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Strengthening research translation in healthcare: a review of the establishment phase of Sydney Health Partners' Clinical Academic Groups

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Abstract

Background: Partnerships between academic research institutions and health care organisations, and the individuals within them, can help to better integrate research into health care to improve care delivery and patient outcomes. Descriptions of different collaborative models have emerged, but evaluative evidence is limited. Sydney Health Partners (SHP) is one of Australia's accredited research translation centres. It supports a Clinical Academic Group (CAG) Program which comprises 12 networks of researchers, health professionals, and consumers focused on translating research evidence in specific health areas. We undertook a review of the CAG Program to identify factors contributing to the early establishment and progress of the CAGs, and opportunities for Program improvement.

Methods: This qualitative review gathered data from two sources between May 2025 and June 2026: a detailed document review of Program records (guidance materials, funding applications, reports, governance documents); and semi-structured interviews with CAG leadership team members. A coding framework was developed for the document review, and details systematically extracted for each CAG. CAG members were interviewed individually or in small groups, with interviews audio-recorded and transcribed verbatim. Transcripts were coded using reflexive thematic analysis to identify broad themes relevant to the study aims.

Results: Approximately 65 documents were reviewed and 41 participants interviewed. Factors critical to the establishment of the CAGs included: committed chairs or co-chairs who led each CAG, a culture of collective leadership, support from the CAG Program secretariat (guidance, funding, shared infrastructure), and direct operational support within each CAG (fractional staff). CAGs showed variable progress towards the Program's five goals (collaboration, capacity and capability building in research translation, consumer involvement, and competitiveness of grant applications), with more attention given to building translational research capacity and establishing collaborations. Suggested program improvements included more support for consumer engagement, more funding, and greater clarity around measures of success.

Conclusions: Collaborative networks between researchers, health professionals and consumers can help build research capacity, better align it with local health needs, and support research translation. However, securing research translation at scale requires an integrated system across research and health organisations that incorporates system-wide structures and resources as well.

BACKGROUND

The process of translating and applying research evidence to improve health care delivery and patient outcomes is often slow to occur or does not happen at all (1, 2). Internationally, over the past twenty years efforts have been made to transform the pathway from research discovery to translation and accelerate the transfer and scale-up of research innovations by creating partnerships between organisations that produce health research (universities, medical research institutes, health service organisations) and those that can use and apply research evidence to improve health services (health

service organisations, hospitals, and health policymakers). Such partnerships include Academic Health Science Centres (AHSCs) in North America and the United Kingdom (UK) (3, 4), Collaborations for Leadership in Applied Health Research and Care (CLAHRCs, renamed Applied Research Collaborations (ARCs) in 2019) also in the UK (5), and Research Translation Centres (RTCs) in Australia (6). These organisational partnerships are designed with ambitious goals such as forming “more integrated systems that advance science from discovery to translation to care” (7) and “integrating knowledge, methods, and expertise from different disciplines and forming novel frameworks to catalyse scientific discovery and innovation" (8).

Information is somewhat limited about how such partnerships work and whether they are delivering on their intended goals. Reviews of AHSCs have noted an absence of empirical evidence on operational characteristics such as optimal leadership styles, governance structures, or even partnership size (9, 10). A more recent commentary on the AHSCs in the US after more than a decade of operation raised questions about the range of participating organisations in such partnerships but there was little mention of how they work and whether they have been effective (4). An initial review of the CLAHRCs program found a tendency for clinical academic leads to focus on academic rather than clinical outputs, and to target individual practitioner behaviour rather than considering system level change (11). A subsequent review, after several years of operation, noted a surprising lack of data regarding the CLAHRCs’ impacts on health care delivery or patient outcomes (12). Within Australia, relatively limited published information is available on how clinical-academic partnerships operate in practice, apart from a rapid review of published and grey literature including website content (8).

