them were very limited in what movement they had and what access they had to other therapy and there wasn't much going on in the school, so just simple stretching programs that we implemented from our assessment. That made quite a difference (Imogen, Student).

Braxton's standing frame

Set up

Two people are needed for this transfer to be safe!

1. Place the frame where you'd like Braxton to stand in it – it should not be used to move him
2. Breaks on!
3. Before every use, the screws at the front of the frame need to be tightened
4. One person can place Braxton's feet on the foot plates, and the other can place his arms over the front bench
5. One person to hold Braxton in place, while the other fastens the pelvis strap, then the chest strap, then around his feet

When Braxton is in the frame

- place a rolled up towel in between his knees, and a towel under his arms to cover the hard edge of the table
- both feet should be flat on the ground – he must be wearing shoes
- encourage Braxton to look straight ahead as much as possible
- activities he may enjoy include music and singing, reading, toys on the tray table

Aim for Braxton to stand in his frame for at least 15 to 30 minutes a day, increase this time when he is able



Figure 16. Plan for Braxton's standing frame

5.2.3 Building capacity of the School Staff

A heralded side effect of the student placement was the visibility of the students' intervention at all three tiers and hence, the skills and awareness their intervention provided for school staff. All staff were grateful for the support the students provided while they were on the ground, as well as the capacity they left in their wake. This happened in a number of ways:

- Through purposeful and 'incidental training' delivered by the students in formal professional settings such as a staff meeting as well as during therapy sessions (where an AHS staff member was present or at least in line of sight).
- Through conversations staff were involved in between the students, supervisor and parents/guardians during assessments and therapy sessions, and
- During the development and implementation of plans which enhanced staff awareness of the physical needs and appropriate intervention for their students.

Although there was some concern about there not being a separate therapy room (see Section.) for interventions, this had the benefit that school staff were in the same vicinity which the therapy took place. Hence, they were able to observe the students and supervisor during therapy sessions. Classroom staff indicated that this contributed to their understanding of appropriate forms of intervention, as well as providing them with ideas for how to work with other pupils with similar needs, thus overall enhancing their confidence and knowledge regarding the physical needs of their pupils. This is evident in the case study above which indicates the enhanced confidence of Braxton's teachers following the advice offered by the students.

AHS has a hydrotherapy pool. Due to renovations it was out of action during the first placement but the second cohort made good use of it. It was noted by the students how much "fun" the pupils had in the pool, "For them it's playtime, it gave them enjoyment and freedom of movement" (Kirsty, Student). Figure 17 shows photos of Caleb, a 17-year-old pupil who engaged very strongly with the students and thoroughly enjoyed playing "pool soccer", an activity they established based on his love of ball sports. It was tough for classes to use the pool, as some children required at least two adults to support the pupils and this was something the students were able to offer. One teacher noted her appreciation of the students' involvement and the ideas it gave them for hydrotherapy sessions,

Our students have weekly hydrotherapy sessions in the pool. One of the Flinders students was AusSwim trained. As well as giving us ideas of activities we can do with Braxton in the pool, they were generous with their observations and helped us identify activities we can do in the pool with other students. For example, they recognised that another student

was ready to progress to the next level of competence in the pool (Teacher and SESO).

There was a designated hydrotherapy staff member who was relatively new to the position and was inexperienced in working with people with additional needs. One of the students indicates how they were able to build her capacity through suggesting and demonstrating ways of working with pupils in the pool,

We spent a lot of time in the hydrotherapy pool. I think [the hydrotherapy instructor] really benefited because she didn't have any disability training, and she didn't really know how to manage some of the kids in the pool. So that was useful to get hands-on there and help her out. Another set of hands just helped in the pool too. And at times, it was a bit chaotic and unorganized but we gave her some strategies and some ideas of what she could be doing those situations (Daniel, Student).

As in the case of Braxton (Case Study One), the students created photographic posters (see Figure 16) for the hydrotherapy instructor in order for her to replicate the activities they had designed following their departure.

Engaging the classroom teachers and SESOs in conversations about the pupils involved in the program was seen by the students and supervisor as a critical way to learn more about the participating pupil, and as an appropriate channel for establishing a relationship with the pupils' parents/carers. Indicating that these conversations were beneficial to them, the staff noted that it gave them the opportunity to learn more about the physical needs of their pupils, gain a deeper understanding of the intricacies of the conditions, as well as raise ideas for activities they could do with specific pupils,

It was really useful for us [classroom staff] to be part of the conversations with the supervisor and Braxton's Mum. They helped inform us about his condition and ways we can support him. We are trained to cater for the physical needs of our students, but the physio students can bring in the physical therapies. Being part of the conversations helped us learn some of the correct terminology around Braxton's needs, for example, in regards to his medication for relaxing muscles and has helped inform us about explicit questions we should ask about Braxton in regards to his condition. The students' and supervisor's presence at the school enhanced our knowledge and gave us some good ideas of activities we can do with Braxton (Teacher and SESO).

School administrative staff all noted the way the placement had enhanced the confidence of school staff in regard to supporting the physical needs of AHS pupils.

Described in detail below, this was attributed to the way the students and supervisor immersed and positioned themselves in the school characterized by respect, flexibility and willingness to be guided by the school staff so as not to disrupt school activities (see section). Ultimately, as described by the Assistant Principal, this provided the staff with some valuable professional development,

It's almost like the staff have been coached and trained with no cost to the school in a unique situation, amazing professional development that can really value-add to the types of programs that we offer for the kids here...and we shouldn't take that lightly (Sheina Treuel, Assistant Principal).

The “side effect” of professional development for staff at AHS delivered by the student-learning placement meets a recommendation in the NT Review of Policy and Practice for Students with Additional Needs. The review suggests that working with and learning from health practitioners could offer a “strong system of learning and development for staff” which will result in enhanced staff retention, and improve professional practice within schools which cater for children with additional needs (Milnes, 2018:vii, 47-48).

Caleb McMillan - Hydrotherapy Program – September 2019

Walking

With the therapist supporting Caleb's trunk from behind and holding two noodles under Caleb's arms, assist Caleb to walk forward. Caleb will often let his feet go forward and transition to a floating position. Encourage Caleb to stand up straight and push through his legs. If able, a 2nd person should be present to hold Caleb's hand to encourage him to come forward.



Seaweeding

Seaweeding with Caleb's head supported on therapists' shoulder, therapist will also support Caleb at his hips over his swim trunks. Then move Caleb backward while swinging him to the left and right. Perform this as a rest from other activities such as walking.



Floating

Floating on back can be performed in the the same way as seaweeding but in a stationary position. Get Caleb to hold the position for at least 10sec.

Kicking

Caleb can start in a resting / floating position with his head supported on the shoulder of the therapist. After a short countdown, encourage Caleb to kick as fast as he can for as long as he can. Do this approximately 5 times throughout the session. This exercise can be incorporated after floating. Caleb performs this very well when incorporated into a race with another participant in a hydrotherapy session.



Kicking a ball in float

Caleb is to relax on his back floating in the water with his head on the therapist's shoulder. A ball is pushed slowly to Caleb and he must co-ordinate his feet in order to kick the ball back to a target. Set up goals using markers to engage Caleb further in the activity. Caleb can also perform this activity with his arms in the "Walking" position.



Precautions

Caleb should not get his head in the water due to risk of aspiration. At times, Caleb will dunk his head into the water, but this should be discouraged. Caleb should also avoid getting water in his ears as he is prone to ear infections.

Important information

Two people should be present in the water for Caleb's Hydro sessions as he is strong and heavy and can be impulsive at times. Allow 1 hour for Caleb's pool sessions to include time for transfers, showering and dressing /undressing and 30minutes of hydrotherapy. Caleb is not able to support himself in the water and requires a minimum of 1x heavy assistance in the water at all times.

Figure 17. Hydrotherapy plan for Caleb, Cohort Two.

5.3 Impact of therapy plans

The previous two sections have offered examples of plans the students developed illustrating examples of activities the teachers could undertake with the pupils to ensure ongoing therapy following the four-week placement. This was not entirely new to the teachers. Previous interventions had also provided plans but some of them were out of date due to infrequent physiotherapy intervention.

Typically, these new plans were a pictorial step-by-step guide of activities such as stretching, passive movements, assisted rolling, exercises over a gym ball, and advice around positioning. Ongoing intervention by the staff between placements aimed at outcomes such as maintaining pupils' range of movement, preventing contractures, improving head control, increasing ability for functional movements, and maintaining the pupil's comfort. The plans provided a resource from which the students and supervisor could work together to "train" the teachers and parents/carers to continue the therapy in the students' absence. They were also used as a "handover" resource between cohort one and cohort two. In addition, video footage of the therapy was recorded and uploaded to the classroom iPad as noted by Jessica,

We developed a therapy program that we went through with the [pupils] a couple of times. To make it sustainable we took videos and photos of the therapy and made it into a program. [It included] a little explanation of what we were doing and we gave a copy of that to the classroom teacher. The school were going to give a copy of that to [pupils'] families. One carer came in and we were able to go through a session of therapy with [pupil] and the carer so that he could do everything and we could teach him one-on-one. We also made a video and provided that to him (Jessica, Student).

The picture-based plans were printed for the teachers who laminated and displayed them in a prominent place in their classroom. Copies were also provided to parents and if circumstances allowed, they were encouraged to replicate the activities at home. As well as noting how practical these plans were, the teaching staff provided the following feedback,

After assessing Braxton and working with him, the physio students and supervisor provided us with plans, goals and notes about Braxton which are easy to follow. They made them and we laminated them and stuck up in the classroom so we can easily refer to them (Teacher and SESO).

In addition to contributing to improvements in his comfort and functioning, Braxton's teacher and SESO point out that the new activities they had the capacity to undertake

with him as a result of the students' training, enabled them to more effectively deliver on the requirements of the curriculum,

The work that the students did with Braxton and the activities we have been doing with him since have enabled us to tick off two of his Learning Outcomes for the year which we use for reporting on the students (Teacher and SESO).

Given the existing high workload of the school staff, a student in the first cohort indicated some concern regarding the ongoing implementation of these plans following their departure. She explains this and makes a suggestion as to how she thinks plans could be handed over more effectively,

There was a bit of miscommunication as to who was going to do what when we left. Trying to hand over our therapy plans to the teachers was done at the end of the day when they wanted to go home or during class time when the kids are running around and it was all a bit hectic. It probably would have been good to have an opportunity to sit down with all of the staff, maybe in a staff meeting - something a bit more structured to formally hand over what we were [giving them]. We made the plans as simple to follow as possible with videos and photos and nice pictures and things so they could go up in the classroom, but we felt a bit like, "We want to tell you more and we want to make sure you really understand because we don't want the hard work that we've done to go to waste" (Imogen, Student).

5.4 Impact of reporting

The physiotherapy students were required to complete comprehensive written reports about each pupil who received individual assessments and therapy. The reports were written in order to meet the requirements of the Nationally Consistent Collection of Data (NCCD) on school students with disability which "enables schools, education authorities and governments to better understand the needs of students with disability and how they can be best supported at school" (Australian Government, 2020).

The team of four students shared the report writing responsibility, each volunteering to write reports as the cases emerged and writing a total of three to six reports each over the duration of the placement (the number varied depending on the complexity of the pupils they were reporting on). Copies of the reports were shared with both parents/carers and the school who kept them on the pupils' files. The reports included:

- Medical history summary,

- The dates and duration of sessions provided by the student team,
- Relevant family and contextual information,
- Physiotherapy assessment results including neurological, musculoskeletal, functional assessments and physical transfers,
- Recommended physiotherapy programs based on assessment and therapy intervention including hydrotherapy,
- Specialised equipment used and required by the pupil, and
- Recommendations related to NDIS plans.

As well as being a tertiary assessment requirement for the students, the formal reports provided families of the AHS pupils with an up to date evidence-based needs assessment of their children. Given the period of transition onto the NDIS, a number of parents/carers conveyed that the reports were an invaluable resource for informing their children's NDIS plans and included information they had previously struggled to access due to high costs and long waiting periods.

One parents/carer emphasized that the report written by the students had saved her significant time, energy and money. Previously, her son's NDIS plan had not provided any supported funding for hydrotherapy, and physiotherapy funding had been minimal. The student placement report provided her son with:

1. A specific hydrotherapy program,
2. Photographic evidence of him enjoying the hydrotherapy,
3. Measurable outcomes in terms of his strength and function,
4. Evidence to demonstrate his specific needs for equipment such as a walker, and
5. An evidence base for how the intense four-week intervention had improved his quality of life.

The report thus enabled her to lodge a review to her NDIS Coordinator of Support (COS) to amend the funding and resources allocated in her son's NDIS plan. She describes the report as having a long-term impact over "many years" due to being able to use it as a "base" that any future physiotherapist will be able to extend upon (Anne-Marie Temple, Parent/Carer).

An additional benefit of the report to this parent/carer and her son is that it was free. Her previous experience had demonstrated that the process to acquire an evidence-based report for NDIS through the "normal" channels was costly, timely and arduous. As well as the cost of the physiotherapy assessment itself, there were incidental costs associated with the fly-in fly-out (FIFO) nature of the service that was required to account for the lack of private physiotherapists in town, described in more detail in **Section....**

The impact of the students' reports in terms of both providing an evidence-base for physiotherapy needs and being cost effective can be seen in the following statement,

We got approval for a walker on the back of their report. So we're actually seeing the evidence...that was so beneficial... Because it's these kind of reports that I can't afford to spend up to \$7,000 getting [done] by an amazing person. But these are amazing young people and I can get it for free. So really absolutely, financially it has saved us not just like 100 or 200, it's saved us thousands of dollars (Anne-Marie Temple, Parent/Carer).

5.5 Specialised equipment: requirements and barriers to access

Seventy per cent of the AHS pupils referred to the program required specialised equipment. This equipment included standing frames, walkers, wheelchairs, and classroom equipment such as specialised desks and chairs (e.g. a chair with arms). This section will explore:

1. The role the students played in enhancing the use of specialised equipment,
2. How this impacted the school, and
3. Sourcing specialised equipment and the challenges this entailed.

The section incorporates a second case study and refers to Case Study One in order to emphasise both the challenges in remote contexts regarding fitting and accessing equipment, and the positive outcomes as a result of the student interventions.

5.5.1 Student placement supporting the use of specialised equipment

One of the key practices the students undertook and gained experience from during their intervention was assessing, adjusting and ordering specialised equipment. The purpose of specialised equipment is to:

- Enhance pupil's function in terms of mobility and activities,
- Increase their opportunity to participate in school and classroom activities,
- Reduce the time each day being wheelchair bound which can have positive physiological impacts on their development and increase psychological benefits and thus improved quality of life,
- Gain lower limb strength and therefore increase the possibility of being able to weight-bear, and

- Therefore, decrease the need for manual handling or hoisting for school staff and parents/carers.

As noted in Case Study One, following the initial observation that Braxton's standing frame was not fitted correctly, the adjustments and education the students provided enabled him to be in it for longer periods. In turn, he was able to have greater engagement in classroom activities, including interacting with educational materials on the attached tray.

The previous section indicated the impact of the evidence-based report on the acquisition of a personal walker for one of the pupils. Previously, he had only had access to a DoE-issued walker and so was restricted to use during school hours. He will have use of the new walker after school hours, including at weekends. The parent describes what the acquisition of a personal walker will mean for her son's quality of life,

It is huge, I didn't really realize how amazing this [having his own walker] will be for us and his wellbeing. I can take him outside and we can go for a walk and we can chat. So instead of Caleb being stuck in either a wheelchair or a lounge chair constantly after school we can go for a walk outside and talk about other things. It's such an enclosed and heavy environment that Caleb and I live in and to have the walker we can walk this way and it's a completely different look to walking that way. And even at school when he's on the walker, the path is still the same path so our walks at home will be different to the walks at school...That walker will benefit him not just physically but mentally as well (Anne Marie Temple, Parent/Carer).

Specialised equipment commonly prescribed by physiotherapists for children with cerebral palsy (CP) includes standing frames and mobility aids such as walking frames. For children with very limited motor control, standing frames can allow a child to be safely supported in an upright position. Whilst this does not totally prevent the development of hip dysplasia (a very common problem associated with spastic quadriplegic CP due to imbalance of muscle action over the hip joints) it provides the child with the benefit of being in the same position as their more active peers. Walking frames can be provided for children with some motor control of their legs and aim to enhance independent mobility and thus quality of life. As noted by the supervisor, bony growth of children continues throughout their growing phase until 17, 18 or 19 years of age. During this period there continues to be potential for bony deformity due to abnormal muscle action around joints – especially the weight bearing joints of the lower limbs.

Such risks are exacerbated by extended periods in wheelchairs. Avoiding this through access to specialised equipment has a range of other benefits to the child. In the case of

Braxton referred to in Case Study One, the outcomes of increased time in the standing frame which was adjusted for him during the placement include:

- Potentially mitigating the deforming influences of CP,
- Weight bearing through bones which promotes growth and strength,
- Standing is a normal part of child development and allows a child the opportunity to be at the same position as others in the classroom,
- Providing trunk support gives him the opportunity to develop increased head control and upper limb control,
- When a tray is attached to the standing frame, a child can use his arms for functional activities involving 'grasp and release' of objects, and to use communication devices involving simple 'touch' activated switch toys,
- Being upright in a standing frame avoids abdominal compression and therefore promotes bowel function and helps to overcome constipation, discomfort and colic which are common problems in children with CP due to being in a seated position in a wheelchair for a major part of the day, and
- Being upright in a standing frame also has positive impacts on social interaction as Braxton can be standing at the same level as his peers.

5.5.2 Enhancing use of specialised equipment: Impact on the school

An increase in use of specialised equipment was reported by staff and parents as a key outcome of this project. The students and supervisor observed that although there was access to equipment at the school, it was not being put to optimum use. This was attributed to lack of knowledge amongst the staff regarding fitting, adjusting and using the equipment, and time pressures. The students noted this in their reflections,

Acacia Hill is well equipped to meet the students' needs. The students with physical needs keep equipment (e.g. walkers, standing frames) at school. Some students have similar equipment at home, whereas for others there is little or no opportunity at home to use equipment. Despite this, use of equipment was very limited, particularly with the older students. Reasons for this included: lack of knowledge around use of equipment, old and poorly fitting equipment, and a perceived lack of time (Cohort One, Powerpoint, 2019).

During the student placement, the staff observed a notable increase in use of available equipment throughout the school and appreciated that the intervention was resulting in getting pupils "back into walking frames and walking as much as they possibly could" (Sheina Treuel, Assistant Principal). It was specifically noted that five students were

using walkers much more frequently than they had previously. The staff celebrated the newfound mobility and freedom it gave the pupils to move around the school. The principal also noted the enhanced confidence in the teachers regarding use of equipment.

A further outcome of the improved accessibility and fitting of equipment for the AHS pupils was that it gave the staff an insight into the capacity of their students. As observed by the supervisor, “It’s awakened the school community to the potential for the AHS students” (Supervisor). Appropriate application of specialised equipment can, as seen in previous examples, enhance the pupils’ mobility and participation in school. School staff were witness to this ‘new’ potential of the participating pupils and were hence able to modify their program and teaching. The consequent ability for his teachers to “tick off” two of Braxton’s learning outcomes is evidence of this.

5.5.3 Sourcing specialised equipment and the challenges this entailed

Enhancing use of specialised equipment at AHS was seriously hampered by complications regarding resourcing the equipment. Access to equipment is exacerbated by the remoteness of Alice Springs and the necessity for specific equipment to be ordered from Darwin both for trial and purchase. The challenge in sourcing the equipment required by the AHS pupils had additional complications linked to pupils’ transition onto the NDIS and equipment in Alice Springs being available from two separate pools; one owned by the Government health service and administered by CDT and the other owned and administered by the Department of Education. The complexity this resulted in is foregrounded in the following Case Study whereby, despite vast improvements in strength and function as a result of the students’ consistent intervention, an eight-year-old AHS pupil had minimal access to a walker. When she did have it, it greatly improved her quality of life and was much appreciated by her parents.

5.5.4 Case Study Two: Gracyn and the barriers to services and equipment

Gracyn Johns is an 8 year old girl with Trisomy 5p, a genetic condition resulting in multiple impairments including intellectual disability, low muscle tone and skeletal problems. Gracyn has ankle foot orthoses (AFOs) which assist in compensating for her foot deformities and assist her to take weight through her legs. Gracyn cannot walk and at school she requires hoisting due to not being able to take adequate weight for transfers. Her knee flexion deformities had worsened over the years due to extended periods sitting in a wheelchair. Although she had opportunities to come out of the wheelchair at school, she had never had access to intensive physiotherapy that, as identified by this project, could have benefitted her.

Access to services

Gracyn and her family are New Zealand citizens. Her mother moved here in 2015 to seek work opportunities and Gracyn and her Dad followed in August 2017. Not being an Australian citizen, Gracyn is ineligible for the NDIS. Gracyn received support from CDT both before and beyond the rollout of NDIS, however, as pointed out by the family, she never received the intensive therapy required.

Additionally, her parents reported Gracyn's treatment to be piecemeal and hampered by lack of information-sharing between services. For example, when Gracyn's measurements or weight were required for ordering equipment this would sometimes be undertaken at school, and then requested to be done again at home. Long periods of inaction following measurements meant this process was sometimes done repeatedly (to take into account Gracyn's growth) which was a source of frustration for her parents.

Student intervention

Gracyn was referred to the first cohort of Flinders physiotherapy students by her class teacher and Principal for review of function, difficulties with transfers and decline in mobility. The students and supervisor coordinated with her teacher and observed Gracyn in the classroom. They had discussions at school with her CDT physiotherapist who shared the program she had recommended for Gracyn, including: sit to stand, crawling and independently getting into a low seat. The team then coordinated with her parents to provide an intensive home therapy service. Home was deemed the most appropriate place for the therapy for the following reasons:

1. Gracyn is prone to seizures which impedes her ability to attend school regularly;
2. The home environment was less disruptive to other children;
3. Her father wanted to be actively involved in her therapy both in order to learn skills from the students and be there as a familiar adult for Gracyn; and
4. Home visits maximised the students' time as they were able to remain at school for the whole school day and undertake Gracyn's therapy after school hours.

