


# BMJ Open Does an expanded allied health student training programme in regional New South Wales (Australia) result in a positive social return on investment? A protocol for a single-university education-based economic evaluation

Melissa Nott <sup>1</sup>, Elyce Green <sup>1</sup>, Micheal Anderson,<sup>2</sup> Louise French,<sup>1</sup> Chelsea Lander,<sup>1</sup> Rachael McAleer,<sup>3</sup> Natasha Brusco <sup>4</sup>

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For numbered affiliations see end of article.

**Correspondence to**  
Dr Melissa Nott;  
[mnott@csu.edu.au](mailto:mnott@csu.edu.au)

## ABSTRACT

**Introduction** 20 years ago, health professional student placements in rural areas of Australia were identified as an important rural recruitment strategy and funding priority. Since then, there has been a growing body of research investigating the value, impact, barriers and facilitators of student placements in rural areas of Australia. Charles Sturt University, Three Rivers Department of Rural Health, was recently awarded an Australian Government grant to expand their Rural Health Multidisciplinary Training (RHMT) programme, designed to increase multi-disciplinary student placements in rural areas of New South Wales (NSW), Australia. The aim of this study is to determine if the expanded RHMT has a positive social return on investment (SROI).

**Methods and analyses** The RHMT Programme will expand into the Forbes/Parkes/Lachlan local government areas of NSW where there is a population of 21 004 people, including 3743 First Nations peoples. Data collection includes collecting programme outputs, programme costs and conducting surveys and interviews with students, host organisations, supervisors and community members including First Nations peoples. The SROI will quantify the ‘investment’ required to implement the RHMT programme, as well as the ‘social return’ on the RHMT programme from the student, organisational, supervisor and community perspectives. The SROI will compare the combined cost with the combined return, from a societal perspective, including a 3-year time horizon, with cost data presented in \$A 2024/25.

**Discussion** The findings of this SROI study may influence future Australian government investment in RHMT as a mechanism for supporting rural allied health recruitment and for investing in the local rural economy.

**Ethics and dissemination** This study has been approved by the Charles Sturt University Human Research Ethics Committee (#H23589) and the Aboriginal Health and Medical Research Council of New South Wales (#2130/23). Results will be disseminated via a peer-review journal publication, as well as conference presentations.

## STRENGTHS AND LIMITATIONS OF THIS STUDY

- ⇒ First Nations peoples have been involved in the conceptualisation and design of this expanded Rural Health Multidisciplinary Training (RHMT) Programme evaluation, as the study involves and impacts First Nations peoples.
- ⇒ The 3-year time horizon for the expanded RHMT Programme evaluation provides a strong foundation for a social return on investment analysis (compared with a time horizon of less than 12 months).
- ⇒ The planned data collection is likely to identify currently unknown factors of ‘value’ that stem from the expanded RHMT Programme; to reduce potential bias, these unknown factors of ‘value’ will be independently clarified, quantified and valued during the data collection process.

## INTRODUCTION

Compared with a traditional cost-effectiveness or cost-benefit analysis, a social return on investment (SROI) analysis takes on a wider economic perspective<sup>1</sup> and is defined as ‘a framework for measuring and accounting for the much broader concept of value’.<sup>2</sup> A SROI captures the health and non-health benefits by considering the social, economic and environmental costs and benefits and, in doing so, shifts the focus from outputs to impact.<sup>1–4</sup> A SROI can be applied to multiple interventions such as those in the health, justice and education settings, including education that pertains to rural student placements for health professionals.<sup>1 5–8</sup>

20 years ago, health professional student placements in rural and remote areas of Australia were identified as an important rural recruitment strategy and funding priority.<sup>9</sup> Since then, there has been a