Within organisational partnerships, different approaches have been used to also operationalise collaborations ‘on the ground’ between individual researchers and clinicians, often around shared clinical or emerging health priorities. Examples in the UK include Clinical Academic Groups (CAGs) within King’s Health Partners (13), and the Health Integration Teams (HITs) within Bristol Health Partners (14). Both models bring together multi-disciplinary teams from across partner organisations to integrate research and clinical care but vary considerably in governance and resourcing. The King’s CAGs are more structured, formalised and aligned to strategic programs, whereas the Bristol HITs are more flexibly structured and designed to address local health priorities. Other less formal collaborative mechanisms between researchers and healthcare professionals, such as alliances, networks, and mergers, have been found to rely on building trust and synergy between members to foster a shared belief in the collaboration and to drive collaborative performance, but they depend heavily on the individuals involved (15). Thus, while clinical-academic partnership models have been well described, there is limited understanding of how to operationalise collaboration models to enable their success and the types of impact they can deliver.

In Australia, Sydney Health Partners (SHP) is one of 12 formally accredited Health and Medical Research Translation Centres (RTCs). This Partnership includes five major health organisations serving a community of over three million people around inner and western Sydney, an internationally recognised university, and 10 affiliated medical research institutes. Unlike other similar organisational partnerships

that are dominated by academic institutions, SHP is health services led through its five health partners. In accordance with the requirements of the national RTC Program (6), SHP seeks to harness and align its research capacity and capabilities with health service priorities, strengthen collaboration between researchers and health service providers, and accelerate the implementation and scale-up of evidence-based interventions to deliver patient and public benefit in large and diverse health systems (16).

In 2021, SHP developed its Clinical Academic Group (CAG) Program, drawing on national and international approaches to create a model that was better adapted for a health services led partnership. The SHP CAG model brings together clinicians (medical, nursing and allied health professionals), researchers, other health services professionals (e.g., Clinical Service Directors, Hospital Executives) and consumers to engage in a different form of collaboration overtly aligned with the needs and priorities of health services and focussed on clinical and health services research translation.

Between 2022 and 2024, 12 CAGs were established through two open, competitive rounds of selection. They cover major health priorities (e.g., cancer; cardiovascular health); health services priorities (e.g., geriatric medicine; child development); and innovations in health care (e.g., virtual care; genomics and precision medicine). A full list of the CAGs included in this study is provided in Supplement 1. The CAGs include a mix of new groups coming together for the first time, and some formed out of larger existing networks. Each CAG has a leadership team of approximately 10–20 individuals including a Chair or Co-chairs, with representation across career stages, professional disciplines, and partner organisations. Several leadership teams also include consumers. Most CAGs have a wider membership network, and provide collaborative, training and educational opportunities. A small SHP CAG Program secretariat provides a modest annual grant (currently AUD$70,000/ USD$50,000) to facilitate CAG organisation, communication and professional development; as well as support for cross CAG learning and preferential access to SHP-sponsored training and events (e.g., Implementation Science Masterclass, Consumers in Research courses, and SHP Annual Forum). In the first two years of operation, the CAGs were directed to focus on 'the 5 Cs': *collaboration*, *capacity* and *capability building* in research translation, *consumer involvement*, and *competitiveness* of grant applications, reflecting broader objectives of the national RTC Program. The CAGs were also encouraged to engage in dialogue with health service partners to develop their research priorities, to increase the likelihood that research projects would address questions that mattered to clinicians and patients, and the resulting evidence would be translated and used in practice.

Given the limited information on how best to implement collaborative models to ensure their success, we conducted a review of the establishment phase and early evolution of the SHP CAG Program. Our review had three aims:

1. To describe the establishment, early evolution and variation across the CAGs
2. To evaluate to what extent the CAGs were making progress towards the intended program goals and objectives
3. To identify opportunities to strengthen and improve the CAG program.

METHODS

Study design

The review obtained data from two sources: 1) document review, and 2) semi-structured interviews and focus groups with key stakeholders. Following coding and synthesis of the data within each source (see below), two members of the study team not directly involved in the collection of the data or operation of the CAG Program (HS and AT) identified common themes to address the three study aims, with reference to the consolidated criteria for reporting qualitative studies (COREQ) (17).