The students and their supervisor visited Gracyn at home four to five times a week for four weeks and provided intense therapy for roughly half to three quarters of an hour each afternoon. Their program focused on repetitive sit to stand activities with Gracyn. Initially she was resistant, indicated by physical resistance and screaming which her Mum attributed to her lack of confidence due to her being "aware of her limitations". With her parents' encouragement the students continued, and she started to enjoy it as described by one of the students,

We made some really big improvements with Gracyn. Initially she screamed and didn't really want a bar of us but then, as she got to know us she got used to what we were doing and started initiating the therapy. When we got there [to her house] she knew what we were there to do and that was really rewarding (Imogen, Student).

Chapter Three: Strategies and actions applied to meet the project objectives

Starting from “virtually nothing” (Anne Bent, Placement Supervisor) by the end of the four weeks Gracyn could contribute to weight bearing, had built strength in her leg muscles and pelvis to be able to take weight, and was able to do a sit to stand movement with less physical support than she required prior to the placement. As noted by her Dad,

...they [the students] came round so often, they came round up to five days [a week] solid, we were able to do a hell of a lot with them (Matt Johns, Gracyn's Father).

As well as developing strength, Gracyn gained a greater interest in movement including crawling and pulling herself up more often. Her Dad was very engaged with the students' program and repeated sessions at home with Gracyn as described by Imogen,

Her parents were so supportive as well, really enthusiastic for the input from us, which I think made a big difference because we knew that the therapy would continue and not just end when we weren't there (Imogen, Student).

Gracyn's parents appreciated the immense improvements the students assisted Gracyn with and the difference that it made to their lives. Prior to their intervention, her father was really struggling to lift Gracyn including in and out of the bath, in and out of bed, into a standing position from the floor, and getting her into her feeding chair. Following the intense intervention, Gracyn was able to assist with these movements due to learning how to both roll over and move from sit to stand which significantly reduced the physical burden for her parents,

She wasn't sitting to stand whereas now (after) a whole month of them coming round five days a week, she worked really well with them and she was able to get up really nicely and now that she knows it she uses it all the time. Like I said, she's quite a big girl and I've got a bad back so when I go to take her to bed...I've got to lift her. If I want to take her to the bathroom I've got to lift her into the bath, I've got to lift her out of the bath...(now) she will kneel up, get onto her knees and then [when you] get ready to lift her up she pushes off with her legs. She wasn't doing that before (Matt Johns, Gracyn's Father).

Accessing a walker

Following this initial set of sessions, the supervisor advised that Gracyn was ready for a walking frame. Gracyn had only ever had access to a walker previously in New Zealand at the age of between 18 months and three years but had not been offered one since living in Australia. The family had had a standing frame which had been organised through a government equipment scheme. Although Gracyn was upright in a standing frame, she didn't particularly enjoy it and preferred the freedom of being able to pull herself around on the floor rather than being stationary. Hence, her parents only persisted with it a couple of times.

Chapter Three: Strategies and actions applied to meet the project objectives

With the parents' permission, the students' supervisor and the CDT physiotherapist selected an appropriate walker from the Department of Education storage facility. The selected walker was free for Gracyn to use because there was no other child in Alice Springs who required it given its specific size. However, her use of it was restricted due to the Department of Education protocol that the walker was not to leave the school grounds. Due to the points outlined above, the intervention of the team up to that point indicated that the most appropriate and effective place for Gracyn to make the most of the frame was at home. Hence this policy significantly restricted Gracyn's use of the walker for a number of reasons: 1. The challenges of regular school attendance due to seizures, 2. The need for her father to be with her in order to assist in and out of the frame, and 3. During this time the school buildings were being renovated and the hall, which was the most appropriate place for her to practice, was only available two mornings a week. Furthermore, the bulkiness of the walker meant it was not appropriate to store it in Gracyn's classroom. Hence, despite the frame having to stay at school, Gracyn was not able to use it there.

The walker was eventually trialled at Gracyn's home. For the duration of its use at home and with the ongoing support of her Dad, Gracyn continued to gain strength and confidence with the walker. She was eight and walking for the first time,

It was just amazing. She gained capacity to initially push it backwards and then she learnt how to push it forward, and then she used it as a sit to stand exercise. Her father was so enthused about her using it at home and he used it with her every day. I couldn't believe it when he said she can walk 200 metres down the street with it. As well as building strength, it's contributing to her quality of life. Her Dad's doing something that he enjoys with her (Anne Bent, Placement Supervisor).

Gracyn's Dad indicated how Gracyn benefitted from having the walker at home where they were using it twice a day for half an hour each session,

I think it was about two months we had it for and we documented the whole time the use of it and she just got really good at it. She got better and better the more she [did] it and again it's the intensive – you know, she can't just learn to do it [quickly], she needs it over a period of time and, you know, wonders can happen.

As well as exercise and strengthening her muscles, [she gained] a lot of independence. She can go where she wants. She can actually direct herself into the direction that she wants to go to. To start off with it wasn't – it was just like around here sort of thing but in the end we were going 200 metres down the road, maybe 250 metres down the road, which is like really cool. She loves it. You can just see that she's enjoying it. It's something that she looks forward to do... if she'd have had it earlier, like when we first got over here [to Australia], she'd be running [around in it]. She's also not straightening up and that [having a walker earlier] could've helped a hell of a lot when she stands (Matt Johns & Ngaire Hurunui, Gracyn's Parents).

Chapter Three: Strategies and actions applied to meet the project objectives

Despite the overwhelming positive outcomes of Gracyn having a walker, the DoE guidelines meant the walker had to be returned to the school. Unfortunately Gracyn was then away from school for several weeks and so was not able to access the frame. The second cohort of physiotherapy students were able to visit Gracyn at home only once. When she returned to school, the students and supervisor arranged to assess her using the walker again. The supervisor invited a senior DoE staff member visiting the school from Darwin to come into the school hall to see Gracyn using the walker effectively both to walk and as an exercise tool. This observation and relationship resulted in a supportive letter to allow the walker to be used at home for the two weeks of the upcoming school holidays.

Therapy and equipment for Gracyn

The student placement provided Gracyn and her family with a period of concentrated intense therapy as required for Gracyn's condition. The prolonged and regular therapy enabled rapport between Gracyn and the students, an enhanced knowledge of her needs and a period for setting her up and trialling a piece of equipment which made a significant improvement to her quality of life.

The service was frequent enough for Gracyn to develop skills because she could remember what she had learned from one session to the next. As well as the intensity of the service, Gracyn's father attributed the success of the therapy largely to the "manpower" the students were able to offer as a group to assist with mobilising Gracyn, in contrast to previous infrequent individual therapist assistance.

With the support of CDT the family has applied for a walker through the government equipment scheme.



Figure 18. Gracyn using her walker (photo supplied by Gracyn's parents, Matt Johns and Ngaire Hurunui).

5.5.5 Inequity in accessing equipment

Accounts from parents, students, staff and the supervisor all indicate a sense of frustration around the bureaucratic systems and 'red tape' regarding access to required specialised equipment such as that experienced by Gracyn and her family. For the students, the delays associated with accessing required resources came as a shock,

One really challenging thing was being frustrated with services outside the school and equipment that should've been available for the AHS students but wasn't. There was nothing the project or the school could've done about that, I think it's just the reality of what it's like in Alice Springs and some of the kids not being as advantaged. Like [pupil] having a sling lifter that doesn't work and regularly breaks down, which means his mum was constantly having to lift him, as a 16-year-old. You know, I found that very frustrating (Jessica, Student).

The project's involvement in modifying and locating equipment exposed a range of barriers to being able to adequately meet the needs of pupils at AHS. Consequently, as seen in Case Study Two, the student team and the supervisor spent a lot of time advocating for the pupils.

5.6 Advocating for the pupils and their families

The social justice lens many of the students had brought with them to the role helped them recognize that many of the pupils were from backgrounds where their disabilities were compounded by other social determinants of health. As noted by the AHS Principal, the team ended up unexpectedly playing an important role in "lobbying" for the pupils and contributing to exposing ways to address "Indigenous disadvantage and closing the gap". Thus, as well as providing a service, the project took an advocacy approach in four main ways.

First, the assessments and interventions undertaken have foregrounded and reinforced the understanding of the dearth in physiotherapy services for most of the AHS pupils and their families involved in the program (this is discussed in relation to the transition to the NDIS in Appendices 6). The students soon learnt that their reports (Section...) were of great value to the families and provided information they could use to strengthen their positioning during their own advocacy for their children's needs. Ultimately, in one case, this enabled a family to save \$7000 (see Section...).

Second, the placement exposed the barriers to effective use of and access to specialised equipment. Although this was partly due to insufficient physiotherapy services for the pupils, even with adequate services during the student placement there were still immense struggles which were attributed to barriers created by bureaucratic systems. This was indicated in Case Study Two and is further described by school staff difficulties at a “systems level”. Sheina Treuel, the Assistant Principal, indicated that she was grateful for the way the placement was a catalyst for “pushing back” against some of the bureaucratic aspects of the system which were getting in the way of supporting their pupils,

At the end of the day it's about our kids and we have to advocate for them...we've rocked the boat a little bit, because of the bureaucratic nature of certain things; that's not a bad thing. Let's push back against the system and say, "Hey, you're not meeting our needs, we need you to help us, we're on the ground, we're saying this is what the pupils need so we need you to help us do that" (Sheina Treuel, Assistant Principal).

One of the students reflects on the advocacy role the group played and how it contributed to three of the pupils acquiring walking frames,

I think especially, it's really great because the kids, especially ones that need walking frames, standing frames and stuff like that, they need people to be activists on their behalf and get them their frames, and just advocate for them, which they don't have otherwise. I think I could count three kids that wouldn't have access to essential equipment that they do now if it wasn't for these placements (Anna, Student).

One of these three students was an 8-year-old child with progressively degenerative neuro muscular condition. The team identified that due to weakness she was at great risk of falling and required a frame to make her safe. On checking, she had no physiotherapy or equipment in her NDIS plan. She was seen twice by the students and referred to the Central Australian Aboriginal Health Congress (CAAC). A frame was accessed for her to trial from CDT. During a trial at the school, the pupil successfully was able to get in and out of it, and safely steer it. As reported by the supervisor, “She was clearly delighted to have greater ease of mobility both in the classroom and outdoors in the playground” (Anne Bent, Placement Supervisor). This resulted in many hours of follow up meetings and advocacy with other services and NDIS in order to try and secure a personal walker for the pupil. During the second four-week placement, the supervisor kept track of time spent doing advocacy work, which equated to approximately 15 hours.

The third characteristic of the placement which enhanced advocacy was the “external” positioning of the supervisor and the students. Not being employees of government health or educational services provided them with both an outsiders’ perspective (including a comparison to what they were used to), as well as being more “free” to “pull a few strings” and challenge the system in order to enhance services for the AHS pupils, described here by the Assistant Principal,

The other thing that's been really cool is some relationships are already established by the supervisor with outside agencies so she's been a nice go between, as it were, and she's sometimes privy to more information than we are privy to. So she can probably pull a few strings that we can't, but she also challenges our system because our system needs to be pushed to effect change (Sheina Treuel, Assistant Principal).

Fourth, the experience of the student physiotherapists and the time they had for regular and intense therapy enabled them to identify, refer and in some cases accompany the pupils to other services required to enhance their health and wellbeing. Services included speech therapy, occupational therapy, neuropsychologist, prosthetics and orthotics, and podiatry. The supervisor’s knowledge of the “lay of the land” in terms of services greatly benefited this aspect of therapy for the AHS pupils.

Hence, although not anticipated, the presence of the students at the school and the deep insight they gained into the circumstances for the AHS pupils resulted in advocacy becoming a significant part of their role in an attempt to try and improve systems and conditions for the pupils. A contributing factor to their understanding of circumstances was the opportunity to have regular interaction with parents and carers.

5.7 Value of the student-learning service to parents and carers

The student/supervisor team recognized the crucial role parents and carers played in assisting them to understand the needs of the referred pupils. Hence, they put energy into establishing relationships with them early on and maintained regular contact throughout the placement, as observed by the Assistant Principal,

[Apart from one family where the parents resided in a remote community] I could guarantee firm relationships were established with every other single one of those families...there were quite a number of visits into their homes, the students were invited and provided advice on prescription of equipment and things like that (Sheina Treuel, Assistant Principal).

The relationships between the student team and parents/carers were initially facilitated by the school, particularly by the Special Education Support Officer who had 0.5 FTE of his position allocated to supporting the physiotherapy project, and the Aboriginal Education Officer (AEO). Once established, the supervisor took the lead in ensuring the parents/carers were regularly updated. Initial and ongoing contact occurred at school drop off and pick up, over the phone, in the classroom and in some cases during home visits. As relationships developed, parents/carers specifically requested to meet with the students and the supervisor.

As well as ensuring the parents/carers were adequately informed of their children's progress, the interaction with the parents/carers provided the students with an holistic insight into the AHS pupils lives which contributed to the designing of their therapy programs to have a broad range or reach. Sheina Treuel, the Assistant Principal, commented on the broad scope of the service, and how important it was that the students recognized that their therapy needed to take into account the pupils' lives beyond the school setting,

The scope of the service could go way beyond what the organization [school] could provide. That meant linking into homes as well because we know it's the holistic aspects of the child, not just one place that they're in, but a number of places, that they function across so they can generalize [physiotherapy needs] from one place to the other (Sheina Treuel, Assistant Principal).

Further bolstering the interaction and involvement of the parents/carers in their children's therapy was the view held by Glenn Irvine, the SESO working with the students, that parents/carers are the "lynch pin" in their children's wellbeing, and hence, they deserved and required all the support they could get,

A big consideration is that more often than not I think the families are the lynch pin of the whole thing really and if they can be offered some support I think that's priceless because it's a job that is difficult and goes on for all your life. It's really difficult and any support they can get [is great] (Glenn Irvine, SESO, AHS).

Parents/carers highlighted a range of benefits of the student placement to both themselves and their children. Key elements of the program they noted and are addressed in detail below are:

1. Consistency and regularity of care for their children over four weeks,
2. The students' interest in the families' perspectives and background of the pupils,

3. The ability of the students to act as a conduit between the parents and the school regarding their children's needs,
4. The strong trusting relationships the students developed with the pupils which enhanced their enjoyment of school, and,
5. Receiving copies of the plans and reports developed by the students at the cessation of their placement.

5.7.1 Consistency and regularity of care

In contrast to the intermittent and irregular therapy their children had been receiving over the previous few years and the challenges they had accessing services through the NDIS, the parents highlighted the benefits of four weeks of regular care delivered by the same team. It was noted that the four weeks allowed their children to build rapport with the physiotherapy students, and hence, therapy was more effective than seeing a series of different therapists over a period of time, as experienced by Gracyn,

People (physiotherapists) would come and go really quickly and with Gracyn that's a big thing. It's just better if she gets to know these people and that the same people work with her because she gets a rapport with them, she trusts them and then they can do more things with her whereas if there's a new person every time she doesn't trust them. [If] she's not confident with them she doesn't do what they want her to do and that can be quite irritating... [she was] quite wary for the first three or four days but then after that it was like she was waiting for them to come, anticipating them (Matt Johns, Gracyn's Father).

5.7.2 Gauging families' perspectives: a holistic approach

Engaging and including parents/carers in the programming of therapy for their child was empowering and reassuring for families. The students' inexperience, their humble approach to delivering the service and their genuine interest in the background of the pupils ensured that they incorporated families' advice into the therapy. This approach deepened their understanding of the pupils' physiotherapy needs, as described by one parent/carer,

We also went into cultural stuff. They were asking about Caleb's age and his family contact and those kinds of things. They wanted to know a holistic view (Anne-Marie Temple, Parent/Carer).

The people and networks the students were exposed to throughout the course of their placement enhanced the students' holistic approach. Conversations and interactions

with significant others in the pupils' lives enhanced their knowledge of the context which in turn contributed to the programming of their therapy for individuals. One of the parents/carers draws attention to the many different ways the students harnessed information about the pupils,

I saw them with such a diverse range of people... the Indigenous support person (AEO) and also with Glenn (SESO). Their level of respect and engagement was so diverse. So whether it was a teacher, whether it was a student (pupil), whether it was a parent, whoever it was, it really looked like a two way street. I could hear them chatting and asking questions and I thought, "how awesome". And not only that, they also wanted to know about the school, like how the school is evolving. So it wasn't just this isolated thing, they were doing the therapy in inclusion, which is amazing (Anne-Marie Temple, Parent/Carer).

One of the students notes how valuable a specific and purposeful meeting was with one of the pupils' parents/carers and how it assisted in directing the course of the treatment they provided him,

It was good being able to do a family meeting. The mum came in and we met with her for about an hour and just talked through all her concerns about [her son], concerns about the NDIS funding and got a bit of his background. That was really helpful because we could find out her specific goals and understand why they were important to her...like she wanted him to be able to more reliably take his own weight to assist with transfers, so we were like, "Oh that's great, that's something we can work that will be relevant to his day to day life" (Jessica, Student).

During the placements, the students also undertook home visits to four different homes. This provided them with an insight into the home contexts of the pupils, and in particular highlighted some of the challenges parents and carers face regarding accessing and installing equipment. The parents/carers were willing to share this aspect of their lives with the students, noting that it enhanced their relationships, improved the student's understanding of their children's circumstance, and enabled the students to include recommendations for home equipment in the reports.

5.7.3 Enhancing parents'/carers' insight into school life

The students' immersion in the school and hence their insight into the school programs assisted in keeping parents/carers abreast of activities taking place in the school. Parents/carers are often very busy and have limited time to spend at the school or meet with staff. The students became a conduit between the parents/carers and staff

regarding the physical needs of the pupils and the programs the school were able to provide. For example, one parent/carer had been under the impression that her son was regularly using a walker at school. The student intervention brought to her attention that this was not the case and the reasons behind it. From the perspective of this parent/carer, the student-learning placement has enhanced accountability of the school,

It brought me up to speed with my knowledge as to what was happening at the school. There's (now) been more accountability. I'm now getting reports such as, "Caleb hasn't used the walker this week". Whereas I wasn't getting anything before...it's not a dobbing thing. Then I'm able to be productive on Caleb's behalf. Now, people are aware that it's not happening whereas before it didn't matter (Anne-Marie Temple, Parent/Carer).

5.7.4 Parents/carers appreciation of relationships between pupils and students

Parents/carers consistently provided positive feedback on the nature of the relationships their children established with the visiting students. Section...(ways students operated in school) provides an insight into the positive ways the students positioned themselves in the school, including approaching their role in a relaxed and humorous way. Feedback from one parent/carer is indicative of how her son enjoyed spending time with the students,

He loved those students, he really, really did. And when I say that, people say, "Oh bless". But no, he really, really looked forward to it. Normally, I would say to him, "How was your day?" and I'd just kind of get a grunt or an absolutely exhausted response, but those days that he saw them he would tell me all about them (Anne-Marie Temple, Parent/Carer).

This parent/carer attributed her son's strong connection with the students to his recognition that they were young adults like himself. She saw this as critical to the trust he placed in them, specifically during the hydrotherapy sessions,

They [students] weren't too much older than him and he got that they were young adults. He understands that he's starting to become a young adult because we talk about him being a man now. So he could identify with the two young men. We can forget that these people with a disability sometimes don't necessarily get categorized as that. (They) see these (other) young men [the students] as young men, but we don't see

Caleb and others [with disabilities] as young men, but they are. So he was doing that link himself and he was really proud of that (Anne-Marie Temple, Parent/Carer).

5.7.5 Benefits of the reports to parents/carers

At the cessation of the placement parents/carers received copies of their children's reports and copies of the plans which were provided to classroom staff (Section...). This provided the parents with a deeper knowledge of the physiotherapy their children require, presented them with a visual resource to use at home and access to a comprehensive professional report on their child's capacities as well as needs which could be shared with future therapists. As described above, this was especially useful for families who needed an evidence-base to inform their children's NDIS plans (Section...).

This close involvement of parents and carers in the therapy of their children at AHS meets recommendations presented in the 2018 NT Review of Policy and Practice for Students with Additional Needs,

The evidence presented within the review shows a clear drive to empower and strengthen the decision-making related to students with additional needs by involving students and their families in collaborations with school and system staff as well as other agencies (Milne et al, 2018:vii).

5.8 Impact of transition onto the NDIS for AHS families

On trial since 2013, the rollout of the National Disability Insurance Scheme (NDIS) became fully operational in the Northern Territory in 2019. Due to the rollout of the NDIS by July 1st 2019, pupils at AHS with NDIS plans were no longer eligible for services from CDT (apart from one family who were New Zealand nationals, see Case Study Two). The rollout had been relatively gradual, with clients transitioning from CDT to NDIS over the preceding 18 months. However, the scheme is very different in structure from the previous government-delivered physiotherapy services accessed by AHS pupils and the contrast has been challenging for many families, as the CDT manager notes,

The families have had a long history with our team and received therapy from us; sometimes regularly and sometimes not very regularly but we had a long relationship with lots of those families. So for them, it's been a massive change in terms of accessing therapy services. You used to just

come to Flynn Drive [CDT] for everything and now it's a different market. NDIS planning is a really big thing for families to go through and the private market is quite thin on the ground in Alice Springs still. So families get this plan and get this money and then they've got to find services for their child (Manager, CDT).

The consistency with which the NDIS has featured in the participants' feedback indicates that it is worthy of attention and discussion. Participants not only reflected on their experience with NDIS to date, but also compared this experience with the services they received through the student-learning placement (see Table...).

As described in the introduction, leading up to the transition to the NDIS the government health service was already struggling to provide adequate physiotherapy to many families due to lack of resourcing. However, for many, access to the NDIS has not overcome this. From the feedback informing this report, this has been primarily attributed to two factors: 1. A lack of private physiotherapy service providers in Alice Springs, and 2. A failure in developing NDIS plans which adequately reflect the needs of the AHS pupils and their families. The first concern is discussed in this section, followed by a case study about the experience of a family of an AHS pre-schooler and their navigation of the NDIS. Additional observations and a discussion about the barriers to developing NDIS plans are provided in Appendix 6.