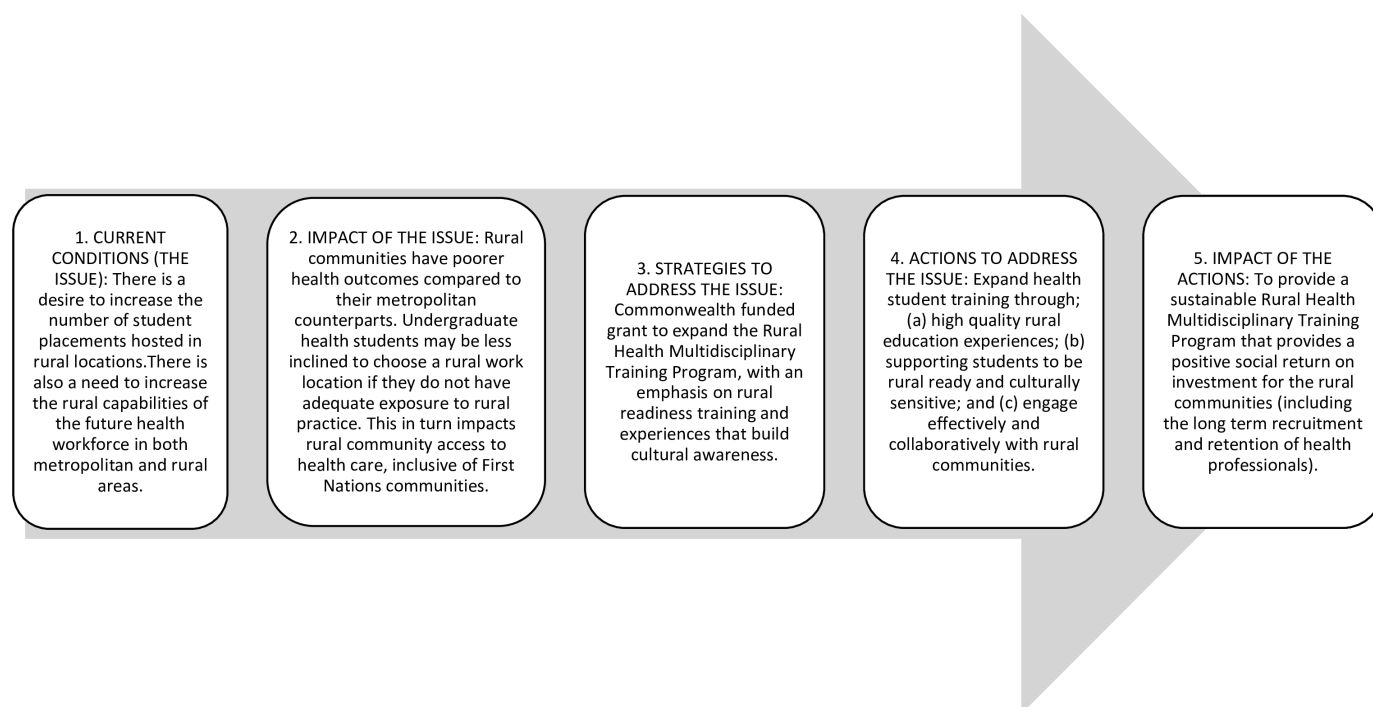
growing body of research investigating the value, impact, barriers and facilitators to student placements in rural and remote areas of Australia.<sup>10–13</sup> Rural recruitment pathways have been previously described as vague and interrupted, with an inconsistent return of graduates to the rural setting post-graduation.<sup>13</sup> While the financial burden and cumulative commitment required for a rural placement can be prohibitive for some potential students, many who do participate in a rural placement report a positive and supportive rural experience.<sup>12 13</sup> In 2020, COVID-19 impacted rural and remote health student placements in Australia, resulting in either cancelled placements or participation in an adapted placement.<sup>10</sup>

In late 2021, Charles Sturt University, Three Rivers Department of Rural Health, was awarded a Commonwealth Government grant to expand the Rural Health Multidisciplinary Training (RHMT) Programme. The RHMT is designed to expand multi-disciplinary student placements in rural and remote areas of Australia, and it has been previously reported that for every \$1 spent under a RHMT Programme in Australia, another \$1 is generated in the local economy,<sup>11</sup> indicating a positive SROI. The current expansion of the RHMT programme will focus on an increase in health student training through high-quality rural education experiences (both traditional and non-traditional placement types); and additional programmes to ensure students are rural ready and culturally sensitive and engage effectively and collaboratively with rural communities. The aim of this study is to determine if the expanded RHMT has a positive SROI.