The study was approved by the University of Sydney Human Research Ethics Committee [2024/HE001900].

Document review

Document review was undertaken to provide contextual and descriptive information of the establishment of the CAG Program, to better understand variation across the CAGs and to support the interpretation of interview findings. Staff managing the SHP CAG Program kept detailed records pertaining to the design and implementation of the Program. Each CAG was also required to submit documents at different time points. The document review included:

- program guidelines and funding applications
- annual progress reports and budgets
- governance documents (e.g., Terms of Reference, role descriptions)
- other related reports

A coding framework was developed to capture descriptive details of the establishment and early progress of each CAG, and performance against program goals and objectives during the three years, January 2022 to December 2024. The above documents were collated for each CAG and systematically reviewed (by AR and LK) to extract information against the coding framework. Content analysis was then performed to identify common themes and characteristics (18).

Semi-structured interviews and focus groups

Independent evaluators (MT and AS) were engaged to select a cross-section of representatives from each CAG's leadership team for interview. The representatives included:

- one Chair or Co-Chair (serving during 2022 to 2024)
- one early- to mid-career researcher (EMCR, < 10 years post-PhD)
- one clinician (e.g., medical, nurse, allied health professional, or midwife)

- one other person on the leadership team (e.g., consumer,).

Efforts were made to ensure diversity in gender, career stage, and discipline, and representation from across SHP's partner organisations. Each CAG's operational staff were also invited to participate. The evaluators were given the option of including a limited number of other key CAG stakeholders that might emerge from the interviews.

Selected individuals were contacted by email. Replacement participants were identified if invitees declined to participate or were unavailable. Following written consent, individuals were invited to an interview or focus group between June and August 2025. A semi-structured interview guide was used (Supplement 2), addressing CAG establishment and evolution, perceived enablers and barriers to achieving objectives, perceived value of the SHP CAG Program model, and perceived strengths and areas for improvement for the program model. All interviews and focus groups were conducted by MT for consistency and lasted approximately 45 minutes.

Interviews and focus groups were audio-recorded and transcribed. Interview notes and analytical memos were also made to assist in the analysis. Identifiable information was removed during transcription and analysis. Transcripts were coded using NVivo (QSR International). The coded data were then separately examined to construct preliminary thematic coding (by MT and AS) using reflexive thematic analysis (18) to identify broad themes regarding CAG establishment and evolution, perceptions of enables and barriers to achieving objectives and value, and reflections on areas for improvement. Both independent evaluators then compared coding interpretations and interrogated themes against the study questions, and then further refined them via a data synthesis meeting with the wider study team.

RESULTS

Approximately 65 documents were reviewed (see Supplement 3 for coding framework and summary information for each CAG). A total of 41 participants were interviewed either individually or as part of a small focus group. All CAGs were represented, with each having at least one Chair or Co-Chair included for interview. Approximately 60% of participants were women and 40% men, reflecting the overall gender balance across the CAG leadership teams. The participants included 30 CAG leadership team members, nine operational managers, two EMCRs (one of whom also participated in a Leadership Team interview) and one additional stakeholder with program-level knowledge.

1. **Establishment, early evolution and variation across the CAGs**

Six CAGs were established in 2022, five in 2023, and one in 2024 (n = 12). The document review showed that by December 2024, there were 189 leadership team members across the CAGs, with individual teams ranging from 10 to 24 members. Most leadership teams had a senior-level (Professor) Clinical Academic as Chair or Co-Chair, that is, a person who held a formal academic appointment and actively provided clinical services. The composition of individual teams varied but across all CAG leadership team members, approximately 45% were Clinical Academics, 21% were Other Academics, 24% Clinician

Researchers (had a primary clinical role and conducted some research), 5% were Consumers and 5% Other (e.g., Professional Staff, Policymakers, Subject Matter Experts; see Supplement 4). EMCRs made up 24% of team members. Overall representation from Allied Health and Nursing and Midwifery was low (12% and 4% respectively).