Although it is hoped that the feedback from the participants can contribute to recommendations regarding the rollout of the NDIS in underserved areas, a discussion about NDIS and its impact on the access to allied health services for the AHS pupils and their families is far more nuanced and complex than possible in this report.

5.9 Minimal access to physiotherapy services for those on the NDIS

At the time the NDIS transitioned, there was only one private physiotherapy practice in Alice Springs. As well as being at capacity with private clients, the service does not focus on paediatric needs or focus on clients with neurological disabilities. Many AHS families requiring physiotherapy services for their children could no longer access services of CDT, yet, there were not the private providers in Alice Springs to fill the gap. The CDT manager, draws attention to the benefit of the student-learning placement emerging at this time of transition,

For a lot of families that I'm aware of in town, they got their NDIS plan and it's meant less services for them now than what they were getting from us previously. So, for them in particular to know that their child was

getting some physio at school is probably a real relief and meeting a need (Manager, CDT).

One means the NDIS has used to try and fill the niche in physiotherapy services is through engaging services from outside Alice Springs on a fly-in fly-out (FIFO) basis. This was experienced by the school in 2018. As described by the previous principal, the arrangement was not ideal, especially when the Darwin-based therapists assumed they could use the school as a site to treat their clients with no prior liaison with the school,

So that was going to be an issue for me as the Principal: that there were people coming in ad hoc to take students out, expecting to be able to do programs, but they also had to be supervised by a teacher so they couldn't just rock up. So I just said to them "No I'm sorry, you won't be able to do this, just rock up out of the blue" (Principal, AHS, 2012- 2018).

The parent/carer of one child reported on the disadvantage of FIFO physiotherapy for her son. At the time, she had opted to use a physiotherapy service from Darwin due understanding that there was a long waiting list for the local NDIS provider which could provide physiotherapy. Although not keen to use someone from out of town, she was eager to get a report done for her son which could contribute to his NDIS plan and hence determine funding for future physiotherapy. She explained,

I can either wait six months for somebody from interstate [or Darwin] or I can wait a year and a half for someone local (Anne-Marie Temple, Parent/Carer).

However, she was disappointed in the FIFO service. First, only an hour was allocated for her son's therapy. During this time the therapist wished to make adjustments to his equipment which required his physical cooperation. However, the appointment took place after school, a time of the day when her son was "so exhausted and so not wanting to play the game" and hence, was "non-compliant" (Anne-Marie Temple, Parent/Carer). This would have perhaps been an opportune time to have an initial session with her client, and then return later for a follow up to adjust his equipment. However, due to the FIFO nature of the visit the therapist was due to fly back to Darwin, minimizing the possibility of developing a trusting relationship with the pupil in which the therapist could then attempt the adjustments.

Second, the FIFO visits incurred a very high cost which consumed a lot of the money in the pupil's plan. As well as paying for the service itself, a percentage of the flights, accommodation and other incidental costs had to be paid using his allocated NDIS money (the proportion of which is determined by how many other clients the therapist was visiting while in Alice Springs). Follow up administrative work required by the

therapist is also included in the cost. The high cost for the physiotherapist's report angered this parent/carer who was concerned about such an "extortionate" cost for an essential service for her son

Additional challenges regarding the transition on to the NDIS experienced by Alice Springs families are demonstrated in the following case study based on an AHS preschool pupil and his family.

5.9.1 Case Study Three: A long wait for Luke: A family's experience navigating the NDIS

A combination of barriers contributed to a dearth in physiotherapy services for a pre-school aged AHS child with quadriplegic cerebral palsy. This case study focuses on his family's interaction with the NDIS, the impact it had on their son's access to physiotherapy services and the consequent benefits of the intervention provided by the student-learning placement in 2019.

In the early stages of the NDIS rollout, Luke's family attempted to put a plan in place. They were either unaware of NDIS Local Area Coordinators (LACs), or LACs were not yet unavailable in Alice Springs (LACs were initiated later in the rollout of the NDIS in response to reports of confusion about the scheme in trial sites),

We didn't have one [LAC] at the beginning because we didn't know about these guys before – that was two years ago (Parent/Carer).

Without any support, the parents/carers filled out the required paperwork with a comprehensive list of services required for their son in the proceeding twelve months and submitted it to the staff in Alice Springs NDIS office. However, as well as being a one year wait before hearing back from the NDIS with a plan, their request was assessed by someone in Darwin who removed some of the child's key requirements, including a wheelchair. Furthermore, only minimal hours for physiotherapy were included in his plan,

We went up there (NDIS in Alice Springs) and we had our list, what we needed, and the guy at NDIS wrote everything down. We put it all in his grant but the people in Darwin crossed everything off and took everything out; that's what they told us. I can't describe how rotten it was because if you come face to face with a little boy in a wheelchair and they can see how he is and on the [decision making] end of the plan, they took off the wheelchair, well, that's not understandable. They also took his incontinence stuff also out of the plan. They took his standing frame out of the plan. They also took his bed out of the plan...[Because of taking all these things away] Luke was broke for more than half a year, he had no money anymore (Parent/Carer).

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In this plan, the family were allocated 15 hours physiotherapy for twelve months,

It was only 15 hours for the whole year so that was really quickly gone and we tried to fight to get more hours (Parent/Carer).

This is a significant difference to the minimum two/hour a week deemed necessary for his therapy by Anne Bent, the placement supervisor.

Luke's parents/carers were driven to having to do physiotherapy at home for their son due to his severe condition. Failing to keep his joints soft and flexible resulted in him being both in pain, struggling to get comfortable when lying down and resulted in poor hygiene as his carers could not move his stiff legs apart to clean him adequately. In order to provide the necessary ongoing treatment, the parents improvised. They drew on the mother's experience from working in health and used advice they found on the internet,

Me and my wife were doing the physio for him so his joints don't get stiff. I looked at the internet to get some tips for how to keep his knees and his hips so the joints don't jump out. Keeping his mobility with his joints was a lot of work. We had to do it all ourselves so we were quite busy. We worked our way through it but we're not professionals like physios are (Parent/Carer).

One of the Flinders students reflected on the necessity for children such as Luke to have intense intervention at an early age. She notes that improvements in function seen in preschool-age children following a four-week block of intervention can have a marked effect compared to the same intervention on more mature students. Many of the students were taken aback at the conditions, barriers and general lack of access to services pupils such as Luke had prior to their visit, conditions which are likely to increase the severity of the pupils' disabilities later in life. Imogen's comment highlights the impact of the students' intervention,

[Following our intervention] you can see how those [younger preschool age] kids then progress throughout their lives. You just think, "What if we had been able to provide that service earlier to all the other older kids who are limited in their function, perhaps they would have improved function by now too?" (Imogen, Student).

One of the students reflected on Luke's family's situation and how the intervention provided by their placement contributed to the capacity of the family to undertake physiotherapy with their son,

Luke was an interesting one because his NDIS plan somehow managed to come up with no funds for physio, which was a mistake and his carers were in the middle of disputing this. In the meantime his carers were coming up with therapy ideas themselves and researching on Google for ideas. They were doing a really good job but they were just a bit concerned that they were not qualified to do it

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so they specifically asked us for exercises and activities to do with him while they were waiting for the NDIS plan to be fixed (Jessica, Student).

Reflecting on the therapy his son received during the student placement, the father stated:

I can say that what Luke had at that time when the students were there was more than he got in the last two years (Parent/Carer).

The endless waits for the processing of NDIS paperwork and plans has taken its toll on the family. The father describes the waiting time and his confusion at why someone in Darwin had the authority to deem what was necessary for his son in Alice Springs,

It should go all quicker with NDIS. This sending forms from Alice Springs to Darwin, it sits around there for three months and then they say, "Oh, no, he's not getting the wheelchair". Then it gets somehow sent back to Alice Springs and it sits there for another three months and still, "Oh, he's not getting the wheelchair", so that's six months. Things like that are what I don't get. They should let us know earlier so you can request a new meeting and ask why not. This transition shouldn't wait for one year...I don't know who is sitting in Darwin saying he doesn't need a wheelchair. What kind of people? A rubbish picker sitting there or some other people just helping out and doing crosses? I don't know. It's not understandable how they can say he doesn't need a wheelchair (Parent/Carer).

During the conversation the father was clearly exhausted by the complications and his lack of control over finding ways to provide what was necessary to manage Luke's pain and enhance his function, comfort and quality of life,

Making it hard doesn't make it easy for us. Sometimes I think that's why nobody wants [to foster] these kids, because it takes too long, everything, to get equipment, and things like that (Parent/Carer).

An added challenge for this family was that they had four Indigenous foster kids in care and lived in a rental property. As Luke grows, modifications to the house will be required in order to enhance his mobility, for example, a specialised bathroom that can fit a wheelchair and rails on the ceiling so his parents/carers can transfer him into bed. However, two significant barriers stand in their way which are putting stress on family. First, the landlord is not happy with them making these modifications, and second, when they had inquired about financial support for these housing modifications through the NDIS they were told that this was only possible if they owned the house; an option which is not feasible for the family.

A year after their initial submission to the NDIS, the family were made aware of Linkup Disability Services, an NDIS provider in Alice Springs. This led to the development of another plan for Luke. Although this also took a year to process, things started to progress for the family, supported by the

advocacy of a Linkup staff member who engaged with them and assisted them to navigate the system,

Then we found Linkup. She helped us through the next meeting. Now she's fighting for us and last week we got a new plan and they put everything in that we requested including more hours for home care and two hours a week for physio which is all covered for the next four months. We know he's got his physio and we're happy with that. He's getting his wheelchair, he's getting his new standing frame and his incontinence equipment so at the moment it sounds good (Parent/Carer).

Luke's physiotherapy is now being provided by a recently employed paediatric physiotherapist working in a local allied health private practice which emerged in response to the high need of AH services for NDIS clients. The practice opened in January 2019 but was unable to recruit a physiotherapist until October 2019. This practice now employs two physiotherapists which is helping to meet the needs of NDIS clients who require physiotherapy in Central Australia.

5.10 The way the physiotherapy students operated in the school

The provision and delivery of safe and effective health services that cater for the diverse cultural and social contexts of Central Australia is a common cause for concern, and where needs are not met, health inequalities persist (Maclean et al, 2017; Northern Territory Government, 2016; Downing et al, 2011). The introduction of a new program to AHS had the potential to be disruptive and unsettling for the school and unclear for the students, none of whom had previously worked in a school context, and only one of whom had previous experience in Alice Springs (at the private physiotherapy clinic). However, accounts from all parties indicated that other than a few teething problems (which can largely be attributed to the pilot nature of the project), the students and their supervisor successfully wove the program into the life of the school.

Unlike physiotherapy services in the school in the preceding two decades, the school had ownership of the program and was an integral part of planning when and how services would occur. The university students were immersed in the school context for the four weeks of their placement. This provided the school staff, the students, parents and pupils with an opportunity to develop relationships, systems, and means of communication that could contribute to the effective delivery of services. As noted by one staff member, the students were fast learners and hence slotted well into the "school culture",

The students were good at reading the cues in order to fit in with the school culture. Although the logistics with gates and keys were complex largely due to the building renovations they communicated well with school staff and picked it up fast (Teacher and SESO).

The accounts that inform this report attribute the positive impact of the student placement to both the design of the project, and to the characteristics of the students themselves. Addressed below, their capacity to work as a team, the professional relationships the students established in the school, their flexible, easy-going and fun attitude, their humble approach to physiotherapy intervention, and their eagerness to learn were all noted as making a strong contribution to the way the school embraced the service and the readiness of the pupils to engage in therapy and other activities with the students.

5.10.1 Teamwork of students as a benefit to the school and outcomes

Working as a team of four students and often in collaboration with school staff was noted as a key dimension to the successful delivery of the program. Throughout the evaluation, the team-approach to service delivery was often contrasted to the previous and more typical approach to therapy by a single therapist,

I remember they'd be sitting [together], brainstorming, talking about things and working it out as a team. I imagine normally a physiotherapist would come on their own, observe a child, do therapy and [then] sit by themselves at their desk to write their report. That collaboration to me was really powerful. You had all these clever young minds, and the supervisor's amazing mind and knowledge. Also, sometimes myself or a teacher managed to be there at the same time, it was collaborative and I think that is really powerful (School Principal).

The classroom staff also noted that despite the space it required, the team-work approach to service delivery was suited to the needs of AHS pupils. The following observation indicates how impressed the staff were at seeing the students collaborate during therapy session,

Although it was sometimes a bit crowded with all the students in the space, it was also good to see what they were doing, how they interacted and shared ideas with each other. They demonstrated professional relationships in the way they took turns, worked as a team, had conversations about what they were doing and handed Braxton's care

over to each other in the therapy sessions. There's a lot to be said about the support and morale they provided each other as a team (Teacher and SESO).

An insight into delivering therapy as a team from the students' perspective is offered in the next chapter.

5.10.2 Students' attitude enhances success of therapy

Leading up to the student placement there were many unknowns about how the program would unfold, and to some extent a "nervousness" about the impact of the students' presence in the school. However, following the two placements, the reflections on the way they positioned themselves drew attention to the positive attitude they brought with them. As well as being described as "*professionally focused and engaged*" (Glenn Irvine, SESO, AHS), additional characteristics of the students were admired including their capacity to be flexible, fun and easy going.

In contrast to their other placements which were predominantly with adult clients, the students recognized that it helped to "have fun" with the AHS pupils and to undertake therapy through games and a light-hearted approach. The supervisor encouraged and mentored the students into working this way as she describes here,

We shouldn't forget or disregard that the little children had a lot of fun during the interactions. Remember in many instances these children are non-mobile, the world has to come to them, they can't go out to the world. [As a therapist] you can work out ways that a child can participate even if it's an assisted active movement. Things that are fun for them, like bouncing on a ball. When the child doesn't have full trunk control, it can be quite safe if you stabilize hands firmly around the pelvis, the child is safe and has fun have because this is stuff they can't do themselves. And then with a group of students, you can have a student doing that and the others all laughing and clapping - having fun is an important part of therapy with kids (Anne Bent, Placement Supervisor).

The supervisor noted that the students' age contributed to their capacity to take such an approach, "because they are young, in their 20s, and lively, they laughed loudly, and talked loudly and joked and had fun, they bring an energy to the role" (Anne Bent, Placement Supervisor). The relatively small gap in the age between the pupils and the students also contributed to the ease in which they established relationships with the pupils. As noted previously, one of the parents/carers observed that her teenage son saw himself as a young man, and hence, built an easy rapport with the young male

students more easily than he would have with older therapists and this encouraged his participation in the program.

Gracyn's father, introduced in Case Study Two, points out how the patience, acceptance and initiative the students applied to their therapy could not have been better suited to his daughter and family,

They were patient. They listened to – of how to properly care for her, [that] sort of thing. They were even mindful of this (points to Gracyn), her dribbling. She dribbles quite a lot so they were putting these towels over their shoulders...they were like really acceptable of her and very, very helpful. I couldn't have asked for better. It's something that I believe there needs to be more of...they just made things happen...They were [also] keen to initiate things. A lot of people are standoffish, especially when they don't know the limits of [a client]. They weren't. They were quite keen to get hands on; it was really, really good. There was nothing at all that I could fault them with, yeah, nothing at all (Matt Johns, Parent/Carer).

The students also exercised their patient approach when it came to identifying time and space to undertake therapy in the school. School staff indicated that they were grateful for the flexibility the students offered in terms of timing and location of therapy, which was enhanced by their immersion in the school, and therefore, familiarity with the school routine. Teachers commented that despite the need to often share teaching and therapy space, the students made it work,

Although we were often all in a shared space [with the rest of the class] the physio students were a minimal distraction. They were quiet and respectful both with Braxton and with the other students in the class (Teacher and SESO).

Despite the challenges with both space for therapy and a physical base for the students in the school, the Principal noted that they had been very accepting of the arrangements. A comment from one of the students indicates her recognition for the need to be flexible when delivering therapy in a school context,

You definitely need to be flexible and be prepared for things not to go the way you planned and be ready to change your plans at the last minute (Jessica, Student).

One of the students from cohort one notes that the flexibility and lack of expectations regarding the delivery and establishment of the program assisted the students to both

ease their way into the context and establish a program in response to the needs of the participants,

There weren't any expectations of "We're here for this amount of time and we need to do these sorts of things every day". So, there was lots of flexibility in how we wanted to structure our days and structure our therapy (Imogen, Student).

This flexibility contributed to the capacity and initiative of the students to mould their activities to suit the "Three-Tier" response to intervention: between individual therapy sessions they could interact with whole classes and in the playground as observed here by school staff,

They also made an effort to engage with the students outside the classroom. During outside play they would sometimes come down and say hello, play ball and interact with the students and staff (Teacher and SESO).

Influencing their approach to service delivery were the skills and experience of the supervisor who mentored the students in effective and appropriate relationship-based approaches to therapy. This was enhanced by the side-by-side supervision required for the students which thus gave ample opportunity for her to share accounts both in terms of professional knowledge, but also of appropriate ways for health professionals to position themselves in the social and cultural context of Central Australia. Sheina Treuel, the Assistant Principal, had extensive experience working in schools for children with additional needs. She contrasted this approach with supervision of other allied health students who do not require constant on-the-ground supervision which, in her opinion, made placements less effective.

5.10.3 A humble approach to service delivery: Students' willingness to learn

Responses from those around them indicated that the students brought a humble approach to their role as physiotherapists at AHS. Perhaps attributed to not being yet fully qualified this was demonstrated by their willingness to learn from those around them. Their deference to school staff, parents and the pupils themselves enabled them to both gauge a deep insight into the needs of their clients, as well as develop equal relationships rather than one of "powerful practitioner verses meek client"; an approach that was recognized and appreciated.

With the support of their supervisor, the students very quickly came to value relationships with the teachers and parents in order to enhance their knowledge about

the pupils' conditions and gain a deeper understanding of the context. This was particularly noted in cases where participating pupils were non-verbal and hence could not communicate their conditions, discomfort and pain. As one student noted in reference to a teacher,

She was more of the expert, on what activities he could do in the frame, how long he should be staying in the frame and how to build up his tolerance for standing in it (Jessica, Student).

Further indicating their willingness to learn was the way the students grasped the opportunity to learn some sign language in order to more effectively communicate with the pupils. For both cohorts, the school organized sign language training delivered by one of the teachers early in the placement. The teachers appreciate this effort and noted the way it enhanced the students' capacity to deliver therapy,

We were also really happy that the Flinders students were enthusiastic about learning how to sign. This made a big difference to their ability to communicate with students throughout the school (Teacher and SESO).

Also demonstrating the "learning" approach the students brought with them, Daniel points out that working in "tandem" with parents/carers and teachers was essential in understanding the needs of the pupils which were often outside the scope of the students' previous experience,

So often with our physiotherapy goals we know what we want going in, but for this particular patient population, sometimes that's not really achievable. We want to do certain things, but logistically it doesn't always line up. So working in tandem and in collaboration with the teachers and the carers, and the kids, we could get the best outcomes for them rather than I guess what we wanted (Daniel, Student).

As well as recognizing and appreciating the "learning" approach of the students, the teachers themselves took opportunities to inform the students in order to increase their understanding of the pupils and the school. For example, the Assistant Principal recognized that the students' interaction with the pupils may be enhanced if they learnt some behavioural management strategies,

I would ask about their key learnings. I would ask them how are you going, is there anything you need to know? [I would] model some of the different behavior management strategies. We've got some pretty big scary kids who are just really sweet. So it's just about showing that side of our pupils, that they're really great characters and sometimes they'll

have a meltdown, but we actually know why and not to be frightened away, just get to know them. And then both groups did that really easily (Sheina Treuel, Assistant Principal).

In their final presentation to both AHS staff and the public, the cohort one students emphasized the importance of what they had learnt from the teachers and the SESOs who they described as “the experts on their students – their individual learning styles, likes and dislikes and communication needs” (PowerPoint presentation, cohort one). This was reinforced by feedback from Braxton’s teacher and SESO,

Braxton was all smiles when the students were working with him. He enjoyed the interaction. They were good at developing a genuine relationship with him and to do this, they observed and picked up skills from us – copying how we would joke and be a bit cheeky with him. They were very easy going and respectful in the way that they sat down at his level during the therapy sessions (Teacher and SESO).

The key attributes the students brought with them – flexibility, fun, patience, initiation, professionalism, humbleness and a willingness to learn - enabled them to successfully “merge” into the life of the school, an approach which is summarised by the Assistant Principal,

They just merged in really, because they were there all day every day, on the ground and in the classrooms. The school is a really lovely welcoming school and staff are always appreciative of extra advice and support [and] they just meshed in and became part of the team. I didn't actually ever look at them as not being part of the team. I know each time they left, there was always that sense of, “Oh no, they're going now”. So they seem to have connected very easily with the staff and...the staff were really grateful for what they were bringing to the role. They're really professional and personable and really likeable. They had really good social skills to slot in, easy to work with, flexible, had great senses of humour, could see the funny side. But they really connected very well with the kids, they developed that rapport. You'd see them out at play time, playing with kids, bouncing the ball. And I think they were really happy. They were sad to go when it finished (Sheina Treuel, Assistant Principal).

5.11 How the student learning placement contrasts to the services experienced by some AHS families

The accounts that have emerged in this report indicate that the timing of the student-learning placement has both assisted to fill the niche in terms of physiotherapy services, and ease the stress and confusion many families were experiencing during the transition to the NDIS both in terms of accessing services, and being provided with evidence-based reports which can be used for NDIS plans. As well as filling a niche, the accounts have demonstrated the contrast between the primarily positive experience of families with the physiotherapy provided by the service-learning placement, and their experiences with accessing physiotherapy, or lack of, through the NDIS⁵. Based on the accounts which emerged in this report, the characteristics of both types of services are summarized in Table 6.

⁵ The occupation of the physiotherapy role at Desert Therapy for 8 weeks by the supervisor following the second cohort's placement provided continuity of care for these families (see Section on sustainability). Anecdotal evidence demonstrated that families were happy with this service, however, recording the impact of this was outside the scope of this evaluation.