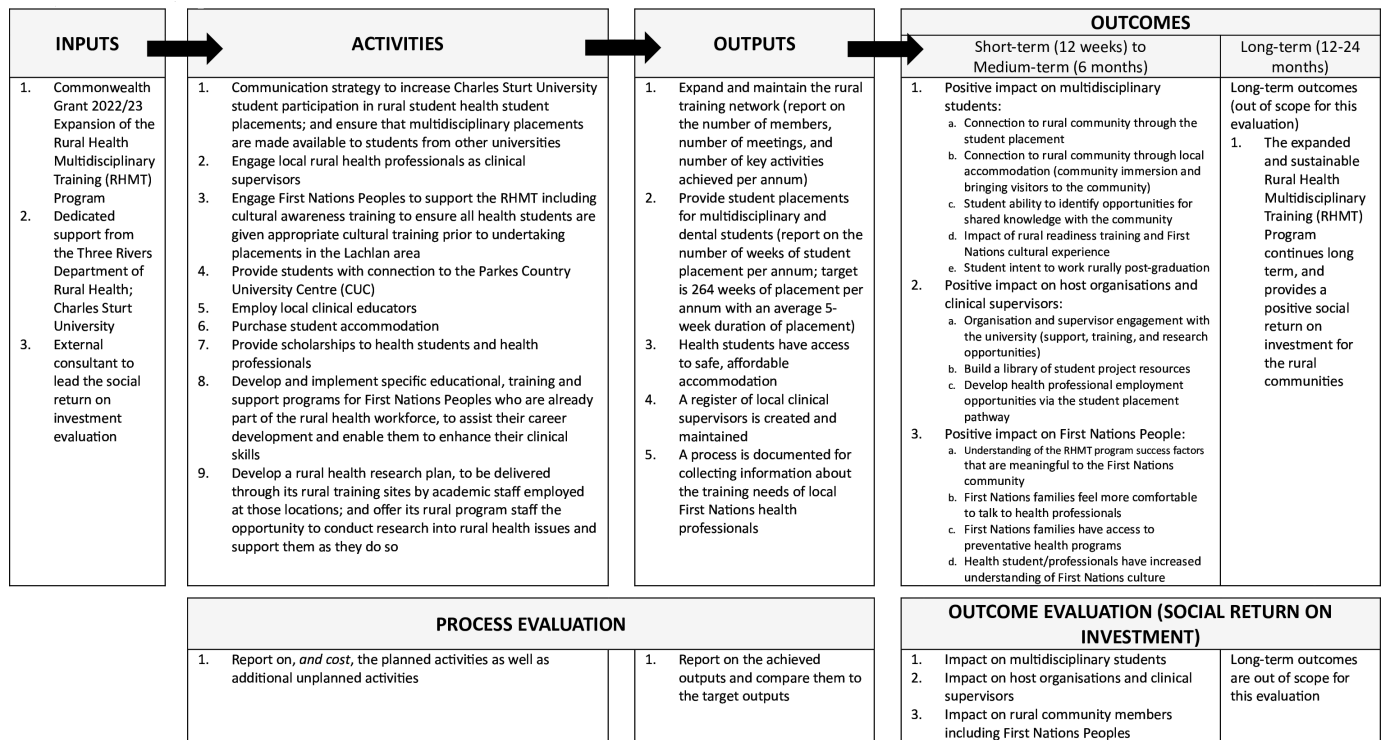
## METHODS AND ANALYSES

This study protocol has been reported in accordance with the Consolidated Health Economic Evaluation Reporting Standards 2022, CHEERS 2022; online supplemental additional 1.<sup>14</sup> This project has been approved by the Charles Sturt University Human Research Ethics Committee (reference number H23589) and the Aboriginal Health and Medical Research Council of New South Wales (reference number 2130/23). The RHMT Programme will expand into the Forbes, Parkes and Lachlan local government areas (inclusive of Condobolin) of New South Wales (Australia) where there is a population of 21 004 people, including 3743 First Nations peoples.

An overview of the project is presented in [figure 1](#) (theory of change) and [figure 2](#) (project logic model). In summary, the RHMT programme will aim to deliver the following activities: (a) appoint local clinical educators with demonstrable skills in cultural awareness to lead the programme expansion; (b) empower local health professionals to conduct clinical supervision of health students and offer them support via the Rural Health Education team at Three Rivers; (c) provide 264 weeks of allied health student placements per year in the Lachlan area ensuring that students undertaking a placement complete cultural awareness training, that has been designed and delivered by local First Nations community members and that First Nations students have access to the Charles Sturt mentoring programme; (d) acquire dedicated student accommodation; (e) establish a Rural Allied Health Advisory Committee to provide governance and direction for the RHMT Programme and to support strategies to improve long-term rural workforce recruitment and



**Figure 1** Project theory of change.



**Figure 2** Project logic model.

retention; (f) partner with First Nations Peoples to enable students to develop cultural understanding and cultural responsiveness through cultural safety/rural readiness experiences and training; (g) collaborate with the Parkes Country University Centre to provide support and social connection to health students in the area; and (h) progress an evidence base by contributing to the Three Rivers research agenda via research and higher degree research student appointments, together with clinical-researcher partnership research models.

The aim of this study is to determine if the expanded RHMT has a positive SROI. To address this aim, the primary study question being answered is ‘Does an expanded allied health student training programme in regional New South Wales (Australia), result in a positive social return on investment?’, and this is broken down into the following individual research questions:

1. What ‘investment’ was required to implement the RHMT Programme?
2. What ‘return’ on the RHMT programme was achieved from the student perspective?
3. What ‘return’ on the RHMT programme was achieved from the organisational and supervisor perspective?
4. What ‘return’ on the RHMT programme was achieved from the community perspective, including First Nations peoples?

### Methodological approach

The SROI will combine the actual impact with the potential impact of the RHMT. The actual (or evaluative) impact is the observed impact of the RHMT within the specified time horizon (in this case 1 year). The potential

(or forecast) impact is based on the value that will be created if the intended outcomes are achieved over the total time horizon (in this case 3 years).<sup>4</sup> Activity data will be compared with pre-determined project targets, with qualitative data collected to provide context. Data collection methods include collecting programme outputs, programme costs and conducting surveys and interviews. Interviews may be conducted as a 1:1 interview or as a small group interview/yarning circle (n=2–6), depending on the preference of the participants. Where consent for recording an interview is provided, interviews will be recorded; however, if consent is not provided, detailed notes will be taken. To increase rigour, all *investment* and *return* data will be entered into the freely accessible Excel-based Value Map, developed by Social Value International, and will be analysed within this Value Map.<sup>15</sup>

### Study population and consent

1. Multidisciplinary health students will be invited to participate in a post placement survey and interview. We will aim to recruit ~20 students.
  - a. Inclusion criteria: students aged 18+ years undertaking a health student placement through, or in partnership with, the RHMT Programme. No exclusion criteria. Participant recruitment is via the students’ email. Informed consent is required prior to commencing the survey or participating in an interview.
2. Host organisations will be invited to participate in a post placement survey and interview. We will aim to recruit ~8 staff from host organisations.
  - a. Inclusion criteria: staff employed at the host organisation (aged 18+) who have had contact with the