Leadership approaches within the CAGs emerged from interviews as a critical factor shaping early evolution and operationalisation. Participants consistently described committed Chairs and Co-chairs as central drivers of momentum, with purposeful leadership helping to set direction and sustain engagement.

The Chair has bought us all together and actively made the effort to set up a space for us to be truly collaborative

Many CAGs adopted a collective leadership approach, drawing on complementary expertise across clinical, managerial, academic and consumer domains.

The CAG created a tangible leadership team with clinical, managerial, and academic leads working side by side

The culture within the CAGs with collective leadership teams was described as “collaborative”, “low-ego”, and “cross-disciplinary” and seen as fostering trust and broader partnership.

There’s a strong sense of sharing … it’s not competitive

However, the leadership model was not without challenges. In some cases, leadership structures were constrained by limited availability of clinical leaders and clinician researchers who lacked protected research time within their local health organisation.

Operational support also emerged as a critical enabler for the early establishment and ongoing functioning of the CAGs. The SHP CAG Program secretariat provided support through funding, operational meetings, development of a MS Teams central sharing hub for templates (e.g., Terms of Reference, Letters of Support, Event Planning), creation of individual webpages, and other communication support for newsletter development and branding advice. Interviewed participants stated that the infrastructure support and resourcing were central to forming the structure and visibility needed for individual CAGs during their establishment and formative stages. Several participants highlighted how the resourcing and infrastructure helped them establish their CAG’s direction and legitimacy. As one explained:

SHP gave us the initial structure and expectations which helped us plan

SHP’s role as host and convenor of the CAGs, which included creating forums, conditions, and cadence for members to align and act, was also seen as critical to supporting the CAGs’ visibility, legitimacy and sustainable connections at multiple levels: individual (e.g., EMCRs networks), team (CAG leadership

teams), organisational (health services and universities), and supra-organisational (state-wide and national agencies).

…the fact that we're a CAG and with support from Sydney Health Partners … we have opportunity to be more broadly showcased

…to connect not just with people in health but others who give different perspectives, like tech and AI space

Participants also valued opportunities provided via broader SHP events and specific CAG Program events to engage directly with senior executives of health services to raise the profile of their research and learn about health service priorities. One participant reflected:

I personally found that it was the most recent session with three district chief executives to be really valuable

The flexible use of funds provided to each CAG was described as integral to enabling the CAGs to host events and initiate activities:

"…we got seed funding from SHP to build our cross-collaborative relationships, our leadership team and set some overarching priorities"

…what makes the big difference is, you know, having some discretionary money that we can use for events, consumer participation, and other things

All CAGs used some of the funds to employ part-time operational staff, ranging from 0.15–0.50 full time equivalent (FTE) (mean 0.28 FTE, median 0.20 FTE). These staff managed administrative tasks and, in some cases, actively worked on projects. All CAGs identified these roles as indispensable to successful establishment and ongoing functioning, with one participant saying:

You can't do this without skilled support. It is crucial to getting anything done

1. **Progress towards intended program goals and objectives**

The document review indicated there were five goals defined for the CAG Program, reflected in the 5 Cs, when it was launched in 2022 (see Table 1):

Table 1
CAG Program Goals and Objectives, 2022.

CAG Program Goals **(the '5 Cs')**	**CAG Objectives**
Increase **capacity** of research translation	To grow the number of 'next generation' clinician researchers and identify clinicians not engaged in research To generate interest and engagement in health services led research
Enhance capability in research translation	To develop the research translation capability within the research discipline Foster leadership skills in mid-career and clinician researchers
Foster **collaboration**	Increase collaboration through engagement with other networks to optimise innovation
Ensure effective **consumer** and community involvement	Engage with available consumer training and resources Integrate consumers and community in the co-production of research outputs
Improve **competitiveness** and impact in research translation	Identify clinically relevant questions important to the health services Improve the quality of competitive funding applications

Annual progress reports captured activities and outputs against the above objectives. Individual CAGs varied in the type and number of activities they supported during 2022–2024 that contributed to the 5 Cs (see Supplement 3). The most common types of activities across the CAGs focused on building capacity and establishing collaborations across partner organisations (see Table 2).