Characteristics of the NDIS funded physiotherapy services many pupils and families had received to date	Characteristics of the service-learning physiotherapy services
High dependence on fly-in fly-out services who have little knowledge of the Central Australian context	Students worked closely with a supervising physiotherapist who had a deep knowledge of the Central Australian context
Lack of continuity of care	The same group of students undertook regular therapy over four weeks
Minimal opportunities to establish relationships between AHS pupils/families and therapist	Therapist/student immersion in school which provided a foundation for strong and trusting relationships
Infrequent and limited hours allocated to physiotherapy	2 x four weeks of intense and regular therapy
Costly services and costly development of reports to inform NDIS plans	Free service and free comprehensive reports the parents/carers were able to use to enhance NDIS plans
Access to support staff within NDIS who have limited experience with how to identify allied health needs of client	Therapy takes place alongside school staff thus enhancing their capacity to continue activities with the pupils and boosts their confidence use specialised equipment
Lack of information sharing between therapists and school staff	The information collected and recorded by the students was shared with the school with ease
Expectation that the school fits into the schedule, timetabling and availability of therapists	Patience, flexibility and close coordination with teachers to ensure the therapy isn't disruptive to school programming. The school was an integral part of planning and owning the service.
Limited cultural awareness of staff regarding cultural needs for pupil and their family	A focus on cultural awareness and cultural safety in the delivery of the program
Expectations that therapy can take place at the school with little if any forewarning (disruptive to school lessons and children's education)	Students collaborated closely with the school and organized therapy session with staff in order not to be disruptive of school programming
Dropping in to school with little engagement with students family	Strong relationship with school and pupils' families provide a holistic approach to care
Focus on individual therapy	The intervention offered by the students offered a 3-Tier intervention model: individual, whole of class and whole of school
Service delivered by a single therapist	A team approach to therapy which provided a comprehensive service and enabled additional activities for the pupils which required extra hands such as hydrotherapy
Fly-in Fly-out services are likely to work in isolation, rather than taking a multi-disciplinary approach to pupil's health needs	Close and regular contact with pupils enabled the students to meet others involved in the pupil's healthcare and were able to take a holistic approach to care ie. speech therapists

Table 6. Contrast in participant experience between NDIS-sourced services and the services provided by the service-learning model.

Supporting the contrasts evident in this table, the School Principal points out the differences between NDIS and CDT-type service provision, and what the students were able to offer,

What the students can provide is quite different. The NDIS and the CDT would have been a bit similar. One person (one physio) comes in and works with one or two children. But the physiotherapy students were here for a four-week block and this made a difference. Other things that made a difference include being a team. Additionally, the supervision matters too. She is a genius of paediatric physiotherapy (School Principal).

5.12 Sustainability: therapy at AHS between and beyond student placements

Sustainability between and beyond the placements was a key consideration for many stakeholders and participants who did not want to lose the momentum the first cohort had established,

I guess an issue that needs to be taken into account is how to get some carry over effects, like how can something continue when the students leave or don't come back for six months? Something's better than nothing but then how do we make sure that there is some sort of sustainability? (Tahlia Lee, Team Leader and Physiotherapist, CDT).

Over the course of the placement, students and staff established measures to ensure support for the referred pupils between and beyond cohorts. The School Principal observed of the students, "There was a really strong awareness that they didn't want to come in, do all these amazing things and then disappear and everything dies" (School Principal). Imogen from the first cohort indicates her concern for the gap that they would leave following their departure,

The biggest thing for us was towards the end of the placement, trying to work out who was going to take over our role. It was five people helping with these kids that were leaving, so trying to fill that role with the staff...was probably the biggest challenge (Imogen, Student).

There were six key dimensions of the program – some planned, and others which emerged during the course of the project – which contributed to its sustainability. They are summarised here and described in detail below:

1. Close engagement and involvement of the school staff in the programming and therapy,
2. The students' immersion into the life of the school, making the activities they implemented visible and gaining physiotherapy a prominent position on the school's agenda,
3. The purposeful development of plans and reports which can be referred to for ongoing therapy / activities,
4. Interaction and information sharing between the two cohorts of students,
5. Having a dedicated Therapy Aid position in the school, and
6. Following the cessation of the second placement, the supervisor was employed by a private practice as a physiotherapist to service children with additional needs for eight weeks.

First, crucial to supporting the physical therapy between student visits was the close and inclusive engagement of school staff in the therapy so as they could gain the skills to continue the programs with the pupils. One of the Department of Education regulations for the program was that a school staff member had to be within "line of sight" of the students and supervisor during therapy sessions. Although occasionally perceived as a challenge due to the existing high workload of the staff, this had the benefit of staff observing and learning appropriate physiotherapy intervention which built their confidence in being able to deliver the therapy in the students' absence.

Second, the immersion of the students in the school context for a prolonged period provided them with a deep insight into the life of the school, the children's needs and the way their skills could complement the existing programs. They gained the knowledge required to design activities in a way that suited the classes and fit in with the school timetable, for example, the daily physical education (PE) activities with the senior male class. This program has continued to be a strong and consistent part of the pupils' daily routine. As described by the School Principal,

I think when they [PE lessons] first started, the pupils were uncertain about the new activities. However, overtime they grew to like it and it became part of the daily routine. They continue to be engaged with the program which indicates how it has been sustainable in the students' absence (School Principal).

The students' immersion into school life resulted in the pupils' physical and mobility needs becoming more prominent on the school's agenda, both at a classroom level and administratively. As noted by a few staff members, their lack of expertise in the area, combined with the decreased presence of CDT physiotherapists at the school, meant that there was less scope and motivation for physiotherapy to be high on the agenda. Hence, even though there was a significant gap between placements, the students

encouraged staff to embed the activities into practice and amend human resource requirements accordingly,

I think what it's done is kept it on the agenda, it's kept it on the radar, because we know the students are coming back. So, we've had the conversations, we've had the assessments done, we've had the programs devised, we've had the conversations, we've identified some HR [human resource] issues to be able to support the program, and then embedded it into practice. So, we know when the students come back, we're looking for improvement; we're looking for progress and I think that keeps us really honest about looking at those things as well (Sheina Treuel, Assistant Principal).

A third enabler of sustainability, was the purposeful development of comprehensive plans and reports which were made accessible to staff and students. As described in **Sections...**, the plans enabled accessible and quick reference material to guide school staff in the ongoing delivery of activities and therapy for their pupils to enhance their comfort and mobility.

Further contributing to the sustainability of the program was that the Flinders Students from both cohorts are part of a small pool of 40 students studying physiotherapy. This allowed for interaction and information-sharing between placements which provided the second cohort with ways of meaningfully supporting and continuing the interventions the first group had implemented. Although continuation of this information-sharing is dependent on the consistency of universities the students are recruited from, the Flinders-based supervisor has indicated the possibility of students from the first two placements returning to present information about the placement to future cohorts which would further enhance effective exchange of information and maintaining a “corporate memory” of the project.

A key staff member supporting the project during the first placement was the school-employed Therapy Aid. The focus of her role was to work alongside the students, and, following their departure, implement the mobility plans they developed. A timetable was developed by the school to embed specific daily activities between the Therapy Aid and the AHS pupils engaged in the project. This was working well, but the Therapy Aid was largely absent from her role during the second cohort's placement. The school noted the importance of supporting this position to “ensure that those activities took place every day” (Sheina Treuel, Assistant Principal). The students also noted the potential of a full-time therapy aid,

I think if the therapy aid was there, if they had someone like that working full time, it would give those kids that need it a little bit of extra

help, some extra time and therapy time. That would make what we do a lot more sustainable and make the benefits a lot more lasting (Kirsty, Student).

Additionally, the supervisor noted the challenges for staff to fulfil the plans set in place by the students without the assistance of a Therapy Aid,

A Therapy Aid needs to be physically active to be able to help with manual handling to do things like assist children into walking frames and standing frames. Without the Therapy Aid it's challenging for staff to follow some of the plans set in place by the students. It takes two members of staff to be able to assist children in and out of walking and standing frames. It can't be expected for the teacher and SESO to do this when they have other children in their class they need to teach (Anne Bent, Placement Supervisor).

An unexpected contribution to the project's sustainability following the second placement was the employment of the placement-based supervisor as the physiotherapist at the lone private practice in town that was set up to offer allied health services to children with additional needs. During the eight weeks in the role, her work required her to undertake ongoing therapy with the pupils who had been engaged in the program at AHS. The existing relationships provided continuity for the pupils and families, and this position allowed her to follow through on issues which were not resolved during the placements. Her ongoing involvement with the school enabled liaison with the staff regarding the school's capacity to fulfil the plans established during the placements and gave her an additional insight into school life to contribute to her planning for future placements at the school. The supervisor's employment by the private practice also made way for information-sharing with other allied health staff employed by the service i.e. speech pathologist and occupational therapist, regarding the needs and circumstances of clients, thus enhancing opportunity for a multi-disciplinary approach to treating the children. Additionally, this enhanced the supervisor's insight into the "lay of the land" regarding NDIS which could potentially be beneficial for future placements at AHS,

I was really unaware of the players in the NDIS field during the student placement but this work with private practice has given me a better idea of the NDIS lay of the land (Anne Bent, Placement Supervisor).

Combined, these measures have assisted in establishing systems, skills and relationships that can support sustainable outcomes of the intervention provided by the students and their supervisor in May/June and September 2019 and into 2020.

5.13 Conclusion

The student-learning placement in 2019 at AHS provided a service to a group of high needs children in what is otherwise an underserved area, “value-adding” to the school in a way that was appreciated by all participants (Sheina Treuel, Assistant Principal). Supported by three case studies, this chapter has highlighted the contrast in level and effectiveness of services which families and pupils received during the placement in comparison to what they had access to prior to the intervention. The key characteristics identified as shaping the service in a way that met the needs of the participants are:

- The student team’s capacity to deliver a service beyond individual therapy,
- The collaboration in planning the service by the school,
- The immersion of the students into the school and thus collaboration between the school staff and the students,
- Building in measures of sustainability to ensure ongoing support for the pupils and families involved,
- The incorporation of advocacy into the student and supervisor’s role,
- The focus on ensuring the pupils had access to appropriate equipment to enhance their function and mobility,
- Taking an holistic approach to planning programs for the pupils and working closely with families,
- The way the students positioned themselves in the school as “non-experts”, and
- The students and supervisor working together as a team.

The students filled a niche in service provision at a critical time of transition between government-based services and services delivered via NDIS plans. As senior staff members noted, the positive outcomes of the student placement have highlighted both the physiotherapy needs of AHS pupils, and an approach to service delivery which works best in the school. It is anticipated that the learnings from this project can inform the NDIS as it modifies its service delivery approach to suit the unique context of Central Australia.

The next chapter will explore the value of the placements to the university students, focusing on the many, varied and unique experiences they had “practicing their trade” in a context which differed significantly from their previous placements.

6 Findings Three: Gaining skills, experience and interest in remote area practice

6.1 Introduction

In addition to addressing the gap in physiotherapy services at AHS, a key motivation for the instigation of this project was to provide a unique opportunity for final year physiotherapy students. The project was designed to 1. Enable the students to experience remote area practice including the associated challenges and rewards, 2. To undertake physiotherapy in a complex practice area, and 3. To expand their horizons regarding possible career opportunities as physiotherapists. Drawing on the experiences and perspectives the eight students shared for this evaluation, this chapter reflects on the value of the student-learning service to the students themselves.

There are two central themes to the students' reflections which provide the foundations to this chapter. Firstly, how the Alice Springs-based placement contrasted with their other placements. Typically, these had been in a health care setting such as "*acute hospitals, rehab hospitals, or outpatient clinics*" (Kirsty, Student) and were described as "*pretty stock standard and similar to each other*" (Daniel, Student). Hence, the students viewed the opportunity to do a placement at a school in Central Australia as "*unique*" (Kirsty, Student). The contrasting features of the placements based on the students' experiences are presented in Table 7. This is not to denigrate the worth of other placements, rather to highlight the key features of the AHS placement the students indicated were valuable to contributing to their skills.

Second, the students were required to establish a physiotherapy service in a setting which previously did not have a service. This required careful consideration regarding both their approach to implementing therapy, as well as the need to establish strong relationships, strategies and systems for effectively integrating the program into the school. One student notes that it was the anticipation of the unknowns which attracted her to apply for the placement,

[Before the placement] I remember a lot of people asking what we would do and what the placement was all about and I guess all of us didn't know, but that was the nature of the project, being so new. I think that was the exciting part and what [our university-based supervisor] had told us was that, "It's a new placement. This is how we want it to work but we're not exactly sure how it's going to unfold because the kids there haven't had therapy for a long time" (Imogen, Student).

Acacia Hill School service-learning placement	Other student placements
Experiences establishing a service	Undertaking placement at previously established services
A diversity in patient conditions on one placement	Similar conditions experiences on a single placement
Clinical paediatrics skills	Rarely working in paediatrics
Opportunity to work with complex neuro-disabilities	Rarely opportunities to work with complex neuro-disabilities
Working alongside other allied health services	Less likely to be working alongside other allied health services
Immersion in a school context	No previous placements in a school context
Working with Indigenous clients	Less likely to be working with Indigenous clients
Working closely with a team of physios to deliver therapy	Usually delivering therapy individually
Receiving regular and ongoing supervision	Less concentrated supervision
Acquiring an insight and understanding of the NDIS	No previous experience with the NDIS on other placements
Experience working with agencies & services complementary to the clients' needs	Rarely needing to engage in other agencies and services
Opportunity to work with clients' families	Rarely opportunity to work with clients' families
Undertaking visits to clients' homes	Never visiting clients' homes
Extensive experience with measuring and fitting specialised equipment	Little experience measuring and fitting specialised equipment
Gaining an insight into how to access specialised equipment in a complex context	Regularly having ease of access to required specialised equipment

Table 7. Contrast between skills and experiences acquired at AHS and those acquired on other placements.

This chapter commences with the professional experience and clinical skills the students gained followed by an insight into the additional skills they acquired which were complementary to clinical practice. Acknowledging the unique approach to supervisory arrangements, it provides student accounts about how this worked for them. The chapter then describes how the students expanded their horizons through undertaking intervention in a social and cultural context they were largely unfamiliar with and hence, how they gained a broader awareness of the impact of social determinants of health. The previous chapter addressed the benefits delivering therapy as a team; here the students will offer their perspective on this. The final section speaks to the third objective of the project: to encourage physiotherapy students to consider returning to Central Australia to take up career opportunities as graduates.

6.2 Enhancing professional and clinical skills

6.2.1 Paediatrics

Opportunities for paediatric placements are rare for the physiotherapy students generally. Some students had had a little experience, such as hydrotherapy sessions with children as casual paid work in a private practice, however for most it was new. Hence, working “*with a caseload of children between 3 and 18 years old with severe physical disabilities, complex/multiple disabilities and sensory and behavioural needs*” (PowerPoint, Cohort One, 2019) provided the students with an opportunity to develop an extensive new set of skills. One student notes the limited experience he had previously working with children,

We haven't done much paediatric learning in our course so just being able to complete a paediatric assessment and just therapy in general, [gave us] really broad skills. On the first day we didn't really know where to start with an assessment for the patients [pupils] but by the end we were confident being able to perform an assessment and treatment including having some ideas of different progressions of treatment, which I know we didn't have at the start (Jesse, Student).

Typically, students who want to pursue a career in paediatric physiotherapy are required to do additional training. This opportunity assisted some of the students to make the decision as to whether paediatrics was something they wished to take up. Three of the students indicated that the placement had “highlighted” their desire to work in paediatrics,

More than anything, it's highlighted what I want to do as a physio...I'm fairly certain I want to work with kids (Anna, Student).

Honestly, I just loved it. I keep thinking how much it's definitely an area where I want to be working - with paed and especially neuro-paed. I feel like it's an area that often doesn't get as much attention as it needs to, especially somewhere like Alice Springs (Kirsty, Student).

I haven't had any other official paediatric placements through uni, so the opportunity to gain some experience in this setting was really good because it is something I'd quite like to do when I graduate (Jessica, Student).

Working effectively with groups of children was another skill the students gained. Inspired by her time in Alice Springs, one of the students from cohort one commenced voluntary work with a children's disability service following her placement. She noted the relevance of the skills gained at AHS which she applied to her voluntary role,

[I will be] helping to run group classes with both little kids and teenagers. I feel like the Alice Springs placement has prepared me so well to work with kids with autism and intellectual disabilities in a group setting and how you'd plan the groups, plan around the kids' personalities. I found that really helpful (Jessica, Student).

6.2.2 Exposure to complex neurological conditions

The placement provided the students with an insight into a broad spectrum of disabilities many of them had never previously been exposed to. As noted by their university-based supervisor, *"These are the most complex cases that these students will ever see"* (Tracey Radford, University-based Supervisor, Flinders University). One student pointed out that the group had had limited learning about many of the conditions during their course, however, she also explained that theoretical learning about the conditions is ineffective compared to working with people on the ground,

At the start, it took me a long time to get my head around a lot of things, like different conditions...it's hard until you see it in context. You can learn all you like about tone and spasticity and all that kind of stuff but until you actually see it, it doesn't really make much sense. We've learned about it, but I never really got it until I saw it (Anna, Student).

Anna also indicates the immense diversity in patient conditions at AHS which other placements would rarely allow,

In a metropolitan area everything would be in their own specialised areas and you wouldn't get to see such diversity. You see so many things in Alice Springs on one placement but on a placement in Adelaide you might just see one of those things [conditions] (Anna, Student).

This diversity included *"so many different rare genetic conditions it's impossible to have heard of them all"* (Jessica). However, the students' experience at AHS provided an increased confidence in understanding the "functional effects" of disabilities which are often alike across different conditions and diagnoses. Once their supervisor had supported them with the specific diagnosis, the students could then *"go home and research it out of interest"* which contributed to developing therapy plans (Jessica).

The diversity and complexity of conditions also provided the students with the skill of “adapting” treatment towards conditions which they may not have come across before, and having to “think outside the box”, as described by Tom,

It was good to get the diversity there that you wouldn't really get anywhere else. Something that I really got out of the placement is dealing with multiple challenges at once and being able to adapt the treatment towards a variety of issues, such as behavioural interventions. It encourages you to think outside the box and have different interventions in mind in case something doesn't go to plan (Tom, Student).

The hands-on experience the students gained, often seeing the same client (pupil) on a frequent basis during the four weeks, gave them confidence in the physical handling of clients with complex needs,

Mostly [I learnt] exposure working with kids and handling of kids who don't have control over their own movement. It's something that I've definitely never experienced before. So, it was good to learn how to position the kids and hold them and get them onto the floor and off the floor and roll them over, things like that (Kirsty, Student).

6.2.3 The opportunity to undertake complete assessments

On other placements, the students are typically involved in therapy with clients and patients who have been referred for physiotherapy by another health professional where an initial assessment had already been done. This provided the students with a previously identified diagnosis and hence direction regarding therapy requirements. However, at AHS, particularly for first cohort, the students undertook full initial assessments to determine if and what physiotherapy intervention was required,

Identifying the need for physiotherapy [was another skill I gained]. Usually [on our placements] people just come to you where someone else has already identified people [clients]. Whereas at the school we were actually doing the initial assessment of a lot of kids and having to identify if there was something that needed to be treated. [At AHS] the teacher tells you that there are five kids in the class they think might have something [that requires physiotherapy]. So we had to actually go in and do that initial assessment and say, “Yeah, this is something a physio can help with” or “No this isn't”. Initial assessment and identification [of physio needs] is a skill that I haven't really been able to use much on other placements (Campbell, Student).

This was reinforced by another student who noted the difference in undertaking assessments with children compared to adults,

Getting to work with [the supervisor], because of all of her experience, she was very, very knowledgeable. I found it really helpful to watch her perform assessments, which she would do while talking through each step. This was great because the assessments did differ from what I've previously learned to do with adults, so we were able to learn on the job (Jessica, Student).

One student highlighted that they gained the skill of incorporating “play and observation” into their assessments. Due to delays in receiving initial consent, cohort one had extensive time for observation in the first few weeks. The delay had the silver lining of enabling the students to develop confidence in the context through observation and play which later contributed to effective clinical assessments. Imogen describes how this unfolded, drawing attention to the barriers to undertaking assessments with AHS pupils which the students had not previously experienced,

We did a lot of observation early on and part of that was for consent reasons, but I think it was really good too, [to] get into the swing of assessing and working with kids because it's different to the adult population where you can just ask them what their problems are and they're more than happy to tell you. Even ignoring the non-verbal stuff, some of the kids we saw that were verbal struggled to describe what their problems were and how they thought we could help. So I think doing assessment through observation and through play as well [was really valuable]. Observation in the first week is really important. If you go straight into doing assessments then you don't get the value of learning how to do an assessment through observation, which I think is probably the most important thing with that population (Imogen, Student).

Another student also drew attention to how the delayed consent process provided the students with an extended opportunity to become familiar with the context prior to undertaking assessments and therapy,

The delay in gaining consent provided the opportunity to observe the kids, get to know the kids in their environment and get to know how the school runs, so there were positives but it also meant we couldn't jump in as fast as we could have (Tom, Student).

Imogen provided an example of how they undertook assessments through play, drawing attention to the challenge of maintaining their professional physiotherapy role in a “fun” classroom environment,

It's quite difficult to get [the pupils] to do a particular movement but if we placed an object or a toy further away from them then we could see them reach or we could see them grasp or initiate standing up from sitting down with toys and [during] play. It sounds like something easy to do but it's actually quite challenging when you're there with a little kid and they're easily distracted. [It was also challenging] to stay on track and not just sit there and have fun with them, because the kids were gorgeous and it was a very enjoyable placement but it was challenging to try and keep in that clinical mindset. Especially being in the school and not in a clinic, it was quite easy to just get absorbed with assisting in the classroom and with play but then [needing] to step back and think about what that means for our assessment (Imogen, Student).