**Table 1** Defining the INVESTMENT elements of the social return of investment analysis (to be converted into \$A 2024/25)

Elements of the social return of investment analysis	Number of people potentially affected	Number of people actually affected	What will change?	How will this be measured?
<b>INVESTMENT: Expanded RHMT Programme</b> Costs for communication strategy to increase Charles Sturt University student participation in rural student health student placements and ensure that multidisciplinary placements are made available to students from other universities Costs to engage local rural health professionals as clinical supervisors Costs to engage First Nations peoples to support the RHMT including cultural awareness training to ensure all health students are given appropriate cultural training before undertaking placements in the Lachlan area Costs to provide students with connection to the Parkes Country University Centre (CUC)	TBC	TBC	Potential students are made aware of the RHMT programme Local rural health professionals to engage as clinical supervisors First Nations peoples support the RHMT Programme Parkes Country University Centre (CUC) is utilised by supervisors and students	Number of students who express interests in the RHMT programme and the number who participate in the RHMT Programme Will determine via record of payments associated with the expansion of the RHMT (grant application) Will determine via record of payments associated with the expansion of the RHMT (grant application) Routinely collected RHMT data that include student and supervisor use of the Parkes Country University Centre • 1/hour of individual time \$4.75 • 1/hour of group time \$4.75 X number of attendees Note: Capital costs, have been calculated per Brusco <i>et al</i> 2014, (21) then inflated by the consumer price index <a href="https://www.abs.gov.au/">https://www.abs.gov.au/</a>
Costs to employ local clinical educators	TBC	TBC	Employment of local clinical educators into the RHMT Programme	
Costs to purchase student accommodation	TBC	TBC	Student accommodation is acquired	
Costs to provide scholarships to health students and health professionals	TBC	TBC	Scholarships are provided to health students and health professionals	
Costs to develop and implement specific educational, training and support programmes for First Nations peoples who are already part of the rural health workforce, to assist their career development and enable them to enhance their clinical skills	TBC	TBC	Costs to develop and implement specific educational, training and support programmes for First Nations peoples who are already part of the rural health workforce, to assist their career development and enable them to enhance their clinical skills	Will determine via record of payments associated with the expansion of the RHMT (grant application)
Costs to develop and implement a rural health research plan, to be delivered through its rural training sites by academic staff employed at those locations, and offer its rural programme staff the opportunity to conduct research into rural health issues and support them as they do so	TBC	TBC	A rural health research plan is developed and implemented and the health professions engage in the research agenda	
<b>INVESTMENT: Students</b> Costs incurred by the student to participate in a rural health student placement (such as transport, accommodation, carbon footprint)	TBC	TBC	The expanded RHMT Programme is developed and implemented in the area	Source: self-reported via survey/interview Recall of direct and indirect student costs associated with participation in a rural health student placement
<b>INVESTMENT: Organisations and clinical supervisors</b> Costs incurred by the supervisors to support a rural health student placement (such as transport, accommodation, carbon footprint) Costs incurred by the organisations to support a rural health student placement (such as HR support, office consumables, carbon footprint)	TBC	TBC	The organisation invests in the RHMT Programme The organisation invests in the RHMT Programme	Source: self-reported via survey / interview Recall of direct and indirect supervisor costs associated with participation in a rural health student placement
<b>INVESTMENT: Rural community</b> Costs incurred by the community to support a rural health student placement (such as social inclusion of the student, as well as transport, accommodation, carbon footprint that relates to a student activity)	TBC	TBC	The expanded RHMT Programme is developed and implemented in the area	Source - Self reported via survey/interview Recall of direct and indirect community costs associated with participation in a rural health student placement

RHMT Programme. No exclusion criteria. Participant recruitment is via workplace emails. Informed consent is required before commencing the survey or participating in an interview.

3. Clinical supervisors will be invited to participate in a post placement survey and interview. We will aim to recruit ~5 clinical supervisors.
  - a. Inclusion criteria: clinical supervisor (aged 18+) who is involved in the RHMT Programme. No exclusion criteria. Participant recruitment is via workplace emails. Informed consent is required before commencing the survey or participating in an interview.
4. Community members including First Nations peoples will be invited to participate in interviews/yarning circle. We will aim to recruit ~10 community members including at least four First Nations peoples.
  - a. Inclusion criteria: community members aged 18+ who are impacted or potentially impacted by the RHMT Programme (aiming for the representation from the Condobolin, Peak Hill, Parkes and Forbes areas). No exclusion criteria. Participant recruitment is via a direct approach by project investigators (not members of the health service) and local First Nations research team member (MA). Informed consent is required before commencing the interview.

#### Impact of, and response to, participant withdrawal

Following the consent process, participants can withdraw from the project up until the point of the data being de-identified. At this point, it is not possible to remove data.

#### Setting and location

Rural New South Wales, Australia.

#### Comparators

There are no comparators.