Table 2
Summary of common CAG activities, 2022–2024.

Program Goals	Number of CAGs with sustained focus	Examples of reported activities
Building capacity for research	10	Outreach activities to clinicians through presentations, roadshows, networking events, and newsletters; incubator sessions to develop project ideas and connect clinicians with researchers; seed funding schemes aligned with health services needs and CAG priorities; conference funding schemes to enable participation in research
Building capability in research translation	4	Providing support to EMCRs through mentoring and mock grant review panels; recognition of emerging leaders through nomination to the leadership team and CAG-focused projects led by EMCRs; nominations to SHP-sponsored trainings
Consumer involvement	8	Consumers actively involved in the direction of the CAG; scoping exercises or as authors on papers; consumer reimbursement schemes for involvement in project design; involvement as speakers or panel members at CAG networking events; providing input on CAG-priority projects
Collaboration	10	Projects or planning activities initiated from the leadership of the CAG involving multiple SHP Partners; networking events and collaborative projects with other CAGs
Competitiveness	5	Grants aligned with needs and priorities of health services with active involvement by the CAG leadership; improved grant quality through mentoring or mock grant review panels
Impact	8	Aligning CAG activities and priorities with the health services; advocacy at local or state-level; emerging scale-up activities

Building research capacity, particularly translational research knowledge and skills among early career researchers and clinician researchers, was a significant early focus for all CAGs. Developing individual and collective research knowledge and capacity was identified as central to advancing research translation within the CAGs and the wider SHP community. Participants described capacity building as not only providing training and access to resources but also shifting practice from standard or “business as usual” approaches to more embedded and collaborative models of research translation practice. CAGs organised targeted workshops tailored to their members’ needs, often focused on strengthening research capability and applying implementation science to research among clinicians and EMCRs. Some CAGs also provided development opportunities through mentoring and small funding initiatives.

Some people hadn’t previously been involved in research but now they’re leading projects

SHP offered training workshops, mentorship, and embedded research support. SHP's training programs on implementation science and consumer involvement were especially valued, with several CAG members reporting that these practical sessions equipped them to progress towards their CAG's objectives. Participants also acknowledged and valued the active involvement of SHP's CAG Program secretariat to support local events and meetings.

CAG leadership teams provided **opportunities for collaboration** within the CAG, and over time, between pairs of CAGs. For example, all but one CAG had established and maintained a 'member' data base which largely operated as a mailing list for communications about CAG events, training opportunities and other relevant news. Membership was free and open to all. By 2024, the individual CAG memberships ranged from 20 to 840. This large range is explained by some CAGs having pre-existing networks (e.g., Cancer, Cardiovascular, Musculoskeletal), but all actively worked to engage researchers and clinicians in a range of activities including seminars/webinars, symposia, and workshops. A small number of CAGs co-hosted events, for example the Musculoskeletal and Perioperative Care CAGs hosted a networking breakfast to share research ideas and establish new collaborations. The SHP CAG Program secretariat supported Program-wide interactions by hosting annual in-person all-CAG workshops, and regular online meetings for all operational staff to allow attendees to network, share learnings, and hear about system and cross-sector issues of mutual interest.

Participants viewed organisational collaboration (i.e., academia and health care) and the use of interpersonal connections to bridge organisational silos as cornerstones of the CAG model, and a distinctive feature compared to more traditional academic groups or professional societies. They valued the opportunity to connect clinicians, researchers, managers, and consumers across different organisations and disciplines. As one participant reflected:

We wouldn't normally get all these people in the same room. It's the opportunity to connect with people who have shared ideas

These cross-organisation links were seen as supporting sharpened research priorities and improving the likelihood of translation of research findings into health service delivery.

