RESEARCH CAPACITY IN HEALTH SERVICES

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QUESTION

What organisational infrastructure, workforce roles, and systems are required to establish and sustain research capacity within healthcare service settings?

RESULTS

ONLINE RESOURCES

GUIDELINES & STRATEGIES

Good institutional practice guide. (2025). **National Health and Medical Research Council (NHMRC)** Link

- Six key elements required for high-quality research culture pg. 12-13
- Leadership and workforce roles essential for sustaining research capacity incl. supervision, mentorship and culturally safe practices pg. 20-25
- Provides graded implementation strategies to embed training, monitoring and evaluation systems into organisational structure pg. 20-25

Section 7 – Strategy, People, and Research Environment (SPRE) guidance. (2025). **Research Excellence Framework (REF)** Link

- Organisations can strengthen research capacity by building strategy-driven infrastructure
- Emphasises the value all people who undertake, enable or support research, across roles and career stages

Research Excellence Handbook Metro South Research. (2025). **Metro South Mealth, QLD Gov** Link

- 'technical, material, and human resources' and research training is required to develop and maintain research skills pg. 5-7
- Embed research integrity through 'ethical leadership and values' that support a strong research culture pg. 4
- Encourage 'positive behaviours' like collaboration and early-career support to strengthen research pg. 6-7

Shaping Better Practice Through Research: A Practitioner Framework. (2024). **Jennifer Harris, Jo Cooke & Kate Grafton (CAHPR)** Link

- Research should be considered 'core business' to improve services and optimise resources pg. 5
- Outlines eight domains of applied 'practitioner research knowledge and skills' pg. 6

The Perceived Research Capacity and Culture within Non Metropolitan Local Health Districts in NSW. (2017). **HETI, NSW Health** Link

- Strengthen team-level support, as limited support means 'improvement in capacity and culture will be limited' pg. 5
- Use top-down and bottom-up strategies, where executives provide resources and staff shape priorities pg. 5
- Build research systems, education, mentoring, evaluation, 'all levels need to be engaged' to sustain capacity pg. 20

A Research Capacity Building Strategy for SWSLHD Primary & Community Health 2015 -2020. (2015) **NSW Health, Primary & Community Health Research Unit** Link

- Discusses limitations to capacity buildling, and identifies 'formal research training structures to enhance research literacy, language and culture are required' pg. 20
- Strategy emphasises building a 'critical mass of Community Health staff with research experience' plus mentoring and role-based expectations pg. 21-22
- Proposes and outlines 'capacity building framework' pg. 36

PEER-REVIEWED JOURNAL ARTICLES – MOST RECENT FIRST

Articles are grouped by theme:

- Barriers & Enablers
- Data & Systems Infrastructure
- Administrative Infrastructure
- Research Roles
- Education & Training

Each article summary contains excerpts from the abstract and an online link.

BARRIERS & ENABLERS

Castro, M., et al. (2026). **Nursing Research Capacity-Building Programmes in Acute Care Hospitals: A Scoping Review.** *Journal of advanced nursing, 82*(2), 1055–1075. Click for full-text.

Our analysis identified two dimensions of research capacity: (1) individual research capability and (2) organisational research capacity, each influenced by various determinants. Findings suggest that four key elements are required to build a research capacity programme: (1) context assessment, (2) multilevel leadership and management engagement, (3) programme tailored to context and (4) clear outcome indicators.

Lee, S., et al. (2024). **Enablers and Barriers of Research Engagement Among Clinician Researchers: Nursing, Allied Health and Medical Professionals.** *Journal of multidisciplinary healthcare, 17*, 4075–4087. Click for full-text.

The ethics regulatory process was identified as a strong barrier in all professions, other commonly identified barriers were lack of time to conduct research and lack of funding. Researchers reported difficulties knowing where to obtain assistance and support when required. Mentorship was the most common enabler identified by all three professions. In addition, a positive research culture and organisational support and assistance within the organisation were seen as strong enablers.

Nott, M., et al. (2024). **Collaborations between health services and educational institutions to develop research capacity in health services and health service staff: a systematic scoping review.** *BMC health services research, 24*(1), 1363. Click for full-text.