6.3 Skills complementary to clinical practice

As well as gaining many professional and clinical skills applicable to their future physiotherapy careers, the unique context of AHS provided the students with a broad suite of other skills they valued and saw relevant for personal development. As noted by one of the CDT staff who had seen many students come and go from placements in Alice Springs, “*It's a life experience [for them] as well*” and an opportunity to “*see the way things work in different places*” (Tahlia Lee, Team Leader and Physiotherapist, CDT). Most of the students recognised the value of these additional and complementary skills, particularly given that they were all in the final year of their studies and thinking about future employment. One student noted,

I've just been writing my cover letters and resumes and one of the things that stood out to me in particular was that I got to do a lot of really different stuff that I haven't got to do on other placements. Most of the placements have just been assessment and basic management whereas there (AHS) we were talking to the local physio team to source equipment, create interventions for the classes and the whole school, which is quite different in a very good way, from what I've been able to do on my other placements (Campbell, Student).

6.3.1 Accessing specialised equipment

As discussed in **Section...**, accessing specialised equipment was problematic for AHS pupils. The students all indicated their surprise and frustration at the contrast between accessing specialised equipment in a clinical setting such as a hospital in Adelaide, and their experience at AHS, a lesson that was poignant for them in understanding the context,

[I've learnt] planning around complex social situations, but also, trying to plan sourcing equipment between departments is something I probably haven't done before, like trying to get equipment from the education department. I've mostly been in acute hospitals so all the equipment you need is right there...It was more complex (at AHS) than I'd anticipated. It was good to see that and what steps [were required] to go through to make that all happen (Kirsty, Student).

Sourcing equipment for the pupils at AHS provided the students with an understanding of the steps needed to overcome the barriers to accessing resources in Central Australia. Additionally, being involved in accessing equipment exposed them to the way different departments and agencies operated. As reinforced by Campbell, accessing equipment in a hospital setting is “pretty straightforward”, whereas the challenges of doing so in Alice Springs provided them with a set of unique skills,

If you're in a hospital they just have a supplier and a list of prices and it's pretty straightforward, whereas here we actually developed the skills around looking up different suppliers, contacting different people and figuring out interim things. So I feel like I'm actually a lot better setup for equipment, procurement and prescription in the real world versus just in the ideal setting of a hospital where at your fingertips, and you just have to put in the order form (Campbell, Student).

6.3.2 An holistic and multi-disciplinary approach to therapy

As described in **Section...**, the students' interaction with their clients was not confined to one-on-one therapy. They recognized that opportunities to gain knowledge about the pupils beyond therapy were essential to gaining an insight into the “bigger picture” of the pupils' lives, and hence, the students were able to take a holistic approach to therapy. As noted by Daniel, in hospital settings, this rarely happens,

[Our supervisor] got us involved with a lot of things outside of the school setting, which was good like, she got people from other disciplines to come talk to us about the NDIS. The home visits were good and we got to chat with the families and the carers and it was good to get the whole picture. Often, we're limited to the scope of the hospital, you don't get to

understand what it's like when the patients go home. While we really did [get that insight] on this placement, and that was most eye opening for me (Daniel, Student).

The multifaceted approach to intervention the student team employed at AHS resulted in “therapy” which involved more than the typical “patient and therapist” relationship which they were used to. The students noted the benefits of working with a multi-agency team to support intervention of AHS pupils and the consequent communication and therapy skills they gained,

Being able to work with members of the community is a skill that I was able to develop a lot on this placement, just having exposure to [others] which you don't really get on a lot of other placements. You're usually just seeing that one person or that one group wherever you are and you're not actually dealing with other members of community, so that was a really good thing (Campbell, Student).

Liaising with other allied health staff contributed to the holistic approach to therapy. This included the CDT physiotherapist, the speech pathologist from a newly established private practice in town and a speech therapy student. This approach was rare for the students when doing placements in hospital settings where accessing other allied health services could be challenging or simply not part of the physiotherapists' domain,

In the city [hospitals]... you don't see any of the OTs or speech pathologists or anything, just because it's so big (Campbell, Student).

The students benefited from both the clinical knowledge they gained from these other health professionals, as well as seeing the value of a multi-disciplinary approach to allied health service delivery to children with complex needs. One example is the establishment of the physical education sessions with a senior class during the first cohort's placement. Working alongside the speech therapist to develop the program resulted in activities incorporating multi-disciplinary elements of the pupils' learning including communication and teamwork. This approach had positive outcomes for both pupils and the students as described by Jessica,

[One of the skills was] getting [to do] multidisciplinary teamwork. We actually worked with the speech therapist to plan the exercise group for the older pupils. The speech therapist and the class teacher had goals of encouraging communication, teamwork and turn taking and then we had ours of encouraging increased physical function. So our aim was to make sure the activities were targeting all of these goals. This was a great multi-disciplinary experience because it was my first real

opportunity to work closely on shared goals with a speech therapist (Jessica, Student).

Although the students occasionally had the opportunity to work in multidisciplinary teams while on placement, the general dearth in allied health support for the AHS students minimized the chances of multi-disciplinary support for the pupils. The Assistant Principal points out how the lack of multidisciplinary services at AHS is “distressing”, especially when compared to services in other jurisdictions,

It's so frustrating, I've previously worked at a school in Melbourne where we had our own department of physios (physiotherapists), OTs (occupational therapists) and speechies (speech pathologists) and our own indoor heated pool. It's never reached that same level again, in the whole world of special ed. It sometimes gets really distressing, because here we are in 2019, and we just want to get that little girl a walker, and I cannot believe that here she is at this age, she doesn't have a walking frame! I don't understand why they let that approach go, especially when we talk about “wraparound services” and an “holistic approach” to services, it beggar's belief. So, just a different jurisdiction, different time of things but you'd like to think it could be way better (Sheina Treuel, Assistant Principal).

One student suggested that based on their successful experience working alongside the speech pathologist, perhaps future placements could be designed with multiple allied health students working alongside each other. They anticipated that such an approach could fill the niche in areas of therapy they were not confident in and assist in meeting the pupils' needs,

There were a lot of things where we felt out of our depth a bit. We worked a little bit with a speech pathology student and her supervisor, which was quite good. I think a lot of the functional stuff with writing and playing and hands and that, we felt a little bit out of our depth, whereas we were quite confident with the mobility stuff. I think being such a functional based therapy...an occupational therapy [service] would be really useful (Imogen, Student).

Additionally, the students were involved in referrals for other services including speech pathology, occupational therapy, services from Central Australian Aboriginal Congress (CAAC), neuropsych, prosthetics and orthotics, and podiatry. Occasionally the students accompanied the pupils on referral visits which enhanced their insight into the complementary services required to address the pupils' needs and further deepened

their understanding of the multifaceted and extensive needs related to children with cerebral palsy.

6.3.3 Enhancing communication skills

The students initially found that their limited experience working with both children and in neuro-disability presented them with challenges communicating with the AHS pupils. Most of the clients with whom they worked were non-verbal, and they needed to find alternative ways to communicate. Noting this deficiency early in the first placement, the school's liaison officer organised sign-language sessions for the students run by one of the staff skilled in sign. As noted previously in [Section...](#), this was really appreciated by the school staff who noted it made a "big difference" to the students and pupils being able to communicate with each other.

One of the physiotherapy students emphasises how opportunities to improve their communication with the pupils greatly enhanced their capacity to deliver an effective service in the school,

Communication was a really big one [skill]. Most of the children we worked with were non-verbal, which was quite a learning experience. We did a few lessons with one of the teachers to learn some of the key word signing that they use at the school, which was really helpful. But all of the teachers were great with helping us work out the best ways to communicate with the students, which included speech, sign, and picture cards. As our ability to communicate improved, work with students became much more efficient and ran much more smoothly (Jessica, Student).

Imogen notes that the barriers to verbal communication with the pupils were a cause of concern for her given that it's a technique she uses for building rapport with clients. However, she recognized that the communication skills she developed for liaising with teaching staff, support staff and parents was just as important given their existing knowledge and relationships with the pupils,

One of the things that I improved on was communication with teaching staff, parents and support staff. One of my strengths in my physio practice is communication and normally it's with the patient and that's how I build a connection and then go from there with my therapy and assessment, which was really challenging with these kids because the majority of them were non-verbal. We did learn sign language, which was amazing and made a huge difference to what we could provide to the kids and how they engaged. So, sign language obviously [helped] but I

think the communication with the teaching and support staff at a level that they could understand and benefit from, and then transfer that to the kids [given] that they knew the kids better than us [is a skill that I will carry forward into professional practice] (Imogen, Student).

Tom noted the importance of finding “*alternative means of communication*” given that the kids were mostly non-verbal. Like his counterparts, enhanced communication was an important skill he took away from the placement, and one he noted wasn’t a focus of previous placements,

You don’t get that exposure in any other placement or workplace really, so sort of a steep learning curve on that side of things which you wouldn’t get otherwise. So the skills we developed in terms of communication...were really good and could transferred to many other aspects of physio practice (Tom, Student).

In addition the students gained awareness of the need for communication between agencies and departments in order to access specialised equipment.

6.3.4 Working in a team

Delivering the physiotherapy service as a team of four was a purposeful element of the project’s design. As anticipated, the team approach provided mutual support in a potentially challenging context as well as enabling “many hands-on deck” when working with complex cases. The university-based supervisor also describes the unique skills the team approach to service delivery could offer the students,

This is an opportunity for them to work in much more of a team than they would get at any other placement. And so I’m hoping that they learn something about working with others, other peers, particularly in this sort of setting, which they wouldn’t necessarily get in just about any other placement. My perception of the benefit is that they then realize what it’s like to actually work with your peers, how that works, and how that can work in a positive way. Or it might not and they have to resolve their own internal conflicts and get on with each other. Because their ultimate aim is for the benefit of the client they have to learn to get over any issues and I don’t think that’s a bad thing. I think that that makes this particular placement quite good for that (Tracey Radford, University-based Supervisor, Flinders University).

In other placements, students had a one-on-one relationship with their supervisor. Hence, this dynamic of learning as a team took some getting used to. As observed earlier (Section...), the school staff unanimously reported that a team approach was an asset to the way the students worked and delivered their services to the school. The students themselves noted both pros and cons of doing a placement as a group, described below.

Benefits included:

- Shared capacity to problem solve when faced with challenging situations,
- Providing each other with mutual support both during service delivery and with managing the day-to-day challenges of being a long way from home, and
- Exploring the town together as well as venturing further afield including camping trips and a visit to Uluru,

It is good having the mutual support in that unfamiliar environment, you know that you're not the only one who is uncertain about things and you can bounce stuff off other people (Campbell, Student).

As well as working as a team together in the school, the shared living arrangements for the students provided them with the opportunity to continue discussions about the issues that arose at the school when they got home. One of the students saw this as particularly beneficial and contributing to the development of their programs,

Yeah, working as a team was definitely good. I think it would've been a much harder placement on your own. We lived in two houses next to each other, so we were able to come home and sit together in the kitchen to talk about what we'd done that day and plan for the next morning, coming up with new ideas for the students (Jessica, Student).

The students also experienced some challenges in having to work as a group of four. This included,

- Having less clinical "hands-on" time due to needing to "share" the therapy between four students, and
- Having less time for one-on-one supervision due to the high student to supervisor ratio.

Anna describes the challenges she had working in a team,

I found it really difficult having four people on the placement. I feel like I didn't have as much opportunity as if it was just one or two people to do the assessments. I never got the opportunity to do a full assessment on my own, whereas on other placements you'd be doing 20 or 30

assessments on your own. So, we did them all together, which I think - especially with manual handling...of people when they have disabilities and they have extra movements, like extra tone I felt like I didn't get enough experience managing them [for example] if I had to do an assessment on my own as a job. I'm not sure how I would go about it unless I had help because I only learnt how to do it with help (Anna, Student).

The Australian Physiotherapy Council (APC) requirement for close supervision of students and the DoE guidelines for a member of school staff to be in line of sight resulted in difficulties when it came to splitting the group in two in order to pursue consecutive activities i.e. undertake a therapy session for two students at the same time. However, Jessica notes they found ways around this,

It was hard in the sense it was only one supervisor and four of us. Obviously she [supervisor] can't be there to supervise all of us when we're off in different directions. Certain things could be a bit slower and you couldn't see as many people or do as much as you wanted to, but we made it work (Jessica, Student).

As noted above, a suggestion which emerged regularly in the evaluation of this project to both overcome the issue of being a big group and enhancing the service for the pupils was the possibility of other allied health students undertaking their placement alongside a smaller group of physiotherapy students. As described by Imogen,

It [might] be better being a smaller group or we talked about it being beneficial to have other allied health students there. So, like for example, if it was two physios and two OTs or two speech paths, so you had two separate groups that worked as a team but then two supervisors as well. I think that might give potential to do more but it also might make the therapy timetable very busy (Imogen, Student).

6.3.5 Enhanced organisational and project development skills

Given the pilot nature of the project, the students and supervisor in the first cohort were required to implement many elements of project planning. Most of them saw this groundwork as an opportunity to gain skills as described by Jessica,

On all of my other placements there were pretty set procedures as to how everything's done. This one was different because there was no physio who works there so, especially the first week, it was a lot of work for us to

set up the program, such as talk to the teachers, talk to parents, follow up consent forms, try and plan what our schedule would be like and where we could do the therapy. I obviously haven't got [that experience] in any other placement and I feel like it's been helpful in terms of knowing how to set up a new program and troubleshoot; that was really helpful (Jessica, Student).

Another student could see how these skills could be transferred into future professional opportunities,

Every other placement is already established so it was good for us to have that exposure about what it actually takes to implement a new place for therapy, a new style of therapy, a new program or anything like that. I think that can be easily transferred into any setting, whether we go country or even in metro. We might have a great idea that would really help some people but there's a lot of steps behind the scenes that need to be done before that can start being of benefit. I think that was a very good skill, not so much clinical but as a professional skill (Imogen, Student).

Tracey Radford, the students' university-based supervisor, commended the strong capacity and initiative the cohort one students applied to establishing the project, recognizing that it is rare for physiotherapy students to get exposed to this opportunity on placements,

They took the bull by the horns...they sat around a lot and talked about what they could do at various levels with the school: school wide, class wide and with the individual. Because they didn't have as many individual opportunities to work with students, they implemented more of a whole of school and whole of class process. I've heard that this approach gave them the opportunity to work as a team and come up with solutions as a team and brainstorm together and so on, and that's not an opportunity they get to do much on placements (Tracey Radford, University-based Supervisor, Flinders University).

As described by their supervisor, this placement offered a "lived experience" of being a physiotherapist beyond clinical treating of patients. She noted that the consequent skills they acquired would all be applicable to future workplaces including:

- Setting up a physiotherapy service;
- The administration that is part of dealing with the NDIS;

- The day to day background work required for patient treatment such as completing forms;
- Dealing with bureaucracy around accessing equipment, and
- Applying to funding bodies for equipment.

6.3.6 Becoming familiar with the NDIS

The timing of the placements resulted in the students being exposed to conversations and information regarding the AHS pupils' and families experience with the NDIS. One of them drew attention to having gained *"lots more knowledge surrounding NDIS and the access that children should have to things like frames or therapy"* (Anna, Student). Discussions both before and during the placement about the dearth in physiotherapy services leading up to the team's arrival enabled them to gauge an understanding of the problematic transition to the NDIS. The students remarked that this aspect of disability support was not something they learnt at university and the placement enhanced their awareness that understanding the NDIS was crucial if they were to pursue a career in disability.

6.4 A different way of learning: reflections on supervision and hands-on experience

The supervisor's approach to mentoring and supporting the students were key to the skills and experience they gained. This section presents the students' reflections on the nature of the supervision.

Supervision arrangements for this placement contrasted with what the students were used to. In Alice Springs, their supervisor consistently worked alongside them, helping to navigate the new context and conditions they were exposed to. This was quite different to hospital settings where they were left to work largely independently,

[At a hospital] they give you 10 patients for the day, and they'll want you to see all of them. So in some ways, especially in the later placements, you're just working as a physio, and then the supervisors check in on you but they won't be there with you in the sessions. But here was really, the four of us together, our supervisor was always there and there were teachers too, so it wasn't as hands-on or as intense (Daniel, Student).

Jessica describes the gentle approach the supervisor took to in introducing them to doing full assessments with children with cerebral palsy, by first watching and listening, and then being given the opportunity to do it themselves,

Because this was the first assessment on one of the younger kids, she [the supervisor] did the whole assessment, explaining to us throughout what she was doing and why, and what we should be looking for. Then she would allow each of us to do different parts of the assessments and provide us with feedback. I really appreciated this, because it's hard just to go straight into something when you've never seen it being done properly before (Jessica, Student).

Additionally, the students drew attention to the balance the supervisor took between offering assistance and allowing them to conduct therapy independently. They appreciated the encouragement she gave them to challenge themselves when faced with practice areas they had not previously experienced,

She let us be as independent as we could but would also provide help and guidance where we needed it. She had an interest in what we were doing and would ensure we knew why we were doing what we were doing. She would also encourage us to think about how to get around issues that you get in a rural area (Jessica, Student).

Kirsty explained the benefit of using the first week of the placement for observation following which the students were given “more freedom” as they became increasingly familiar with the pupils’ needs and acquired skills from the supervisor,

I thought she was excellent, the way she spent time explaining things to us in the first week was really good. But then she let us have a bit more freedom in the following week, which was really nice, because none of us had ever done paediatrics before and she showed us what we needed to do, but then gave us the freedom to practice and learn for ourselves (Kirsty, Student).

The students all commented that the AHS placement provided them with less overall “hands-on” experience than on a clinical placement. This is due to working as a team and having to “share” the clients and the supervisor, as well as some sessions with pupils being cancelled due to illness or non-attendance for other reasons. Most of the students were understanding of the context that contributed to these factors, and one noted that these circumstances led to him feeling that “*the experience has developed me a lot more personally than professionally*”. A few however expressed disappointment at not having had as much hands-on experience as they anticipated.

Commented [RB10]: ROS Check who – DANIEL?

An additional element of the students’ work experience not required by other placements was the opportunity to do a presentation about their time at AHS, both to

the school staff and to a public audience hosted by the Centre for Remote Health. One of the students recalls what they included in the presentation,

We just did a bit of a recap of what we did across the placement and the impact we had, the structure and the design within the school [at] the three levels, so the school level, classroom level, the individual level, which ended up being a really good structure for all of our therapy actually, just tell [the audience] about what we'd done and the role we'd played (Imogen, Student).

In addition to informing the audience about the benefits and outcomes of their intervention, the presentations enabled the students to reflect on their experiences and acquire skills in sharing information with an audience,

The presentation is a good exercise in reflection on what they've been exposed to, what they've learnt and how it might change their approach to not just paediatric practice but how they might have gained enlightenment about working with people generally especially cross cultural service delivery (Anne Bent, Placement Supervisor).

The students' willingness to learn and apply themselves to their placement was reflected in their superior assessment results. The Australian Physiotherapy Council (APC) endorses the use of a national assessment tool, the Assessment of Physiotherapy Practice (APP) (see Appendix 7). Student undergo interim and final assessments during their placements are assessed in the areas of:

- Professional behaviours,
- Communication,
- Assessment,
- Analysis and Planning,
- Intervention,
- Evidence-based practice, and
- Risk Management.

However, the assessment process revealed the criteria within the AAP could not adequately reflect the diversity of skills and experience gained by the students in a non-clinical practice setting such as AHS. The supervisor commented,

I felt that the students gained more than just clinical competencies. They were exposed to challenges outside clinical practice such as taking an active role in project planning, facilitating change in an organisation and learning to work effectively and purposefully within a non-clinical

setting. They were immersed in an holistic approach to patient care with the superimposed layers of cross-cultural service delivery and reduced access to services due to the remote environment. They met these challenges very well. It was hard to evaluate their overall performance based on the APP alone – thus I felt they deserved more (Anne Bent, Placement Supervisor).

The combined clinical and non-clinical experiences the students gained from their placement at Acacia Hill School were rich and diverse, building on and extending the skills they had achieved on previous placements. The contrast of their experience at AHS with other placements in clinical settings such as hospital were heralded as hugely beneficial and rewarding for them in a range of ways. In conclusion to this section, Imogen offers a succinct summary about the way the placement unfolded and how the independence they were accorded gave them a real sense of being more than “just a student” which enabled them to grow into their professional role as a therapist,

You can really grow as a therapist there because you're challenged in different ways. It's more like a job. I think when you're working in a hospital you're very much the student on placement and, yes, you can be independent [under your supervisor], but you're still a student on placement. When you go up there [to Alice Springs] we're still students but they really value what we've got to say and the impact that we have so you grow a lot more as a professional in that environment (Imogen, Student).

6.5 Enhancing awareness: cultural safety, recognizing privilege and social determinants of health

In addition to gaining discipline specific skills, the students were immersed in a social and cultural context with which they were largely unfamiliar, specifically working with a high number of Indigenous clients in a range of environmental circumstances. Thus, they gained awareness of the socio-economic privileges available within many of the mainstream services they had previously experienced. This opportunity enhanced their understanding of the need to adapt their therapy programs in order to provide services which were culturally safe. There were a number of ways the students gained insights into Indigenous culture and understanding about the need for culturally safe practice.

First, attendance at *The Introduction to Central Australian Aboriginal Cultures and Context* provided the students with an initial overview regarding what to expect and how to position themselves in order to be sensitive to Indigenous people's needs in Central Australia. The students found this course particularly helpful and relevant,

I think what was particularly good was the presentation from the Centre for Remote Health in the beginning about remote healthcare and Indigenous culture in the area (Daniel, Student).

Second, a further source of information about pupils' cultural background was via parents/carers. One parent/carer was particularly generous with sharing information about her son's cultural and family connections. She recognised the importance of the students understanding the "bigger picture" and praised them for "wanting to know a holistic view" (Anne-Marie Temple, Parent/Carer),

They wanted to know more about how Caleb is involved in Aboriginal law. They asked me about his living context. They hear all the stories ["down south"], and they seemed to think things were still like things were back in the 1960s and 1970s. We've kept those links really strong for Caleb, we go out to those places all the time, it was just that his physical disability [at birth] limited him from [staying with family], they were nomadic and they didn't have a house, it doesn't mean he's not loved [by his biological family]... [going there] allows those people who are safe and strong to still have a relationship with Caleb (Anne-Marie Temple, Parent/Carer).