…it's the collaboration and the connections that have been formed that open avenues to broader projects and focus in more specific health service delivery areas

However, the extent and quality of organisational collaboration varied across individual CAGs. The CAGs with pre-existing networks often leveraged longstanding relationships to progress quickly, while newer CAGs reported needing to invest significant effort in building trust and establishing shared goals with colleagues in other organisations. While progress was evident, some participants cautioned that collaboration risked being more symbolic than functional if not supported with clear structures and resources. For example, several noted the absence of dedicated mechanisms to sustain relationships between meetings or to embed collaboration in ongoing service planning. Others highlighted the need

for clearer success measures to track whether efforts to engage individuals across organisations was translating into tangible outcomes.

Progress on **consumer involvement** was made from the first year of establishment at the encouragement of SHP. By 2024, seven CAG leadership teams included a consumer, with one having two. In progress reports, CAGs often described one-off meetings or workshops about (not necessarily with) consumers or included consumers in wider meeting audiences. In interviews, two CAGs reported developing and implementing a consumer policy and remuneration scheme, supported by CAG operational funding. This was viewed as a tangible demonstration of valuing consumer time and expertise. Many participants expressed a strong commitment to advancing consumer involvement but also indicated more needed to be done.

We know that involving consumers is important, but it's not consistent yet

It's something we know we could improve on … not just having a token person at the table

Most CAGs reported progress towards the goal of **improved competitiveness.** Several CAGs hosted grant writing workshops, and two CAG-based research groups were successful in obtaining multi-million-dollar national competitive translational research grants during the review period. Increased CAG maturity appeared to be associated with a stronger emphasis on grant competitiveness and helping less research-experienced members to engage:

We have several translational research grants and through this experience we supported research-inexperienced services with grant applications. Things like helping to draft proposals and offering advice. This may have happened before, but not in such an organised way

While participants agreed that significant progress had been made, they also pointed to the ongoing need for skill development to strengthen the CAGs' capacity to compete for external funding and sustain translational outcomes. As one participant reflected:

When we established the CAG, we were already doing some of this work, but the experience and discussions we've had over the years have helped shape our proposals and grant applications around collaboration which is multi-district, interdisciplinary, consumer-focused, and engaging clinicians. This has increased our grant success rate

Evidence of impact through research translation was not expected in the early establishment period. However, nine of the 12 CAGs conducted **priority setting activities** to ensure closer alignment of research with health service priorities that should generate more translatable research evidence:

Early on, we ran several priority-setting processes to identify key areas in the service setting and used these to drive our research agenda … and three years in, people have largely stuck with us

The SHP CAG Program secretariat also included senior health service executives in the annual Leadership Team workshops to foster discussions at the highest levels about health system priorities.

Engagement with health professionals was critical to the work of the CAGs but clinical leaders had limited availability or research experience, often constraining their participation and input:

…we have local health district heads of departments which is great for understanding service needs and priorities but not for getting research related tasks progressed …

1. **Opportunities to strengthen and improve the CAG program**

Although the participants identified that the infrastructure and resourcing from the CAG Program were central to successful establishment, they also identified several opportunities to strengthen the model. They identified the need for greater support to meet consumer engagement goals more authentically, with more guidance on how to embed and support consumers across the CAGs. Participants also highlighted opportunities to extend the focus beyond the initial 5 Cs; called for more funding, particularly for seed funding to support early research ideas; support to strengthen leadership skill development; clearer guidance of CAG Program expectations and success criteria; and measures to track whether cross-system work was translating into tangible outcomes.

The SHP CAG Program secretariat also identified opportunities through the document review to enhance program support. These included assisting CAGs to develop clearer pathways to impact through program logic models or other planning approaches that link activities to long-term outcomes such as improved care, better patient outcomes and reduced costs. Program documents also highlighted the value of creating opportunities to share case studies, exemplars and learnings across the CAGs, and to develop guidance and approaches to prepare CAGs to ensure the consumers are ‘research ready’ and supported in their journey with the CAG. The documents also reinforced the importance of the CAG Program infrastructure to foster knowledge exchange, with reports noting the value of sharing CAG activities, such as priority-setting protocols or ideas for capacity building, and providing the resources, tools and templates to maintain continuity across CAG operations.