#### Perspective

'Social return' refers to the impact from the student, host organisation, clinical supervisor, local community and First Nations peoples' perspective.

#### Time horizon

3-year project (January 2022 – December 2024).

#### Discount rate, dead weight, displacement, attribution and drop off

The potential future (or forecast) impacts will have a 3.5% discount rate applied per annum to represent a reduced value on future impacts. In addition to the time-related discount rate, both the actual (or evaluative) impacts and potential (or forecast) impacts will be reviewed for dead weight, displacement, attribution and drop off, using data collected during the projects surveys and interviews, as well as data available in the literature.<sup>4</sup> Once the different impacts have been reviewed for dead weight, displacement, attribution and

drop off, the determined rates for each will be applied to the social return values. It is expected that there will be different rates applied to the different impacts and that there may be overlap of certain impacts that require the 'repeat-impact' to be reduced in value, or valued at \$0, for example, the student who intend to work rurally post-graduation potentially overlaps with the community placing value on increased health professional recruitment. Finally, participants will also report the importance of each impact, and while this will not influence the value via a weight, it will establish the importance from the stakeholder's perspective.

- ▶ Dead weight indicates that an outcome, or a portion of the outcome, would have occurred anyway, without the RHMT.<sup>4</sup> For example, the growth in the local economy was the same for the areas impacted by RHMT, as it was for neighbouring areas that were not impacted by RHMT.
- ▶ Displacement indicates that another activity did not occur to accommodate the activity of interest.<sup>4</sup> For example, a health service did not initiate a new clinic, so the staff could focus on the RHMT.
- ▶ Attribution indicates that an outcome, or a portion of the outcome, occurred due to a separate intervention.<sup>4</sup> For example, if a health service was going to commence an initiative with or without the RHMT, the outcome of the initiative cannot be attributed to the RHMT.
- ▶ Drop off indicates that while the value of an outcome may last for many years, it may decline in value in the future years.<sup>4</sup> For example, the value of 'enhanced student teamwork' would decline in value over the coming years if the student goes on to work as a solo private practitioner.

Measurement and valuation of resources and costs (investment), as well as selection, measurement, and valuation of outcomes (return), have been detailed in [tables 1 and 2](#).

#### Data collection/gathering

Data will be collected by Charles Sturt University, Three Rivers Department of Rural Health staff, and only de-identified data will be provided to the members of the research team who are external to the university. Data collection/gathering techniques are detailed in online supplemental additional 2–5, and these include Additional file 2: Data Collection Form 1—Multi-disciplinary students (data collection via survey and interviews); Additional file 3: Data Collection Form 2—Host organisation staff and supervisors (data collection via survey and interviews); Additional file 4: Data Collection Form 3—Community Members including First Nations peoples (data collection via interviews); and Additional file 5: Data Collection Form 4—Student Placement Details and Supervisor/Student Activity Logs (data collection via current programme data collection processes).

**Table 2** Defining the RETURN elements of the social return on investment analysis (to be converted into \$A 2024/25)

Elements of the social return of investment analysis	Number of people potentially affected	Number of people actually affected	What will change?	How will this be measured and valued*†
<b>RETURN: Students</b>				
Student's intent to work in the rural area post-graduation	TBC	TBC	One student/health professional who is influenced to work, or continue to work, in a rural area	Reference point: cost of rural allied health workforce turnover, inflated by the consumer price index <a href="https://www.abs.gov.au/">https://www.abs.gov.au/</a>
Students have an increased understanding of First Nations cultures (ways of knowing, being and doing that are contextually relevant to the Lachlan region)	TBC	TBC	Students have an increased understanding of First Nations cultures	This will be explored with First Nations peoples, as well as students, supervisors, host organisation staff and the community, during the interviews. Where appropriate, this will be further defined, quantified and valued from the different perspectives
Student connection to the First Nations community	TBC	TBC	Improved student connection to the First Nations community	
Enhanced student learning	TBC	TBC	Enhanced student learning	
Enhanced student connection with the community	TBC	TBC	Enhanced student connection with the community	
Enhanced student capabilities/skills	TBC	TBC	Enhanced student capabilities/skills. Each skill identified will be specified and valued	
Enhanced student experience during placement	TBC	TBC	Enhanced student experience during placement	
Enhanced student sense of community belonging	TBC	TBC	Enhanced student sense of community belonging	In addition to interview and survey data, the literature will be reviewed to further quantify the value
Enhanced student teamwork within the placement organisation	TBC	TBC	Enhanced student teamwork within the placement organisation	
Enhanced student teamwork external to the placement organisation	TBC	TBC	Enhanced student teamwork external to the placement organisation	
Unintended impacts described during the data collection period	TBC	TBC	TBC	
<b>RETURN: Organisations and clinical supervisors</b>				
Health staff/supervisors have an increased understanding of First Nations cultures (ways of knowing, being and doing that are contextually relevant to the Lachlan region)	TBC	TBC	Health staff/supervisors have an increased understanding of First Nations cultures	This will be explored with First Nations peoples, as well as students, supervisors, host organisation staff and the community, during the interviews. Where appropriate, this will be further defined, quantified and valued from the different perspectives
Supervisor connection to the First Nations community	TBC	TBC	Increased supervisor connection to the First Nations community	
Enhanced supervisor connection with the community	TBC	TBC	Enhanced supervisor connection with the community	
Enhanced supervisor capabilities/skills	TBC	TBC	Enhanced supervisor capabilities/skills. Each skill identified will be specified and valued	
Enhanced supervisor experience during placement	TBC	TBC	Enhanced supervisor experience during placement	
Enhanced supervisor sense of community belonging	TBC	TBC	Enhanced supervisor sense of community belonging	In addition to interview and survey data, the literature will be reviewed to further quantify the value
Enhanced supervisor teamwork within the placement organisation	TBC	TBC	Enhanced supervisor teamwork within the placement organisation	
Enhanced supervisor teamwork external to the placement organisation	TBC	TBC	Enhanced supervisor teamwork external to the placement organisation	
Unintended impacts described during the data collection period	TBC	TBC	TBC	This will be explored with supervisors and host organisation staff during interviews