One of the students notes that the close connections they established with pupils and their parent/carers were beneficial (though sometimes confronting) to understanding the backgrounds and circumstances of the pupils,

I think [the placement] is very personally challenging, especially when you build relationships and rapport with some of the children and the carers and understanding how that situation is very different from your own and that can be quite confronting. My main take away from the placement was that I got a lot of experience with the culture and how things are run in Alice Springs and rurally and remote (Daniel, Student).

In addition to home visits with three town-based families, the students visited a pupil and her family in a remote community. This provided them with an insight into living conditions for some people in Central Australia and the opportunity to "see the social determinant of health in action" (PowerPoint, Cohort One, 2019) for remote Aboriginal Australians. Additionally, as highlighted by Daniel in the previous quote, the insight into pupils' lives enhanced their own awareness of privilege and power when working in rural and remote contexts. The students were all shocked to see such challenging living conditions in this remote community,

Living conditions appeared very poor. The closest thing I can compare it to would be rural and remote villages I've stayed in in developing countries. To be honest I was shocked that this is happening in Australia. We were there to see a student and there was just nothing, no resources, nothing in the area for her which was upsetting. There's nothing the school could've done or the placement could've done about that. It was a hard experience, but I appreciate that we were given the opportunity to visit and become more aware of the issues (Jessica, Student).

Gaining an understanding of the complex and often challenging home lives for the AHS pupils assisted the students in understanding the rationale behind providing a physiotherapy service on school grounds and the benefits this had for parents and carers. One student mentioned she had struggled to comprehend the reason for this prior to the placement. However, as she gained a deeper insight into the “complex social situations” she came to understand the barriers to home-based therapy and the impediments for many parents and carers to replicate therapy and activities with their children at home (Kirsty, Student). The next section describes how the home visits unfolded and the way this enhanced the placement for the students.

6.5.1 Exposing students to a diverse learning context: home and community visits

The primary focus of the scope of the project was to provide a physiotherapy service in the school. However, there were occasions when their service went beyond the school grounds and into the pupil's homes. The need for home visits emerged during conversations between the supervisor and the pupils' parents/carers and were initiated for a variety of reasons:

- Concerns raised by parents/carers about existing specialised equipment in the pupil's homes,
- The need for trialling alternative equipment for the home, and
- The process of ordering new equipment through NDIS funding.

Home visits increased the time the physiotherapy students could engage with the pupils as the visits could occur outside of school hours.

In one case, two home visits were made at the request of the parent/carer. The team were asked to advise on safe transfers of her 80 kilogram son, who could not weight-bear at all and required use of hoist. The team were appalled at the difficulties she was experiencing. These were largely due to the fact that the narrow house hallways and inadequate circulation space prevented the effective use of the hoist. For example, showering had to take place in the hallway which the family had modified into a wet

area. Following the home visits, the student team were able to incorporate recommendations for home modifications into their formal report, which, as noted in **Section...**, the family were able to table at their next NDIS meeting to seek additional funding.

For some pupils, home was a more appropriate location than school for intervention. First, it was where they were most comfortable and therefore there was a greater likelihood of them participating in therapy, and second, their parents/carers were there to facilitate the interaction between pupil and students. The parents'/carers' presence enabled a greater insight for the students into the pupils' background and needs, as well as enabling the students to educate the parents/carers regarding appropriate intervention which they could implement at home (see Case Study Two, Chapter Four). The benefits of home visits are described by one student,

In one case we went to the kid's house. We did stuff with the parents there because the kid would become upset pretty regularly so we had to involve the parents. Also, it's better to involve the parent so they know how to do the therapy themselves (Campbell, Student).

Visiting homes provided the students with an insight into the pupils' lives beyond the school. Given that the students' placements were typically in hospitals or clinics, this was the first time for most of them to gain an awareness of the home lives of their clients and challenged the students to work with what was at the family's disposal. For one student, gaining such understanding was one of the biggest benefits of the placement,

I also experienced working in someone's home. There was lots of guidance from [our supervisor] about how to act and implement therapy and make the most of the home setting. I'm used to working in a hospital where all the equipment is right there and it's readily available but we needed to adapt that to work in Gracyn's home and [according to] what the family could do and could manage as well...as much as it was a challenge it was also one of the biggest benefits (Imogen, Student).

Most Indigenous people in Alice Springs are connected to a remote community which provides a strong component of their identity, belonging and link to family. Although the communities within the Central Australian region have basic services, are also somewhat dependent on town services, for example the hospital in Alice Springs. Acacia Hill School is equipped with services for children with specialised needs that most remote schools do not have the capacity, resourcing or expertise to provide.

During the first placement there was concern for the wellbeing of one remote student enrolled at AHS who had had long periods of non-attendance and was not able to attend

her local community school. A visit to her community and home was arranged by AHS. The primary purpose of the visit was to assess the physiotherapy needs of this pupil and to discuss with her mother what the family would like for their child. During the home visit to the female student, only female students and the female supervisor visited her home in consideration of gender appropriateness. There was a follow up visit with the supervisor, deputy principal and the female Aboriginal Liaison officer from AHS on another occasion.

None of the students had ever visited a remote Aboriginal community. Although it was only a brief component of their placement, the students from the first cohort indicated that it was a significant experience for them. The students, supervisor and AHS staff member all commented that they had found the sense of poverty and lack of services and resources confronting and overwhelming, they also noted the impact it had on them in terms of reflecting on their professional practice. Key learnings for the students from the visits included:

- The importance of having an Aboriginal person i.e. the AHS Aboriginal Liaison Officer when visiting the homes of Indigenous families in order to observe and address cultural and language barriers that may be present,
- An enhanced understanding of Indigenous culture,
- The knowledge that there is a proper process for visiting communities,
- The need for mindfulness and respect when communicating with families and the need to develop rapport and credibility with families,
- There are more appropriate ways to finding out information than direct questioning,
- An insight into how difficult it can be to understand the intricacies of a situation,
- Witnessing how the social determinants of health can exacerbate the burden of disability,
- The barriers that exist for remote Indigenous people to access appropriate services and health care, and
- The importance of following through on services and support offered on the visit.

The students also came to understand the visits occurred against a background of visits by other services who were not always perceived to have been useful by this family. Sheina Treuel, the Assistant Principal, gauged that there was a sense the family were not happy to have the AHS team there and they were yet another group of service providers making empty promises. She sensed the parent's reaction being one that inferred,

"Here's this other group of white people that have come in and are going to tell me that they're going to do this and do that then they go off in their cars and never come back again" (Sheina Treuel, Assistant Principal).

One of the CDT staff raised concerns about what child-centred outcomes the visit intended to achieve for the family. The visit to this pupil and her family resulted in respite for the pupil's mother who "was in desperate need of relief" (Anne Bent, Placement Supervisor) which was organized within a fortnight of the visit. The family were also keen to ensure future respite in Alice Springs was arranged to coincide with the second student placement in order for the pupil to receive therapy at the school. Importantly the visits were conducted in a culturally appropriate manner and extended and strengthened the link between AHS and the family.

6.5.2 The opportunity to "make a difference"

Many of the students who applied for the placement were inspired to do so based on the desire to work in a developing context. Overseas placements were challenging to organize and expensive. On reflection post-placement, the students acknowledged that Alice Springs had served the same purpose of being able to "make a difference" by applying their skills in a high-needs context,

...the aspect of knowing we were going to make a difference, regardless of what opportunities we were given, just by us going there and doing what we could [is what made it exciting] (Imogen, Student).

Despite her initial desire to go overseas, Imogen recognized that the experience of making a difference in her own country was just, if not more, rewarding and exciting,

Then this opportunity in Alice Springs came up and we went there and it's another world. It's an absolute other world up there and I think to be able to have that experience in our own country and give back to the Indigenous community like that, it was almost more rewarding than travelling overseas (Imogen, Student).

Having left Alice Springs a week before the interview, Jesse reflected on what he had gained from the placement and noted that he too, had felt that the team had made a difference,

This week I have really missed Alice Springs. I think that placement was really special just because of the context and the kids and thinking back you really feel like you're making a difference and our supervisor really looked after us. And it was just a really nice environment to be on placement in, it was really unique compared to all the other placements (Jesse, Student).

6.6 Will the students return to Alice Springs as graduates?

One of the primary three objectives of the student-learning placement at AHS was to encourage physiotherapy students to consider returning to take up career opportunities as graduates in Alice Springs. As has emerged through this report, there is a serious lack of physiotherapy services in Central Australia, partly as a result of the difficulty recruiting to positions. The transition to NDIS has further revealed a “thin market” when it comes to allied health service delivery, and an urgent need for more private providers to fill the niche; particularly for children with disability.

The Flinders Masters of Physiotherapy program aims to give all students at least one rural or remote placement out of the five placements they do over the course of their degree. As well as broadening the experience and skills of the students, this arrangement is grounded in the desire to enhance and increase a rural and remote workforce in South Australia and the Northern Territory as noted by the Flinders-based supervisor,

I feel very strongly that the Territory is often underserved and rural and remote locations have difficulty getting staff and if we can do anything to try and provide services and give students the idea that working in a rural remote area would be a good idea, then I think we should do that (Tracey Radford, University-based Supervisor, Flinders University).

As well as the host of professional skills and insights the students gained from their placement, the students appreciated the opportunity to live in a remote town and enjoyed the impact this had on their approach to work. Daniel, from ACU, compares his experience practicing physiotherapy in Alice Springs with being back in Sydney, drawing attention to the opportunities to connect with the community,

It's opened my eyes a bit more to issues that were outside my own scope in Sydney, which has been a good experience. So, I've definitely learnt a lot. I found it lot more rewarding than work back in Sydney; building rapport with the community and the families and the kids (Daniel, Student)

Although the students' experience on their placement was overwhelmingly positive and had made a significant contribution to their professional practice, the complexity of the work environment in Alice Springs deterred them from returning as graduates. As well as there being no physiotherapist position available at the school for them to consider, there were few graduate positions in other agencies, which primarily focused on recruiting those with more experience,

I really like the town and I like the work. People did ask us while we were there if we wanted to return to Alice to work, which was hard to answer because while I would like to, there isn't a position at the school to apply for. Also, even if I did return to work elsewhere in Alice, I'd be out on my own and wouldn't have access to the support I have in Adelaide. I wouldn't return as a new graduate (Jessica, Student).

The students indicated that it would have been helpful on their placement to have had an opportunity to explore other potential physiotherapist positions in Alice Springs. This was also suggested by the allied health manager of the CDT who suggested to “roster a day [of their placement] to visit physio work opportunities in Alice Springs” (Tahlia Lee, Team Leader and Physiotherapist, CDT). However, the supervisor made comment regarding the tight schedule the students were on in order to gain adequate exposure to paediatric disability which minimised the possibility for time at other physiotherapy services.

Lack of support and mentorship in a complex work environment was another deterrent for the students returning to work in Alice Springs. Most of the students noted the challenges of being far away from family and partners, and if they were to consider moving, the limited opportunities regarding their partners' work. However, many of them said that they would consider a remote location down the track following initial employment “down south” where they could “progress” their career and gain the confidence required for working in Central Australia,

I definitely am leaning more towards working rural than I was previously but there's still always a concern going straight from university to a place that I'm not from where I wouldn't have fallback relationships of family. [I would have to] deal with the uncertainty of those challenges at the same time as dealing with being a full-time physiotherapist for the first time. I think as my career progressed working in the country would be a lot less of an issue for me once I felt comfortable with physiotherapy practice in general (Campbell, Student).

The students indicated three key reasons they would consider returning to work in Alice Springs: the diversity of work opportunities, the collaborative approach to delivering a physiotherapy services, and the enjoyment of the town and region itself.

6.6.1 Diversity of work opportunities & attractive pay

Although the placement was centred at the school, the students also got a sense of work opportunities in Alice Springs due to collaborating with physiotherapists and health staff from other agencies. Opportunities included at a private practice, at the hospital

and at the Aboriginal health clinic. One of the students notes that for her, an attraction of working in Alice Springs is the “diverse” possibilities of workplaces and the range of conditions to work with,

The diversity with all the opportunities for work there. You can work in the school, you can work at the hospital, you can work in private practice. It's not limited to one area and I think you would continually be challenged in that environment, given the presentations but also be able to make quite a big difference in some cases, just from simple therapy and education, which is really rewarding and it makes those challenges balance out with the reward (Imogen, Student).

The CDT physiotherapist endorsed the value of allied health students coming to Central Australia, a few of whom returned to work for the CDT service following their placements. Based on this, she describes the unique aspects of a placement in Alice Springs,

People love Central Australia when they have an opportunity to come. They learn that you get to work with a really diverse group of clients so it's really interesting, you get to see a broad gamut so they probably go back and say, "Oh wow that was really interesting I got to see so many different types of presentations" where you may not necessarily see that in the city; including all the different social impacts, the cultural [diversity]. It is a really interesting place to work (Tahlia Lee, Team Leader and Physiotherapist, CDT).

Daniel also indicated that although he wouldn't recommended coming to Alice Springs as a graduate, it was an attractive opportunity due to the higher pay offered for remote positions,

I wouldn't recommend it to the first year out unless there was (I don't know what the hospital system was like) a good mentorship program or enough support. It is very attractive due to the pay, which is markedly better than working in the city (Danie, Student).

6.6.2 Sense of community: “You all become a bit of an allied health family”

As described in the first half of this chapter, the placement exposed the students to approaches to physiotherapy practice beyond a hospital or clinical setting. They came to appreciate the benefits of delivering a service in a small town and the opportunities for

interagency and multidisciplinary approaches to intervention. Anna noted *“the way that you can communicate with other people in different positions in the town such as the multidisciplinary work is really great, and because it's a small enough town that the physios know each other is really beneficial, so that would definitely be a plus factor”* (Anna, Student). Campbell recognized the ease of building relationships and how this contributed to the support the students received,

You get to build relationships with other professions quite a lot easier than in a large hospital in Adelaide or in a private clinic because everyone's there in the same space and it's a comparatively smaller hospital...You get better at building those relationships and you get good support as well (Campbell, Student).

The students enjoyed the “small town” context for personal as well as professional reasons. Here Imogen points how she felt she quickly became part of the community,

You get really accepted into the community and you quite quickly become a part of it. I know we felt that within the school, but we also got that from the Centre for Remote Health. You all become a bit of an allied health family almost. So, as much as going up there [is a] challenge being away from family and you are quite isolated, you can quite quickly become part of the community (Imogen, Student).

Kirsty notes that despite some of the challenges they experienced practicing in a remote location, she felt that this was not due to a lack of effort on the part of individuals and she appreciated the helpful approach,

...everyone there [in Alice Springs] is incredibly helpful. I think, even though I said that getting equipment through different departments is difficult, most of the time the people there want to help you, it's the policies that stop them. So everyone in Alice tries to work together a fair bit, which is really nice, they try and pool their resources as much as they can (Kirsty, Student).

6.6.3 Appreciation of location: “It’s a great community”

Contrary to some of their expectations, the students all had a very positive experience living in Alice Springs. Elements of town-life they enjoyed included meeting a large cohort of young health professionals and other students, the ease of getting around, options for going out in the evening, the many bike and running tracks, and

opportunities to travel to other parts of Central Australia. Campbell and Tom both describe the experiences they enjoyed during their placement,

Everyone there is really nice and it's a great community and you've got the opportunity to go do things like go to Uluru and all those sorts of things as well, so it's really good (Campbell, Student).

And,

There's so much to in terms of things to see, places to go and it's so different to anywhere down here...The community is great, very welcoming. There's always stuff going on in town. We went to a quiz night every Thursday night and there are other things around which were great fun. There's a very young crowd up there, lots of young professionals getting experience, like-minded people, which means there are always people to see and people to visit places with (Tom, Student).

Jessica also describes some of the activities they did during their placement beyond work with an emphasis on exploring the country around Alice Springs,

The placement was hard work but at the same time it felt like a bit of a holiday as well. I had such a good time on the weekends exploring with the group, and we all got along really well. We went to the Desert Park, to the markets in town, went camping, did Mount Gillen, and did trips out to all of the gaps close to Alice Springs. We also did a big trip one weekend to Uluru and Kings Canyon which was fantastic. It's really different from anywhere else, you don't get that kind of scenery and those camping experiences and hiking experiences around Adelaide. I really liked the town, we found good cafes, there are nice restaurants and we did the quiz night at Monty's every week, [it was] just fun. There's a lot of young people, a lot of students that we met (Jessica, Student).

Based on her experience hosting students, the CDT physiotherapist describes the positive impact Alice Springs placements had on their desire to return to the town, which was often more dynamic than they had anticipated,

Being able to come as a student might give them the confidence that Alice Springs is a pretty great place to live and work and it's not a scary place. It's not the middle of nowhere where there aren't services and nothing to do. There are sporting clubs everywhere, there's arts, there's culture you know. So later on when they see jobs advertised they might say, "Well, actually I'd really like to go there" rather than thinking... "Oh I

don't even know where Alice Springs is" (Tahlia Lee, Team Leader and Physiotherapist, CDT).

This was also Jessica's perspective who points out that, despite a negative experience in a previous remote location, her experience in Alice Springs has changed her opinion about working in a rural town,

I left [previous placement location] and said I wouldn't work in a rural town and then went straight to Alice Springs two days later and a hundred % changed my mind. I would very happily work and live in Alice Springs. I really enjoyed it. I had a great time (Jessica, Student).

6.7 Influence of placement on physiotherapy specialization

As well as the original focus groups and interviews, follow up feedback was provided by the students in early 2020 when the students were either seeking work, or had commenced their first professional roles as physiotherapists. In addition to sowing the seed for possible future employment in Alice Springs, the students indicated that the placement had influenced their choice of career path in other ways including exploring the possibility of other rural location, working in paediatrics, and working in neuro-disability. For example, Kirsty noted, *"my time at Acacia Hill has influenced the types of jobs I am applying for as I am particularly interested in a paediatric role"*.

Following her placement, Jessica indicated that *"Alice Springs definitely motivated me more and encouraged me more to do it [work in paediatrics]"*. In 2020, she wrote to the project team to inform them about her first job as a graduate,

I've started work at Novita this year, which is a disability organisation that provides therapy (amongst many other things) to people with disability in South Australia. The majority of my work has been with kids and teenagers, but we do work with adults as well. Clients might have autism spectrum disorder (ASD), cerebral palsy, neuromuscular disorders, etc. This was the area I've always wanted to go into - which is why I was so keen on the Acacia Hill placement. I had a fantastic time at Acacia Hill, and my time there confirmed that this was the area of physio that I wanted to work in when I graduated. So yes, I was very lucky with the placement and it's had a great influence on where I've ended up working! (Jessica, Student).

Commented [RB11]: Do I need to include in the methodology?

Commented [AF12R11]: No, I don't think so

6.8 Conclusion

The physiotherapy placement at Acacia Hill School for final year physiotherapy students provided them with an opportunity to be immersed in a complex practice area and exposed them to the challenges and rewards of remote area practice and practice in a cross cultural environment. Contrasting with their other placements which were typically in clinical or hospital settings, the students expanded their work environment and gained a suite of clinical and professional skills which enhanced their capacity as physiotherapists. The placement provided the students with exposure to a social and cultural context with which they were largely unfamiliar and hence, afforded them an awareness of the need to orientate their practice in culturally safe ways. This was enhanced by opportunities such as home and community visits which allowed them to see the benefits of a “holistic” approach to care by learning about clients beyond a clinical setting. Although none of the students have opted to pursue work in Central Australia in their graduate year, the many assets of the placement gave the students motivation and aspiration to consider a future career in rural and remote physiotherapy, and for some, has guided their choice of specialty within the field of physiotherapy.



Figure 19. Front row: Annie Farthing (Centre for Remote Health), Lauren Moorish (Flinders University), Anne Bent (Centre for Remote Health), and Julie Permezel (Acacia Hill School). [Back](#)

Commented [RB13]: Annie – please check names appropriately attributed

Commented [AF14R13]: I have separated into rows – see what you think

Chapter Five: Expanding horizons: gaining skills relevant to remote area practice

row: Kirsty Jackson (Flinders University), Jesse Pardo (Flinders University), Daniel Polybank (Australian Catholic University) and Glenn Irvine (Acacia Hill School).

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7 Conclusion: The multiple benefits of using a service-learning model to enhance paediatric therapy

This report provides strong evidence that a collaborative interagency model for supporting final year service-learning student placements in the delivery of physiotherapy services can enable a culturally safe and responsive paediatric physiotherapy service in an underserviced area. Extensive feedback from those involved in supporting and caring for the AHS pupils, as presented in this report, is indicative of its success.

Additionally, although the students did not indicate a willingness to return to Alice Springs in their graduate year, each of them indicated that the experience had provided them with both skills and motivation to consider remote and rural practice, including the possibility of returning to Alice Springs at some stage of their careers. The multidimensional nature of the placement including its social and cultural context and the challenges the students were required to overcome, complemented and extended the set of professional skills they had acquired during their degree. Hence, the placement broadened the scope of their potential future employment.

This evaluation was guided by the Triple Aim Framework which seeks to measure the effectiveness of healthcare models using three dimensions. The framework seeks to simultaneously improve health of a populations; improve the patient experience of care (including quality and satisfaction); and reduce the per capita cost of health care. The triple aim dimensions were met in the following ways.

7.1 Meeting the dimensions of the Triple Aim

7.1.1 Population health improvement

The project set out to improve the health and wellbeing of the AHS pupils. Improvements in each area were achieved and have been documented in this report with examples including:

- **Increased function:** pupils demonstrated an increased in strength and development of motor skills, capacity to walk etc.