DISCUSSION

The SHP CAG Program aims to bring together clinicians, health service professionals, researchers, and consumers to collaborate on clinical and health services research aligned with the needs and priorities of health service partners, and to facilitate the translation of research evidence into improved health care. All 12 CAGs were established and operational: they had grown in membership, delivered a wide range of seminars and other initiatives to build research capacity particularly among early career researchers and clinician researchers, and some had achieved significant national competitive translational research funding success. The initial goals of the Program, referred to as the 5 Cs, were to build *collaboration*, *capacity* (growing the network) and *capabilit*y (strengthening skills) in research

translation, to seek *consumer involvement*, and to support *competitiveness* for grant applications. The study results indicated progress towards these goals, but also some course correction along the way.

The CAG Program adopted a goal-oriented approach, requiring each CAG to work towards the 5 Cs, however how CAGs were structured and operated was largely self-determined and reflective of each group's different context, somewhat similar to the Health Integration Teams supported by Bristol Health Partners in the UK (14). While SHP CAG members endorsed this flexible model, several common factors appeared critical to the early establishment of the CAGs, including committed Chairs and Co-chairs who supported a collective leadership approach; essential enabling operational infrastructure and support provided both centrally and locally within each CAG; and flexible albeit modest funding.

The review showed that the early focus of the CAG Program was largely on supporting research – building translational research capacity, generating new research ideas, applying for competitive grants – rather than research translation to improve health outcomes. A stronger emphasis on translational research rather than research translation was also evident in the earlier stages of the overall RTC Program, and was reported in the early review of the UK's CLAHRCs program (11). This is perhaps not surprising: generating evidence that addresses local health priorities is an important precursor to the results then being translated and used. In addition, researchers know how to do research; they are less experienced and less incentivised to implement research evidence into practice. Funding for translation is more limited, and the translation pathway requires different stakeholders and different skills. Nonetheless, the RTC Program in Australia and its accredited centres have shown a progressive commitment and effort to support research translation over time. This has been reflected by a shift in emphasis, in the past 12 months, in SHP's CAG Program where the 5 Cs have been reframed into three core aims – **Aligning Research**, **Capacity and Capability Building**, and **Increasing Impact and Competitiveness –** which have been incorporated in the most recent round of funding agreements with the CAGs. Aligning research activities more closely with health system priorities has been given increased prominence to fostering research translation. Capacity building remains a core function of the CAGs and incorporates developing research skills among early career researchers and clinician researchers, increasing capability in the use of implementation science methods to support research translation activities, and a continued focus on building effective consumer-researcher partnerships. The third goal of increasing impact, while incorporating research competitiveness, focuses more explicitly on developing research programs and evidence to drive improvements in health care and patient outcomes. This includes generating evidence across different populations and healthcare settings, increasing the potential for adoption by multiple health services. More recently, SHP has embedded researchers with implementation science expertise in each CAG and delivered implementation science training to CAG members to build translation capacity and support.

An assumption underlying the CAG model is that networks of research 'producers', research 'users' and consumers are more likely to identify research questions that matter to clinicians and patients, and therefore the associated evidence is more likely to be implemented and used. As the CAGs have established themselves, they have engaged in more dialogues with health service leaders and clinical

heads of departments to better understand their priorities, and these conversations have influenced the focus of new research programs. Nonetheless, health organisations have many priorities, including organisational governance and structures, budgeting and finances, and workforce development and sustainability, to name a few. Some but not all priorities will benefit from research within the remit of the CAGs, and health leaders may need help identifying and framing researchable priorities (19). In addition, engaging busy clinicians, especially frontline nurses and allied health staff, in research is not always easy, given the need to prioritise patient care and limited opportunities to share ideas beyond their immediate clinical specialty. Their lack of access to dedicated research time is well-recognised (20–22) and must be addressed at a system level if research-related activities are to be embedded at scale across health services and health care staff are supported and encouraged to meaningfully engage in them. Funding opportunities for large scale research translation also need to better accommodate the lengthy timeframes and sustained effort generally required to achieve significant impact.