Continued

Table 2 Continued

Elements of the social return of investment analysis	Number of people potentially affected	Number of people actually affected	What will change?	How will this be measured and valued*†
<b>RETURN: Rural community</b>				
Health worker employment and/or retention in rural areas	TBC	TBC	Increased health worker employment and/or retention in rural areas	Reference point: cost of rural allied health workforce turnover, inflated by the consumer price index <a href="https://www.abs.gov.au/">https://www.abs.gov.au/</a>
Stimulation of the local economy (including additional visitors in the region and student engagement in community activities)	TBC	TBC	Stimulation of the local economy	
Increase in community referrals to health services (including the First Nations community)	TBC	TBC	Increase in community referrals to health services	
Increase in community referrals to community-based programmes (including the First Nations community)	TBC	TBC	Increase in community referrals to community-based programmes	In addition to interview and survey data, the literature will be reviewed to further quantify the value
Increase in community engagement in health prevention programmes (including the First Nations community)	TBC	TBC	Increase in community engagement in health prevention programmes	
Increase in community engagement in health education programmes (including the First Nations community)	TBC	TBC	Increase in community engagement in health education programmes	
First Nations families and community members feel more comfortable talking to health professionals	TBC	TBC	First Nations families and community members feel more comfortable talking to health professionals	This will be explored with First Nations peoples during interviews. Where appropriate, this will be further defined, quantified and valued from the perspective of First Nations peoples
First Nations families and community members build knowledge of health conditions	TBC	TBC	First Nations families and community members build knowledge of health conditions	
Unintended impacts described during the data collection period	TBC	TBC	TBC	This will be explored with members of the community, during interviews

\*Data collection will involve valuing the unit for each element and establishing the number of units for each element to allow extrapolation of costs across the RHMT programme.

†Where the value of a benefit cannot be captured as a dollar value via the surveys and interviews, the literature will be reviewed for a proxy valuation, and if this is not successful, a value will not be applied, and the benefit will only be described.



### Data sovereignty

Data sovereignty,<sup>16</sup> as it relates to intellectual property ownership, will be carefully discussed with the study participants before data collection. This is particularly important for the First Nations participants, as non-Indigenous researchers will collect First Nations knowledge and experiences through the interview process. In the context of this study, data sovereignty will include who can access; use and benefit from information that is held within First Nations communities, as well as who has the opportunity and right to define; and use and interpret data relating to First Nations communities. In addition to the data sovereignty defined by the study participants, at a minimum, it is intended that the analysis of the data will include First Nations researcher (MA), First Nations members of the Rural Allied Health Advisory Committee and First Nations stakeholders by explicitly asking if the proposed Social Return of Investment analysis includes things that matter and that are material, and if not, what should be included.

### Currency, price date and conversion

All costs will be reported in \$A 2024/25. Costs data collected before this time will be inflated by consumer price index via the Reserve Bank of Australia Inflation Calculator.<sup>17</sup>

### Rationale and description of the economic evaluation model

Not applicable as this social return of investment analysis does not include modelling as there are objective cost measures for the economic outcomes.

### Analytics and assumptions

A social return of investment is a framework for identifying, measuring and valuing the impact of an activity, and it accounts for the social, economic and environmental values that can come as a result of said activity. It will assign a monetary value to the social, economic and environmental impact.<sup>7 8 18</sup> The following social return on investment principles will be followed for the current project: involving stakeholders, understanding what changes, valuing the things that matter, only including what is material, not overclaiming, being transparent and verifying the results.<sup>7 8 18</sup> For this study, the compilation of 'social return' is inclusive of many diverse areas including learning, connection, capabilities, experience, skills, belonging, referrals, prevention, education, teamwork, employment retention, etc. The investment refers to the Commonwealth Government grant to fund the extended RHMT programme, in addition to the in-kind resources provided by Charles Sturt University.