Commented [RB15]: ANNIE's input

Commented [AF16R15]: Ros, I think this could mirror the objectives set out in the original table. This would negate the need to repeat them here, rather just report on them I have started this, but I will work on the table in the email to get the wording right there first

- **Increase in comfort:** the introduction of different positioning options including positions to enhance maintenance of flexibility and as well as the provision of physiotherapy programs designed to reduce the risk of deformity.
- **Increased mobility:** (i) the introduction of a walking frame for a child who had never had one, and (ii) walking training for a young man who had been in a wheelchair for many years and (iii) the more regular use of walking frames for two pupils for whom walking was their only independent physical activity.
- **Increased quality of life** in terms of increasing opportunities for physical activity in group sessions and providing development of social skills by engagement between the AHS pupils and the Flinders students.
- **Increased ability for pupils to participate in classroom and school activities,** by improving awareness of how to reduce the impact of their physical impairments.
- Increased awareness of parents/carers as to how to provide therapy to address the pupils' needs.
- Increased awareness of school staff as to how to provide therapy to address the pupils' needs.
- **Review and modification of existing specialised equipment,** much of which was out of date and no longer meeting pupils needs.
- **Identifying the need for and accessing specialised equipment** and facilitating the procurement of such through appropriate agencies.

7.1.2 Participant experience

Commented [RB17]: ANNIE's input

Accounts and anecdotes provided throughout the report indicate that the service-learning placement was a positive experience for all groups of participants. The following table provides a summary of the approaches to therapy and the characteristics of the program which were identified by participants as enhancing their experience.

Pupils / School staff & Parents/Carers
• Accurate, thorough and complete physiotherapy assessments within the context of the school which was a familiar environment for the clients, • Intensive, regular and consistent therapy over 2 x 4 week blocks which enabled close and trusting relationships between the students, parents/carers, school staff and the pupils, • The fun, relaxed, respectful and humble approach to the way the students operated in the school and liaised with participants, • Considerate and regular communication between the therapy team, school staff and parents/carers, • Experience how physiotherapy programs can be delivered as a three-tire approach to intervention • Enhance staff skills, confidence and knowledge regarding the physical and mobility needs of their pupils,

• Development of individual reports for parents/carers which supported ongoing therapy for their children, • Development of individual plans for pupils which provided prompt and enhanced confidence for school staff and parents/carers to carry out therapy, • Immersion of therapists into the life of the school, • Opportunity to have therapy delivered by a team of therapists which allowed for a wide repertoire of therapy and activities for the clients, • Delivery of a service where cultural safety was valued and considered, • Enhanced advocacy for pupils, parent/carers and schools for children with additional needs regarding the critical levels of intervention required by the pupils and the current deficiencies in the services, • The holistic approach the students took to delivering the therapy which drew on the input and perspectives of parents/carers and school staff, • Opportunity for home and community visits which was beneficial to both the pupils and parents/carers, • The attention the core project team, students and supervisor gave to enhancing sustainability of the project • Referrals to relevant services to enhance ongoing and multidisciplinary care.
Physiotherapy students • Supervision by an experienced and passionate paediatric physiotherapist who was familiar with the school and cultural context. • Enhancing professional and clinical skills, specifically in paediatric physiotherapy, working with clients with neurological disabilities and undertaking complete assessments • Gaining a suite of skills complementary to clinical practice • Gaining positive work experience in a non-clinical setting and the opportunity to participate in a service-learning activity designed to “make a difference” • The experience undertaking therapy as a team • An enhanced understanding of the NDIS • Being exposed to a diverse learning context including conducting therapy at home and visiting a remote Aboriginal community • Increasing awareness of the need for programs which are culturally safe and an raised awareness of the social determinants of health • Experience living in a remote town and being able to explore areas of Central Australia • Enhance awareness of diverse career opportunities and specialisations

Commented [AF18]: Do you mean physiotherapy students or is this a deliberate use of therapist

Table 8 Participant experience of the service-learning placement.

7.1.3 Cost

The evaluation found no direct costs to families and carers however many noted that in some cases the students' intervention had *saved* them money by minimising use of funds from their NDIS plan for both therapy and the intervention required to produce reports on the physiotherapy needs of their children. Through accessing and having

greater exposure and increased understanding of therapy services, families and carers were also able to advocate for additional funds in subsequent NDIS plans. While a detailed cost analysis is beyond the scope of the project, there have been a significant increase in NDIS funding allocated in plans because of the project.

There were positive cost-benefit outcomes for the school including minimal cost associated for staff to gain extra skills and professional development, and positive outcomes for their pupils which aligned with the objectives in the NT Review of Policy and Practice for Students with Additional Needs. The benefit of the service-learning placements to the school can be attributed to the collaborative nature of the project. Extensive experience and knowledge of the local context held by the core project team enabled maximum and efficient use of resources.

The physiotherapy students did draw attention to some financial strain given the initial upfront costs and having to manage being away from part time jobs while on placement. Despite this, all students ultimately felt the positive outcomes and professional experience gained outweighed this concern. At the completion of the evaluation, all students had gained employment in their chosen profession except for one who was undertaking further study.

The most significant costs were the salary and support to bring in the supervisor. These could be ameliorated if there was a local supervisor available to undertake this work.

7.2 Key characteristics of project which enabled it to meet its objectives

The physiotherapy student-learning placement enabled the delivery of a successful specialist paediatric physiotherapy service in an underserved area, as well as providing a challenging and rewarding experience to tertiary physiotherapy students which thus provided them with a set of skills applicable to a complex remote practice area. What were the key dimensions that enabled such an engaging and productive project to occur in a context where programs frequently fail?

First, the project was grounded in strong interagency collaboration. The make-up of the stakeholder committee ensured inclusion and consultation with all relevant parties to meet the needs of pupils, students, parents/carers, school staff and supervisors. For example, an alliance between health and education providers enabled effective information-sharing which in turn enhanced the appropriateness of the programs. Regular meetings of the stakeholder committee employed a reflective process in order to address concerns and amend the project design in response to participant feedback, and to navigate complex situations.

Second, students and their placement supervisor were based at the school and immersed in the same context as the “clients”. This enabled them to develop meaningful relationships with the school staff, pupils and parents/carers. This had three flow-on effects: 1. The opportunity to provide a holistic approach to care; 2. The students could draw on the expertise of parents/carers and teachers to deliver the therapy in a way that was meaningful to the pupils, and 3. The students were able to work alongside the school staff and demonstrate the skills required to deliver the therapy in the students’ absence. Ultimately, their presence embedded physiotherapy into the school system. As well as providing individual therapy to referred pupils, the students designed activities at a whole-of-class and whole-of-school level, an approach recognized in educational terms as a “Three-tier level” response to intervention.

Third, the “pilot” nature of the program allowed the stakeholders, students and supervisors a degree of flexibility and creativity in its implementation. This resulted in the process being grounded in the needs of the participants. For example, the cultural safety of the project was enhanced by contributions from parents/carers and school staff. Furthermore, the students’ intimate involvement in rolling out the project gave them a wide range of opportunities to develop skills relevant to working in the complex social and cultural context of Central Australia.

Fourth, the team-work employed by the students and supervisor provided each other with extensive support in what can be a confronting and challenging context. Working as a team of four made possible some important physiotherapy activities requiring more than one person to assist, for example hydrotherapy. Working as a team also contributed to their capacity to provide activities which enabled the “Three-tier” response to intervention which supports students with learning disabilities to reach their capacity through providing activities at three levels: individual, whole of class and whole of school.

Fifth was the way the students conducted themselves in delivering their program. Feedback from school staff and parents/carers drew attention to the following: 1. Their ability to deliver therapy in a fun and easy-going way that suited school-age pupils; 2. Their flexibility and respect for working within the school timetable; and, 3. A humble approach which indicated their willingness to learn about the clients from parents/carers and school staff – they did not come in as “outsider experts”.

Sixth, the project provided an opportunity for the physiotherapy students to undertake a placement in a social, cultural and organisational context which contrasted with their other placements. The placement equipped the students with a set of clinical and professional skills which has expanded their career opportunities. The students all indicated that the placement had enhanced their interest in working in remote areas which typically struggle to attract allied health workers.

The need for putting in place measures for sustainability beyond their placements was the seventh and final contributing dimension to the success of this project. As well as their immersion into the school allowing the students to build the capacity of school staff, the sustainability of the program was augmented by each student developing plans and reports. The plans were easy-to-follow pictorial posters of activities which could be replicated by both classroom staff and parents/carers. Comprehensive clinical reports were written by the student team to document the intervention and the ongoing needs of each pupil. This contribution fulfilled a component of the students' university assessment. The reports also provided the parents/carers with official documentation that stated the physiotherapy requirements of their children which they were able to table as "evidence" in the development of NDIS plans.

Each of these elements was supported by the passion, commitment and enthusiasm from all involved in the project which contributed to both its successful delivery and the capacity of the stakeholders and participants to navigate complex situations. Enhancing this was the expertise, experience and commitment to the needs of the pupils and the students by key stakeholders including the supervisors, CRH staff and school-based staff. The "powerfulness" of the program was enhanced by the dual nature of the project's outcomes: to provide a service to AHS, while simultaneously offering a valuable and rich learning opportunity to the University students,

It's been a really powerful program. I've loved it. I've loved watching the students come in, watching their development within that period of time, and just watching what they value added to the running of the school and there's been a real richness to that with both cohorts....You know, we just watch what's happening and the kids are definitely getting huge benefits from that involvement...It's great to see young people at this stage of their training knowing full well they're going to be out in the big wide world not too far away, it's lovely to see that level of professionalism and commitment. Yeah, and particularly in this new age of NDIS (Sheina Treuel, Assistant Principal).

7.3 Meeting the DoE policy and practice recommendations

In addition to meeting the three dimensions of the Triple Aim framework, the evidence presented in this report responds to the recommendations in the NT DoE's [Review of Policy and Practice for Students with Additional Needs](#). The accounts collated in this report provide an evidence-base for an allied health program which meets the physiotherapy needs of pupils. This responds to the review's call for "Enhancing an evidence-led system" (Milne et al, 2018:vii). Second, the report recommends "Strengthening shared decision making...by involving students and their families in collaborations with school and system staff as well as other agencies" (ibid). This was

modelled through the collaborative and holistic approach taken during the student-learning placement, alongside family and teachers. Finally, “Improving professional practice” through a “whole of system approach” (ibid:vi) was demonstrated by the interagency approach implemented in the planning and delivery of the project and provides a model for how this can have a positive effect on the health and wellbeing of pupils with additional needs.

7.4 Recommendations

The findings in this evaluation reveal that a service-learning placement is a successful model for physiotherapy service delivery in an additional needs school in Central Australia. Recommendations emerged during the evaluation process which speak to both the need for ongoing service delivery reflective of the model revealed in this report and suggestions as to how the model could be improved to enhance the success of future physiotherapy student placements at AHS. A recommendations document was prepared for the stakeholder committee for the purpose of planning future placements (see Appendix 8). The recommendations have been summarised and presented as six key recommendations below.

7.4.1 Collaborative planning and delivery of the project

Ensure collaborative planning and delivery of service learning placements in contexts such as AHS. Critical to the success of this model was 1. The close involvement of Acacia Hill School in all aspects of planning, delivery and reflection; 2. A core team which represented interested parties which enabled a rich pool of skills, expertise and networks, and 3. Regular and reflexive meetings to enable ongoing planning and modifications of the project to ensure it suited the needs of the various participants.

7.4.2 Immersion in school context

Ensure the services provided by the students can be directed by and responsive to the needs of the placement site. Immersion of the physiotherapy team in the context and the understanding by the supervisor of the context and the importance of local ownership were critical factors in allowing this to happen. This made a significant contribution to the success of the program through: 1. Ownership and control the school maintained of the project, 2. Relationships it nurtured, 3. Enhanced channels of communication, 4. Opportunities for activities beyond typical one-on-on therapy, 5. Holistic approaches to physiotherapy intervention, 6. Opportunities for the students to work in a non-clinical context, and 7. Sustainable project outcomes.

7.4.3 Process recommendations

Recommendations emerged that provide means of improving the efficiency and effectiveness of the service-learning placement. These include: 1. Lengthen the student placement by one week, 2. Commence pupil referral process earlier, 3. Provide administrative support to the placement supervisor, 4. Enable the placement supervisor to be the supervising adult at the school and 5. Reduce upfront costs of the placement for the physiotherapy students.

7.4.4 Delivering therapy as a team

Delivering a physiotherapy service as a team of students in a school for children with additional needs is recommended. Practicing therapy as a team 1. Enhances students' confidence and capacity for mutual support, 2. Boosts shared capacity to problem solve when faced with challenging situations, 3. Enhances experiences when exploring the region, and 4. Enables delivery of therapy and other activities which require multiple therapists i.e. hydrotherapy. Familiarity of the supervisor with both the mentoring role and the local context is a key factor in the success of a well-run team.

7.4.5 Enhance opportunities for students to return as graduates

Assist students returning as graduates or in the early years of their career by 1. Broaden the students' insight into work opportunities in Alice Springs, 2. Liaise with these services and practices to inform them of the cohorts of students who undertook their placements in Alice Springs, and 3. Continue to lobby for supported graduate positions to be developed in this context.

7.4.6 Multidisciplinary allied health student placements

Consider taking a multi-disciplinary approach to service-learning placements in schools such as AHS whereby teams of allied health students comprising of physiotherapy, speech pathology and occupational therapy are on placement simultaneously. A multi-disciplinary student-learning team would have multiple benefits: 1. As smaller groups from each discipline the students would get more hands-on experience and increased one-on-one time with their supervisor; 2. It would enhance the opportunity for a multidisciplinary approach to therapy which would benefit the pupils who often have multidisciplinary needs, and 3. It would provide the students with a greater insight into the roles of other health disciplines required by clients with complex needs.

7.5 Conclusion

The physiotherapy service-learning placement at Acacia Hill School provided physiotherapy services to the pupils and their families which contributed profoundly to their health, wellbeing and quality of life. Enhanced by interagency collaboration and measures to ensure sustainability, the project provided an evidence base to support team-orientated student service delivery, immersion of allied health practices in schools, and intensive blocks of physiotherapy input for children with neurological disabilities. This project has demonstrated that a well-managed service-learning placement meets the needs of the students and provides a much needed physiotherapy service.

Interest from other schools, the Department of Education and the NDIS in this project is indicative of its relevance and it is hoped that the possibility of the project being replicated elsewhere will have positive impacts for many more young people in the Northern Territory and other comparable contexts; particularly as the NDIS continues to modify its programs in response to local contexts. It is clear that services such as those delivered in this project can materially contribute to the health and wellbeing of children and young people such as those with additional needs at Acacia Hill School.

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Appendix 1. Student Needs Profile – Movement, Acacia Hill School

Student Needs Profile

<http://ed.nts.schools.net/studserv/team/dm/FormsRequests/Student%20Needs%20Profile.pdf>

Gross Motor and Mobility

Movement

Fine Motor
Movement

Gross Motor and Mobility

The level of functional independence and the student's physical capacity for movement is the focus of this profile. It refers to movements that require coordination and effective use of limbs, trunk and whole body.

Note: This information would be documented in a physiotherapy and/or occupational therapy report. The student's needs are best described by the level indicators listed below **Level**

Indicator

Age appropriate skill level.

☐ Level 0

37/99 Students

☐ Level 1

19/99 Students

Supplementary (Minimal)

- a. Shows poor awareness of personal space boundaries e.g. bumps into people.
- b. Avoids or appears unsure of movement based play opportunities with peers.
- c. Can complete age appropriate motor tasks with reduced speed/accuracy of movement.
- d. Requires specific verbal direction to complete new or complex motor tasks

e.g. hopping, skipping, climbing, throwing/catching.

- e. Minimal assistance for mobility or balance is required, such as handrails, ramp, tactile markings, a lift or staff support is needed.
- f. Is independently mobile using specialised mobility equipment and requires minimal supervision.

☐ Level 2

27/99 Students

Supplementary (Moderate)

- a. Requires verbal and some physical prompting to complete gross motor tasks e.g. start a task and allow student to complete.
- b. Has difficulties performing gross motor tasks due to decreased awareness, strength, motor planning coordination and/or tactile defensiveness.
- c. Requires some modification of the task to complete successfully. Occupational Therapy

Appendices

and/or Physiotherapy advice may be needed
e.g. allow student to jump over stationary rope during skipping.
d. May demonstrate resistance or opposition in response to challenging motor tasks.
e. Has some independence and requires adult support or training in the use of specialised equipment e.g. walking frame, callipers, and wheelchair.
f. A student with vision impairment may require ongoing support for orientation and mobility program.

☐ Level 3
7/99 Students
Substantial

a. Performs parts of gross motor activities with effort and limited success Occupational Therapy and/or Physiotherapy input required e.g. partial completion of obstacle course/activities.
b. Can complete motor components of activities of daily living with physical assistance e.g. managing clothing for toileting, organising own school bag.
c. Demonstrates extreme avoidance and/or aggressive behaviours in response to challenging tasks.
d. Requires a wheel chair for mobility and needs assistance to transfer to other pieces of equipment or activities e.g. wheelchair to seating, to pool, to toilet, wheelchair to trampoline etc.
e. Requires assistance for general movement or transfers e.g. getting up off the floor.
f. Is mobile but requires significant support when moving around the school due to balance or coordination issues, vision impairment or supervision whilst using mobility aids or disability/disorder.

☐ Level 4
9/99 Students
Extensive

a. Has extremely limited gross motor control for simple actions. Full assistance may be required e.g. reach.
b. Is unable to perform basic tasks.
Occupational Therapy and/or Physiotherapy direction required e.g. walking, sitting, standing.
c. Requires full physical assistance for gross motor components of activities of daily living including access to play equipment, classroom and toileting areas.
d. Requires intensive and long term orientation and mobility training e.g. vision impairment, walking frames.

Appendices

e. Requires intensive support or constant monitoring to maintain posture e.g. standing frame.

f. In order to access the school curriculum and environment, the student requires assistance of more than one staff member for mobility and transfers e.g. use of hoist for transfers.

g. Has limited independent or controlled movement. Constant physical support or instructions from a close range are needed at all times when moving around the classroom and the school.

Total Level of Need = 130

Appendix 2. Interview schedules x 3



Evaluation of Physiotherapy Student Placements in Acacia Hill School Questions for Families and Carers

1. **Have you seen any changes in your child after receiving therapy? In what ways?**
Prompts:
 - a. Function
 - b. Comfort
 - c. Quality of life
 - d. Management by parents / carer
 - e. Pain / discomfort
 - f. Mobility within the school, home and community
 - g. Participation in school, home and community
2. **Do you think your child enjoyed spending time with the Physiotherapy students?** Did he/she have fun in their therapy sessions?
3. **How satisfied are you with the service in terms of:**
 - a. **Communication with the physio service.** Did you understand what the Physiotherapy students were recommending? If a follow up program was recommended by them is it easy for you to manage at home?
 - b. **Service overall**
 - c. **Outcomes for your child**
 - d. **People involved**
 - e. **Cost** – was there any cost in terms of time or financial
 - f. How can we improve this service?
4. **What would you like to see next time? How could the program be improved?**



Evaluation of Physiotherapy Student Placements in Acacia Hill School Questions for Acacia Hill School Staff

1. **A project such as this involves challenges as well as benefits for the school.**
 - i) **Regarding challenges, can you talk about:**
 - (1) Concerns you had before the placements started
 - (2) The amount of time involved in negotiating times for the service to see your students, with the students, the supervisor, school staff, parents/careers. That is how disruptive was it for you and the class?
 - (3) Challenges in negotiating/resolving any conflicts or problems that arose during the placements.
 - (4) Any other challenges.
 - ii) **Regarding benefits, can you talk about:**
 - (1) How the school students have benefited
 - Function
 - Comfort
 - Quality of life
 - Management by parents / carer
 - Pain / discomfort
 - Mobility within the school, home and community
 - Participation in school, home and community
 - (2) How the school staff have benefited
 - (3) How parents/carers have benefited
 - (4) What facilitated the benefits, in terms of planning and preparation, professionalism of the supervisor and the students, communication between Flinders and the school and families
2. **How satisfied were you with the services in terms of** (prompt what did we get right, what could we do next time):
 - i) Communication
 - ii) Services (ie assessment / programs / staff training and advice)
 - iii) Referral process
 - iv) Outcomes
 - v) People involved
 - vi) Cost
3. **Is there anything else you would like to say about the project?**



Evaluation of Physiotherapy Student Placements in Acacia Hill School

Semi structured Interviews for students

1. **What are some of the ways your professional practice has benefited from this placement?**
 - a. **What are some key aspects of the placement that facilitated these benefits?**
 - b. **How did this placement extend your clinical skills and knowledge?** (Prompt: Planning and preparation for the placement, Quality of supervision, relationships with school staff, special events such as the sign language training)
 - c. **Did the placement help you prepare for the transition from student to professional?** How? What assisted this process? Are there any aspects specific to this placement in remote practice area that you think are of value in this process?
 - d. **Has your understanding of inter-professional practice improved?** How
2. **Do you think you made a positive change to:**
 - a. **Children** – can you describe how and give examples
 - b. **The school** – can you describe how and give examples
3. **Can you think about the facilitators and challenges / barriers in the project:**
 - a. **For you as a students** – what helped you? What was challenging? What could be done differently by yourself, the school, your supervisor or Flinders? Consider cost
 - b. **For the overall service** – what helped the service? What was challenging? What could be done differently by yourself, the school, your supervisor or Flinders?
4. **Are there other improvements that could be made to the placement program to improve outcomes for the school students and for the you as physiotherapy students?**
5. **How satisfied are you with the following:**
 - a. Communication prior to the placement
 - b. Your recruitment to the program
 - c. The service you were able to provide
 - d. The supervision
 - e. The outcomes for you, for the students and for the school
 - f. People involved
 - g. Cost to you
6. **What other factors would affect your decision to return to work here?**

Appendix 3. Letter distributed to parents/carers regarding participation in evaluation



Dear Families and Carers,

Flinders University Physiotherapy program has provided a physiotherapy service at Bradshaw School during 2019. It is important for us to know in what ways this was useful and helpful to you and your child. We would also like to know how to improve this service in the future.

We would like to know if you are interested in having a conversation about your experience with the program. It would be at a time and place that suits you and would take about 30 minutes. If so, please respond to this email (or directly to Ros using the contact details below) and Ros will be in touch to arrange a time. Please see the attachment if you would like additional information about the evaluation.

I look forward to hearing from you.