Engaging consumers in research not only increases the relevance of research questions but also strengthens the uptake of findings into practice, particularly when consumers are involved across multiple stages of the research process (8, 23). Most CAGs had evidence of emerging consumer involvement, including consumers on leadership teams and individual consumers involved directly in researchers' projects, but several leaders raised questions about the most effective ways to support meaningful and wider consumer contributions in large, diverse collaborative networks. Others have also reported challenges with embedding consumer roles in large collaborations beyond advisory functions (8). Further guidance in this area will be a focus for the CAG Program going forward.

Given that the CAGs had only been operating for three years at most, widespread evidence of implementing research evidence to impact health care at an organisational level was not expected. However, to what extent can collaborative research networks like the CAGs demonstrate clinical impact? In a separate study involving interviews with health executives across SHP, factors such as strong and broad executive leadership, dedicated research resources and infrastructure, and investment in capacity- and capability-building across health clinicians, managers and executive staff were identified as critical to making research a more integrated part of health care (19). Very similar findings have been reported in other countries (24, 25). These factors fall well outside the influence of individual academic researchers and clinicians; deep and sustained collaboration between academic and health care organisations is needed to drive research translation into policy and practice. Collaborations between researchers and health service staff are important, and may lead to local implementation of evidence, but likely will not be enough to deliver widespread impact. Repeated calls for learning health systems that embed research as part of routine health care and use research evidence to refine and improve clinical practice recognise the role of partnerships between healthcare providers, researchers and consumers such as SHP's CAGs (26, 27). However, they also require receptive organisational cultures, inter-organisational relationships, executive and managerial support, workforce development, linkages across data systems and policy, and a range of other structures and resources(26, 28, 29).

As noted previously, there is a dearth of empirical evidence to guide optimal collaborative models between researchers and clinicians that can facilitate and accelerate the transfer of research innovations into health care improvements. The current review helps to fill that gap, describing some of the characteristics associated with establishing 12 diverse collaborative networks in the first three years of operation. The combination of document and interview data provided rich and complimentary information, allowing a more comprehensive review than one source alone. However, the documentary review was undertaken by Program staff who had detailed knowledge of each CAG that may have inadvertently introduced experiential data. The participant interviews were undertaken by personnel not involved in the SHP CAG Program to foster more open and honest feedback, and more objective interpretation of key themes. The participants represented a cross-section of CAG leadership team members, and as leadership members, they are all responsible for and invested in their CAG's success. Some positive bias is therefore accepted. The SHP CAGs were modelled on other collaborative research-health service networks in the UK and US. As such, we anticipate insights from this review are likely to be relevant to other emerging partnerships between academic researchers and health services in Australia and internationally.

Conclusions

Collaborative networks between researchers, clinicians and consumers can provide a foundation for better understanding health service priorities and questions that matter to patients and aligning research activities with them. These networks provide a mechanism to support implementing research evidence into practice, particularly by the clinicians participating in them. As these networks grow and mature, the potential for generating and using research evidence to improve health care is expected to increase. But embedding research evidence at scale across large, complex health organisations and systems requires more than collaborative, effective research-healthcare networks. They are necessary but not sufficient on their own. For change that is sustainable with impact at scale, they need to be part of a well-functioning responsive ecosystem of organisations involved in healthcare, research, and policy. Attention needs to be given to these latter factors too to effectively achieve sustained research translation into healthcare.

Declarations

Ethics approval and consent to participate: The study was approved by the University of Sydney Human Research Ethics Committee [2024/HE001900].

Consent for publication: All co-authors have expressed consent for publication.

Availability of data and materials: The datasets used and/or analysed during the current study are available from the corresponding author on reasonable request.

Competing interests: The authors declare that they have no competing interests.

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Authors' contributions: DN, AR, AT and HS conceived the project; MT and AS conducted interviews and coded the interview data; AR and LK conducted the document review and coded the data; AT and HS aggregated themes across data sources; and all authors wrote, read and approved the final version of the manuscript.

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