Following the identification of the key stakeholders, contact will be made with the key stakeholders to introduce the social return of investment methodology. Activities from the project logic model (figure 2) will be costed based on the university record of spending. Where cost data are not available, market rates will be applied. A combination of surveys, 1:1 interviews and small-group

interviews will be used to understand what may change, as the impact captured via outputs and outcomes, to ensure the evaluation includes things that matter and that are material and that there is no overclaiming. The impacts will be categorised per the project logic model (figure 2). Quantified outputs and outcomes will have a reference value applied. However, should an output or outcome not have a reference value, we will undergo a suitable process to establish the value. Processes may include techniques such as a Willingness to Pay analysis, the Delphi Technique or a Discrete Choice Experiment. The combined investment cost will be compared with the combined financial return to establish the SROI.

Each impact reported in the data will be defined as an actual (or evaluative) impact or as a potential (or forecast) impact. The results will apply a monetary value to all actual impacts and provide a sub-total for this; then apply a monetary value for all potential impacts and provide a sub-total for this; followed by a combined total for the actual and potential impacts. The *investment* and *return* data will be analysed within the Excel-based Value Map developed by Social Value International.<sup>15</sup>

### Characterising heterogeneity, distributional effects and uncertainty

First Nations peoples will be able to self-identify in the surveys and interviews and we will estimate how the results of SROI analysis vary for First Nations peoples, including how the impacts are distributed across this priority group.

To characterise sources of uncertainty in the analysis, each resource/cost (investment) and outcome (return) will be examined with respect to evidential and decision uncertainty.<sup>19</sup> Evidential uncertainty includes uncertainty in the sources that contribute to the evidence base (ie, missing or poor-quality data), and decision uncertainty includes uncertainty in the sources that substantially contribute to conclusions drawn from the SROI analysis. The identified sources of uncertainty will be addressed through sensitivity analyses where the source of uncertainty will be adjusted by a factor of 0.75 and 1.50 to understand the impact of that individual source on the SROI findings.

### Patient and public involvement statement

Community consultation regarding the programme of work began before the grant application was submitted, and this included 30 letters of support provided from organisations operating in the local community. Extensive consultation and collaboration have continued with these community partners following the grant approval, and this is documented and submitted monthly to the Rural Allied Health Advisory Committee. The research to conduct a social return on investment was discussed with and approved by the Rural Allied Health Advisory Committee, and the research team includes three members who live in the research locale and have been able to continue consultation with community on the research methods proposed. Through formal and



informal feedback processes, the research team has received advice from community members about what type of data could and should be collected. The research team adjusted the research methods in response to this feedback. One example is that in conversation with local First Nations community members, it was identified that First Nations peoples would like to be able to self-identify as being a First Nations person and that their data should be included within the whole community dataset, rather than being separate. In line with AH&MRC requirements, the research team submitted a document to this ethics committee outlining the community consultation process, which commenced a year before the ethics application for the research was submitted.

## DISCUSSION

Should the expansion of the RHMT produce a positive return of investment, alongside completion of the core project activity including additional health student placements, there will be several tangible benefits to the rural Lachlan region community, in New South Wales. These include recruitment of health professionals to the area, local economy stimulation and a self-reported positive impact on First Nations peoples. The potential positive impact on First Nations peoples includes improving access to health services, improving self-understanding of health conditions and improving health professionals understanding of First Nations cultures. It is, however, noted that in 2022, early stages of the RHMT project implementation plan were limited by the COVID-19 pandemic and regional flooding, which resulted in cancelled or adapted health student placements and reduced the planned data collection period.

With parallels to the current proposed study, a similar initiative and evaluation was completed between 2012 and 2018 for medical students undertaking extended rural health student placements in Queensland, Australia.<sup>5</sup> The medical extended rural clinical placement programme reported a positive return of investment, in addition to improved clinical confidence and competence, with greater numbers of medical students planning to work in rural areas post-graduation.<sup>5</sup>

Should this evaluation demonstrate a positive social return on investment, alongside completion of the core project activity including additional health student placements, national scaling and implementation of the programme should be carefully considered to realise the benefit Australia-wide.

## ETHICS AND DISSEMINATION

This study has been approved by the Charles Sturt University Human Research Ethics Committee (reference number H23589) and the Aboriginal Health and Medical Research Council of New South Wales (reference number 2130/23). Plans for dissemination of the project results include publication in a peer-review

journal, in addition to being presented at relevant conferences. In addition, at the end of each survey and interview, participants are provided with the opportunity to provide a valid email/postal address so that they can obtain a copy of the project report in 12 months, and a post-programme community event will be hosted by Three Rivers Department of Rural Health to share project outcomes and findings with key stakeholders and community members of the Lachlan region. Plans for sharing and/or future use of data that is not covered in the current ethics application will be subject to a further application for ethical approval.