Kind regards,

Ros Beadle

Research Fellow
Centre for Remote Health
Alice Springs
Mob: 0409 535 880
Email: rosalind.beadle@flinders.edu.au

Appendix 4. Information and Consent form provided to participants (example – Parents/Carers)



Acacia Hill School & Flinders University Physiotherapy Student Placement 2019

Information Sheet for families and carers

This is for you to keep

Flinders University Physiotherapy programme has provided a physiotherapy service at Acacia Hill School during 2019. It is important for us to evaluate the service to know if this service has been useful and helpful to you and your child. This can help us improve this service in the future.

We would also like others to know about the program so other organisations can learn about how physiotherapy students might help provide services in a school where therapy can be difficult to access. In order to do this, we need to publish the evaluation.

We are asking if you would agree to be part of this evaluation. *You can say No.* If you agree, we will make a time to talk to you and ask some questions about you and your child's experiences. This will be at time and place that suits you and will take about 30 minutes. You can choose to have family or support people during the interview. If you do not agree to be part of the published evaluation, we would still like to interview you about your experience, but we will not include what you say in the published evaluation.

When we talk to you, we will ask you if we can record the conversation. If you would prefer not to have a recording, we will take handwritten notes. Any recording will be transcribed by the interviewer. Data will be kept in a locked filing cabinet, and on a password protected secure server at the Centre for Remote Health campus of Flinders University, accessible only by the research team. You and your child will not be able to be identified in the evaluation.

The evaluation will also include data from the school such as the number of students and general information about the physiotherapy service such as how many children were assessed, and how many times they were seen by the service. We will collect information

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from the Acacia Hill School staff, the Physiotherapy students and the supervisor. We want to know what everyone thought of the program, the things that worked for you and your child and the things you think should be different. We would also like to know if you have suggestions to help us improve the service.

We will provide a report back to the school about the project that you can read. We will also let you know if the evaluation is published.

If you would like more information or want to ask any questions, you can contact

Annie Farthing
Centre for Remote Health
Flinders Northern Territory
Cnr Simpson & Skinner Sts Alice Springs
PO Box 4066 | Alice Springs NT 0871
P: +61 8 8951 4700 | M: 0407 015 791

If you have any concerns about this evaluation at any time, you can contact:

Central Australian Human Research Ethics Committee
Centre for Remote Health
Flinders Northern Territory
Cnr Simpson & Skinner Sts Alice Springs
PO Box 4066 | Alice Springs NT 0871
P: +61 8 8951 4700 | E: carhec@flinders.edu.au

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Evaluation of Physiotherapy Student Placements in Acacia Hill School

Consent Form – Families / carers / guardians

This Means You Can Say NO

This will be verbally explained to participants by an Aboriginal member of staff if required

- The nature and purpose of the research project has been explained to me. I understand it and acknowledge that taking part in this study is voluntary.
- I have been given an Information Sheet which explains the purpose of the study, the possible benefits, and the possible risks.
- I understand that I may not directly benefit from taking part in the study.
- I understand that, while information gained during the study may be published, I will not be identified and my personal results will remain confidential.
- I understand that I can withdraw from the study at any stage and that it will not affect my relationship with Acacia Hill School or the student lead physiotherapy service now or at any stage.
- I have had the opportunity to discuss taking part in this investigation with a family member or friend.

I consent to participate in an interview

Name of participant:

Name of witness:

Signature:

Signature of witness:

Date:

Date:

8.1.1

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Appendix 5. Referral for Flinders NT physiotherapy services at Acacia Hills school

Room Date
Class teacher.....SESO.....

Student.....

What are the main physical problems that this student is having in the classroom (GM / FM ?)

.....
.....
.....

What areas of assessment would you like us to provide for this student?

.....
.....
.....

What issues would you like us to investigate? (eg transfers / mobility / seating / equipment)

.....
.....
.....

What is the best way to communicate with his student? (Verbally +/- using sign language?)

.....
.....
.....

Does this student have any behavioural issues that we should be aware of? Are there any special precautions we should take when working with this student?

.....
.....
.....

Is there anything specific age signs of discomfort forward slash anxiety? That we should be mindful of when working with this student?

.....
.....
.....

Date of assessment.....

Physiotherapy students

Appendix 6. Inequities in developing NDIS plans

Critical to a clients' capacity to access physiotherapy services through the NDIS is the development of a comprehensive plan which determines how much funding is allocated to the individual for physiotherapy services. The purpose of the plan is to support the client and their family to set individual goals, and then determine the services and funding required to meet these goals. The client-directed nature of the scheme is intentional and meets the NDIS's purpose to provide the funding recipient with "choice and empowerment" (Laragy, 2016). Following the development of the plan, the client can choose if the funding is self-managed, plan-managed or NDIA managed which takes into account varying capacities to manage funds and barriers such as low financial literacy.

Central to developing a successful NDIS plan for young clients is advocacy by the client's parents/carers. Hence families need to have a thorough knowledge of the health needs of their children. This preservation of independence was deemed an asset in the transition to NDIS and some participants indicated this approach was working for them.

The challenges of developing NDIS plans and accessing services in a remote area has been explored and discussed in detail in Mavromaras et al's 2018 Evaluation of the NDIS. The team reported specifically on NDIS in the NT with findings from the trial site in the Barkly, a region which comes under the catchment area of Acacia Hill School. The report highlighted there had been a dearth of therapy services for a long time with a resultant lack of understanding of the benefit of such services. The report also found "the quality of the plan was dependent on the skills and knowledge of the NDIA planner" (p254). This together with limited understanding of the process of plan development and implementation had led to minimal improvement in access to services. The individualised approach of the NDIS was "also considered inappropriate when working with Indigenous people with disability" (p255).

Families and school staff who contributed to this evaluation each reported challenges in navigating processes required by the NDIS, challenges which were exacerbated by the low socio-economic status of families involved. For many families at AHS, several barriers, such as those presented in the evaluation of the trial site in the Barkly region, prevented them from adequately advocating for their children and hence, did not receive the physiotherapy (and other required services) necessary for their children. The barriers to developing a plan that adequately reflected their children's needs included:

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- A longstanding dearth of allied health services resulting in little understanding of their potential benefits or advocacy for including in planning,
- A lack of understanding by the NDIA planners of the context in which the children lived and their disabilities which resulted in inadequate plans,
- Minimal or infrequent access to services (i.e. remote clients) resulting in lack of familiarity with the health system and the clients' requirements (at the time of this evaluation, there were no physiotherapy service providers in Alice Springs specialising in working with children with disabilities),
- Access to health services which are not culturally aware and culturally safe,
- Additional pressing health and social issues, such as poor and inadequate housing, overcrowding and health challenges faced by other family members,
- English as a second or third language and low levels of English literacy which perpetuates misunderstandings regarding the requirements of the new system,
- Families from disadvantaged backgrounds have less ability to advocate due to minimal understanding of the system, shame, and poor education, and
- Families are challenged in retaining up to date health records for their children due to high transience between communities and town, shared and overcrowded housing, poor computer literacy or lack of access to equipment (i.e. computers) to maintain records.

As noted by Laragy following a trial of the NDIS between 2013 and 2016, "the most disadvantaged may miss out, particularly those from low socioeconomic and diverse cultural backgrounds" (Laragy, 2016). The experience of families involved in the student-learning project indicate the complexity of the NDIS scheme and the corresponding frustration experienced by families (see Case Study Three). Based on her experience working closely with those struggling to navigate the new territory of the NDIS, the placement supervisor describes the downfalls associated with the system which depends on parents/carers to direct NDIS plans,

Parents aren't therapists and they don't know what the potential is for their students with appropriate physio intervention. However, they are expected to take responsibility for informing their child's NDIS plans. They simply don't know what they don't know and they are being assisted by a planner who may well have been working in an industry completely unrelated to health and disability a few weeks ago and doesn't know about allied health services. So there are weak links all through the NDIS system towards determining the amount of funding the child gets (Anne Bent, Placement Supervisor).

This concern is shared by June Riemer, deputy CEO of the First People's Disability Network (FPDN). She highlights the failure of the NDIS to provide a system which takes into account Aboriginal culture and difference in capacity "despite 52% of NDIS

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participants in the NT identifying as Aboriginal or Torres Strait Islander” (compared to a national figure of 7.3%),

If you really were honest about supporting all Australians who have some form of disability, you have to first acknowledge that some Australians are not of an equal capacity. For example, if someone lives in a metropolitan region — like our Prime Minister says, the quiet Australians, the middle Australians — they have the education to understand what a physiotherapist is, or a speech pathologist is. But unless you’ve had that education and that capacity building to understand the benefits, why would you know any different? (Riemer, cited in Stevenson & Howie, 2019).

A key person in the development of NDIS plans is the Local Area Coordinators (LACs) who are employed by the NDIS “to connect people with disability to supports, services, activities in their community and other government services. LACs also work in communities to help them become more accessible and inclusive for all people with disability....They also work with NDIS participants to develop and use their NDIS plan” (NDIS Information Booklet, 2019). However, as indicated by the supervisor’s concern above and raised as a source of frustration for the parent/carer in Case Study Three, LACs are not required to have a background in health and disability. Combined with families struggling to adequately advocate for their children, plans potentially fail to meet the clients’ needs. This is exacerbated in regional areas such as Alice Springs when final decisions are made in places such as Darwin, far removed from the clients’ context (see Case Study Three).

In some cases reported in this study, assistance was offered by CDT whereby the treating physiotherapist attended a family’s NDIS planning meeting. However, the lack of recent access to CDT physiotherapy for many AHS clients meant this wasn’t feasible for two reasons. First, there were not the required relationships between the families and CDT physiotherapists, and second, the CDT health records pertaining to the pupils’ physiotherapy were out of date which decreased their relevance to the planning process. Despite this, CDT still provide support where they can in the transition to NDIS, especially for children in the 0 to 5 year old age group who are eligible for an Early Childhood Early Intervention (ECEI) plan (available to pre-diagnosed children who have developmental delays in two or more areas). The support offered by CDT in the planning process is described by the CDT manager,

Our role is still now to get people onto the NDIS. So if it's a new diagnosis, we provide the supporting evidence and the supporting documentation to get them a good plan. Before when they were our clients and we were transitioning them, [we were] trying to let them know this change was coming, and what this change would mean, but for some families that

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hasn't been all that successful. There are still children that we're aware of that are no longer getting services from us and the family hasn't accessed NDIS yet so they're not getting services from anyone (Manager, CDT).

The senior physiotherapist at CDT noted that the implementation of the student-learning project being synonymous with the NDIS created some challenges with the handover process,

When the project got set up there was a handover of information about the clients that we used to treat. It did become a little bit messy. Because of the timing with the NDIS a lot of these kids were no longer our clients when this project started. We were handing the last information that we knew about these children when they were ours. Some of them were still clients (there are a few kids that Acacia Hill that aren't eligible for NDIS or had only just transitioned) so they were more up to date [but] some students we hadn't seen for a really long time (Tahlia Lee, Team Leader and Physiotherapist, CDT).

Challenges navigating the new system were not isolated to families. Managing paperwork and student files related to NDIS resulted in a great deal of extra work for school administrative staff given that most AHS students are eligible for an NDIS plan. The previous principal noted that her preliminary experience with NDIS was characterized by a lack of communication,

I don't think there was communication between any of the NDIS people and the school for anything except when they wanted us to go to meetings and do plans. It wasn't what I considered to be a very successful level of support for the students (Principal, AHS, 2012- 2018).

Throughout the conversations that took place for this evaluation, many anecdotes arose which reflect the media's criticism of the NDIS which has repeatedly been likened to "a plane taking off while still being built" and "fundamentally flawed" in meeting the needs of Indigenous Australians in the Northern Territory (Skatssoon, 2019; Laragy, 2016; Stevenson & Howie, 2019). However, the happy ending to Luke's story after two years of navigating the NDIS as reported in Case Study Three indicates that for some families, the NDIS is finding its feet. The potential of the NDIS was noted by the deputy principal who has had extensive experience working with children with additional needs,

[Although] it's making things a lot harder at the moment, it does have the potential to be great. I seriously love the NDIS because I think it's going to make a huge impact long-term for people with disabilities in

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terms of empowering them to take responsibility for their own development, and they will call the market by the things that they want to have. I think what's really cool about it is the money is all going to be there, we've never seen funding like this before ever in the world of disabilities, we've always had to compete; there's always been a bucket (Sheina Treuel, Assistant Principal).

Draft / Confidential

Appendix 7. National Assessment of Physiotherapy Practice framework



Assessment of Physiotherapy Practice (APP)

End of CP (Summative) Feedback

Student Name: Facility: Dates of Placement:..... ☐

Days Absent:

Please allocate a percentage to the core areas of education experienced during the assessment period:

MSK Ortho% MSK OP/general.....% Cardiorespiratory% Neurological physiotherapy% Other.....%

Clinical Supervisor's comments

Student Strengths:

.....
.....
.....

Areas to be improved and strategies for improvement:

.....
.....
.....

Whilst a student may achieve a Pass grade or higher on completion of the unit, if there are any areas of the student's performance you would like followed up by the University, please outline them in the table below. If

you complete this section the University will meet with the student and discuss the areas of concern and formulate a plan of action to be followed by the student. You will be notified of the action put in place by Flinders University.

--

Clinical Supervisor Signature

Student Signature

Clinical Supervisor Name (Print)

Date

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Assessment of Physiotherapy Practice (APP) End of CP Summative Assessment

Student name: Facility/CP:
Date:

- 0 = Infrequently/rarely demonstrates performance indicators
1 = Demonstrates few performance indicators to an adequate standard
2 = Demonstrates most performance indicators to an adequate standard
3 = Demonstrates most performance indicators to a good standard
4 = Demonstrates most performance indicators to an excellent standard
n/a = not assessed = item was not assessed

Note. a rating of 0 or 1 indicates that a minimum acceptable standard has not been achieved

Professional Behaviour	Circle one number only
1. Demonstrates an understanding of patient/client rights and consent	0 1 2 3 4 not assessed
2. Demonstrates commitment to learning	0 1 2 3 4 not assessed
3. Demonstrates ethical, legal & culturally sensitive practice	0 1 2 3 4 not assessed
4. Demonstrates teamwork	0 1 2 3 4 not assessed

Communication	
5. Communicates effectively and appropriately - Verbal/non-verbal	0 1 2 3 4 not assessed
6. Demonstrates clear and accurate documentation	0 1 2 3 4 not assessed

Assessment	
7. Conducts an appropriate patient/client interview	0 1 2 3 4 not assessed
8. Selects and measures relevant health indicators and outcomes	0 1 2 3 4 not assessed
9. Performs appropriate physical assessment procedures	0 1 2 3 4 not assessed

Analysis & Planning	
10. Appropriately interprets assessment findings	0 1 2 3 4 not assessed
11. Identifies and prioritises patient's/client's problems	0 1 2 3 4 not assessed
12. Sets realistic short and long term goals with the patient/client	0 1 2 3 4 not assessed
13. Selects appropriate intervention in collaboration with patient/client	0 1 2 3 4 not assessed

Intervention	
14. Performs interventions appropriately	0 1 2 3 4 not assessed
15. Is an effective educator/health promoter	0 1 2 3 4 not assessed
16. Monitors the effect of intervention	0 1 2 3 4 not assessed
17. Progresses intervention appropriately	0 1 2 3 4 not assessed
18. Undertakes discharge planning	0 1 2 3 4 not assessed

Evidence-based Practice	
19. Applies evidence based practice in patient care	0 1 2 3 4 not assessed

Risk Management	
20. Identifies adverse events/near misses and minimises risk associated with assessment and interventions	0 1 2 3 4 not assessed

DO NOT COMPLETE GLOBAL RATING SCALE AT MID UNIT

In your opinion as a clinical supervisor, the overall performance of this student in the clinical unit was:

☐ Not adequate ☐ Adequate ☐ Good ☐ Excellent

Scoring rules:

- ✓ Circle not assessed only if the student has not had an opportunity to demonstrate the behaviour
- ✓ If an item is not assessed it is not scored and the total APP score is adjusted for the missed item.
- ✓ Circle only one number for each item
- ✓ If a score falls between numbers on the scale the higher number will be used to calculate a total.
- ✓ Evaluate the student's performance against the minimum standard expected for a beginning/entry level physiotherapist.

Dalton M., Keating J., Davidson M. (2009) Development of the Assessment of Physiotherapy Practice (APP): A standardised and valid approach to assessment of clinical competence in physiotherapy. Australian Learning and Teaching Council (ALTC) Final report PP6-28. <http://www.altc.edu.au/project-development-clinicalassessment-2006>.

Appendix 8 Recommendations

During the conversations with participants and stakeholders, they were given the opportunity to make suggestions for ways the student-learning placement could have been more effective both in terms of improving the service, as well as enhancing the experience for the students themselves. The recommendations are categorised into recommendations regarding process, communication, and student pre-placement preparation. Within the report the recommendations are discussed as part of broader issues and can be cross-referenced to provide background information (see report page number). The purpose of this document is to provide additional information to the stakeholder committee for consideration during planning of future placements.

PROCESS RECOMMENDATIONS			
Recommendation		Why?	Report page
1	For physiotherapy students to provide a detailed written account on their previous experience (if any) with paediatric neuro disability and their interest and motivation for doing a placement at AHS	To help guide and inform the supervisor of the nature of support required	51, 136
2	Deidentify reports and provide a selection to future students	To prepare them for the types of conditions they are going to see on their placements	86
3	Be purposeful in the gender balance of students who participate in the placement	To take into account cultural considerations around gender when working with Indigenous pupils ie. for hydrotherapy	143
4	To increase the placement to five weeks	To make the most of the strong relationships the students developed in the first four weeks and enhance productivity	57

Commented [RB21]: ANNIE?

Commented [AF22R21]: Yes? Not sure what you are asking for 😊

Commented [RB23]: Add Anne's recommendations about equipment

Commented [RB24]: CHANGE PAGE NUMBERS

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5	Allocate more time prior to placement to complete the consent process for referred pupils	To increase opportunity for referred students to access the therapy and ensure the process is complete before students arrive	43
6	A week or longer either side of the placement for the supervisor	To provide the supervisor with time to review student programs, review the school services, and prepare for the student's arrival	51
7	Increased administrative support for the supervisor	To free the supervisor up for supporting the students which would enable them to have more one-on-one supervision time	51,136
8	Run student placements as a multidisciplinary team of physiotherapists, occupational therapists and speech therapists	Enhance students' capacity to work in a multidisciplinary team and provide a more holistic approach to care for the pupils	129
9	Develop a formal process and allocate times for "handing over" plans and reports developed by the students to parents/carers and school staff such as staff meetings or family meetings. The students felt that this was sometimes rushed.	To enhance the effectiveness of the plans and increase the possibility of their implementation and hence sustainability of the project	85
10	Allocate one day of the student placement to visiting other services which employ physiotherapists in Alice Springs/Central Australia	To enhance students' awareness of future employment possibilities in Central Australia	146
11	That the supervisor has the auspice to be the "supervising" adult for therapy sessions	Reduce the need for teachers and SESOs to have to be present during therapy sessions and hence take them away from other class activities	117

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12	Review the scope of the students' role in regards to intervention at school, homes and in remote communities to avoid. Liaise closely with other services involved with pupils, specifically those in remote communities, and seek permission from families before visiting communities.	This is to avoid existing agencies are not put off-side by the intervention delivered by the student-learning placement and to ensure that the clients and their families are not being "over serviced".	142
13	To reduce the upfront costs of the placement for the students ie. travel and accommodation.	Decrease the financial pressure on students to undertake the placement which would in turn, make the placement accessible for a wider range of students.	62

COMMUNICATION RECOMMENDATIONS			
Recommendation		Why?	Report page
14	To ensure there is an opportunity for students to present to the school staff <i>during</i> their placement eg. at a staff meeting (as happened in C1)	To improve staff knowledge of the purpose of the student placement, what they could deliver and the impact of the therapy and activities they implemented	65
15	To develop a short presentation to be delivered to school staff <i>prior</i> to placements about the student-learning placement. Possibly engage two ex-students from C1 or C2 to develop a short presentation with support from the supervisor. Could be a short video which the staff could watch at a staff meetings.	To enhance school staff knowledge around the physiotherapy needs of their students, increase their awareness about what intervention looks like and to improve the referral process.	47
16	Enhance communication channels between the school and the NDIS	To increase understanding of how the student placements and the NDIS can effectively deliver physiotherapy services synonymously to AHS pupils. ie. If all students have a physiotherapy as part of their NDIS plan (which the majority of AHS students will have), will they use the school? Will they share their information? How will they interact with / collaborate with the Uni students/supervisor?	179

STUDENT PREPARATION RECOMMENDATIONS

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Recommendation		Why?	Report page
17	Enhance understanding of specific conditions of pupils the students work with on their placement. The supervisors could provide more pre-placement reading about specific conditions of pupils the students will be working with. This may include providing them with a selection of deidentified reports and plans prepared by C1 and C2.	For the students to be more prepared and to have a better understanding of the conditions they will be working with at AHS, which can both enhance therapy and minimise confrontation for the students. For future students to be more aware of the role of a physiotherapist for clients with a neuro disability.	47
18	Enhanced understanding of the complex social and cultural context prior to placement	To enhance student understanding of the rationale behind having a physiotherapy placement in a school ie. Understanding the social determinants of health which lead to families struggling to access health services using typical channels.	47, 140
19	For past students to deliver a PowerPoint presentation to future students doing placements at AHS. Presentation can focus on learning areas and experience they gained on placement include information about working remote, cross cultural service delivery and challenges, such as access to equipment. Content of this presentation may be informed by this evaluation report.	To increase preparation of the students for the placement and hence, address the recommendations above.	47, 140
20	Incoming students are provided with some training in both the needs for sign language and sign language itself prior to commencing the placement. Could be delivered as part of their course as potentially beneficial for all physiotherapy students.	Becoming familiar with sign language was a key skill that all the students claimed contributed to their capacity to communicate with the pupils, and hence develop more effective relationships and deliver therapy that suited the pupils' needs. However, they indicated that it would have been useful to know more, and it would have helped to have some sign language prior to placement.	114, 132