### Author affiliations

<sup>1</sup>Three Rivers Department of Rural Health, Charles Sturt University, Wagga Wagga, New South Wales, Australia

<sup>2</sup>Neighbourhood Central, Parkes, New South Wales, Australia

<sup>3</sup>La Trobe Rural Health School, La Trobe University, Bendigo, Victoria, Australia

<sup>4</sup>Rehabilitation, Ageing and Independent Living (RAIL) Research Centre, Monash University, Frankston, Victoria, Australia

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### ORCID iDs

Melissa Nott <http://orcid.org/0000-0001-7088-5826>

Elyce Green <http://orcid.org/0000-0002-7291-6419>

Natasha Brusco <http://orcid.org/0000-0002-8825-5109>



## REFERENCES

- 1 Banke-Thomas AO, Madaj B, Charles A, *et al.* Social return on investment (SROI) methodology to account for value for money of public health interventions: a systematic review. *BMC Public Health* 2015;15::582.
- 2 Nicholls J, Lawlor E, Neitzert ETG. A Guide to Social Return on Investment, 2012. Available: [http://www.bond.org.uk/data/files/Cabinet\\_office\\_A\\_guide\\_to\\_Social\\_Return\\_on\\_Investment.pdf](http://www.bond.org.uk/data/files/Cabinet_office_A_guide_to_Social_Return_on_Investment.pdf)
- 3 Belfield C, Hollands FHL. What are the Social and Economic Returns, 2011. Available: <https://www.google.com/url?sa=t&source=web&rct=j&opi=89978449&url=https://files.eric.ed.gov/fulltext/ED573122.pdf&ved=2ahUKEwiMo-vmIP-FAxUjcGwGHVHIBEcQFnoECBsQAQ&usg=AOvVaw2qRaNpZrN-0ChJI98u6THh>
- 4 Social Return on Investment Network. A Guide to Social Return on Investment, 2012. Available: <https://socialvalueuk.org/resources/a-guide-to-social-return-on-investment-2012>
- 5 Woolley T, Sen Gupta T, Stewart RA, *et al.* A return-on-investment analysis of impacts on James Cook University medical students and rural workforce resulting from participation in extended rural placements. *Rural Remote Health* 2021;21:1–11.
- 6 Kadel R, Stielke A, Ashton K, *et al.* Social return on investment (SROI) of mental health related interventions-A scoping review. *Front Public Health* 2022;10:965148.
- 7 Krlev G, Münscher R, Mülbart K. Social Return on Investment (SROI): State-of-the-Art and Perspectives-a Meta-Analysis of Practice in Social Return on Investment (SROI) Studies Published 2002–2012. 2013.
- 8 Nicholls J. Social return on investment-development and convergence. *Eval Program Plann* 2017;64:127–35.
- 9 Neill J, Taylor K. Undergraduate nursing students' clinical experiences in rural and remote areas: recruitment implications. *Aust J Rural Health* 2002;10:239–43.
- 10 Hoang H, Jessup B, Obamiro K, *et al.* Impact of COVID-19 on rural and remote student placements in Australia: a national study. *Aust J Rural Health* 2022;30:197–207.
- 11 KBC Australia. Independent Evaluation of the Rural Health Multidisciplinary Training Program; Final Report to the Commonwealth Department of Health, 2020. Available: <https://www.health.gov.au/resources/publications/evaluation-of-the-rural-health-multidisciplinary-training-rhmt-program?language=en>
- 12 Smith T, Cross M, Waller S, *et al.* Ruralization of students' horizons: insights into Australian health professional students' rural and remote placements. *J Multidiscip Healthc* 2018;11:85–97.
- 13 Spiers MC, Harris M. Challenges to student transition in allied health undergraduate education in the Australian rural and remote context: a synthesis of barriers and enablers. *Rural Remote Health* 2015;15:3069:176–92.
- 14 Husereau D, Drummond M, Augustovski F, *et al.* Consolidated health economic evaluation reporting standards 2022 (CHEERS 2022) statement: updated reporting guidance for health economic evaluations. *Int J Technol Assess Health Care* 2022;38:e13.
- 15 Social Value International. SROI Value Map, 2024. Available: <https://www.socialvalueint.org/sroi-value-map> [Accessed May 2024].
- 16 Charles Sturt University. Terminology Guide. 2022. Available: [https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwi-oLTY\\_jAhXCsgwGHSwrB2IQF-noECAoQAQ&url=https%3A%2F%2Fcdncsueduau%2F\\_data%2Fassets%2Fpdf\\_file%2F0008%2F4196258%2FSAIAS-Terminology-guide-Terminology-Guide.pdf&usg=AOvVaw2I7rz5UvVvexug5QH-SA7y9&opi=89978449](https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwi-oLTY_jAhXCsgwGHSwrB2IQF-noECAoQAQ&url=https%3A%2F%2Fcdncsueduau%2F_data%2Fassets%2Fpdf_file%2F0008%2F4196258%2FSAIAS-Terminology-guide-Terminology-Guide.pdf&usg=AOvVaw2I7rz5UvVvexug5QH-SA7y9&opi=89978449)
- 17 Inflation Calculator. Reserve Bank of Australia, 2023. Available: <https://www.rbagov.au/calculator>
- 18 Then V, Schober C, Rauscher O, *et al.* Social return on investment analysis. In: Palgrave Studies in Impact Finance. Cham, 2017. Available: <http://link.springer.com/10.1007/978-3-319-71401-1>
- 19 Rothery C, Claxton K, Palmer S, *et al.* Characterising uncertainty in the assessment of medical devices and determining future research needs. *Health Econ* 2017;26 Suppl 1:109–23.