Collaboration approaches varied and leveraged different activities to build research capacity included training, mentoring, shared funding, and networking. Training partnerships emerging as the most prevalent. Findings emphasised the importance of localisation in approaches, with some studies indicating the intrinsic value of such collaborations for both partners involved. Despite the emphasis on individual interventions like training and mentoring, team-level interventions were notably scarce.

Rego, K., et al. (2024). **Embedding a culture of research in Canadian community hospitals: a qualitative study.** *Health research policy and systems, 22*(1), 164. Click for full-text.

As community hospital research programs matured, participants described a shift in research culture whereby research became more embedded in "the way things are done" within the community hospital. Recommended strategies to achieve an embedded culture of research involve: communications; relationship building; mentorship, training and education opportunities; selecting locally relevant studies; and systems-level support. A top-down approach to embedding research culture was contrasted with a bottom-up approach.

Stormon, N., et al. (2024). **Exploring strengths and weaknesses in health services research culture and capacity.** *Australian health review, 48*(1), 82–90. Request full-text.

The item 'team leaders that support research' was positively correlated with various organisation-level items, indicating that if the respondent perceived the team leader as a low supporter of research the respondent perceived several organisation items also poorly. As an important stakeholder in enabling research in a health service, organisations should investigate the challenges experienced by team leaders in facilitating research and the support or training they may need.

Palmer, S., et al. (2023). **Nursing, midwifery, and allied health professions research capacities and cultures: a survey of staff within a university and acute healthcare organisation.** *BMC health services research, 23*(1), 647. Click for full-text.

There were no significant differences between N&M and AHP in their ratings of individual successes/skills. Finding and critically reviewing relevant literature were identified as specific individual strengths; with weaknesses in securing research funding, submitting ethics applications, writing for publication, and advising less experienced researchers. The main motivators for research were to develop skills, increased job satisfaction, and career advancement; whilst barriers included lack of time for research and other work roles taking priority. Key support needs identified included mentorship (for teams and individuals) and in-service training. Open-ended questions generated main themes of 'Employment & staffing', 'Professional services support', 'Clinical & academic

management', 'Training & development', 'Partnerships' and 'Operating principles'. Two cross-cutting themes described issues common to multiple main themes: 'Adequate working time for research' and 'Participating in research as an individual learning journey'.

Peckham, S., et al. (2023). **Research engagement and research capacity building: a priority for healthcare organisations in the UK.** *Journal of health organization and management, ahead-of-print(ahead-of-print),* 10.1108/JHOM-12-2021-0436. Request full-text.

Interest in research involvement is strong and widespread but hampered by a lack of systematic organisational support despite national policies and strategies to increase staff engagement in research. While useful, these external strategies have limited universal success due to lack of organisational support. Healthcare organisations should embed research within organisational and human resources policies and increase the visibility of research through strategic organisational goals and governance processes. A systems-based approach is needed.

Cordrey, T., et al. (2022). **Exploring research capacity and culture of allied health professionals: a mixed methods evaluation.** *BMC health services research, 22(*1), 85. Click for full-text.

The research capacity and culture survey reported the department's key strength as promoting clinical practice based on evidence. A key reported weakness of the department was insufficient resources to support staff research training. Respondents considered themselves most skilled in finding relevant literature and least skilled at securing research funding. Greater than half of the respondents reported not currently being involved with research. Five themes were identified from the focus groups: empowerment; building research infrastructure; fostering research skills; access for all; and positive research culture.

Oulton, K., et al. (2022). **Culture, cognisance, capacity and capability: The interrelationship of individual and organisational factors in developing a research hospital.** *Journal of clinical nursing, 31*(3-4), 362–377. Click for full-text.

Respondents demonstrated high levels of interest and commitment to research at the individual level which were not always harnessed at the organisational level. Inequities between professional groups existed in terms of training, time to undertake research and opportunities and outputs. Follow-up revealed continuing structural barriers at an organisational level, however at an individual level, interventions were reflected in >30 fellowship awards; major concerns were reported about sustaining these research ambitions. Success in building a research-active clinical workforce is multifactorial and all professional groups report increasing challenges to undertake research alongside clinical responsibilities.

Whitehouse, C. L., et al. (2022). **An organisational approach to building research capacity among nurses, midwives and allied health professionals (NMAHPs) in clinical practice.** International Practice Development Journal, 12(2).

The intentional development of a network of teams, individuals and patients was fundamental to building capacity, capability and confidence among staff. Enablers to the increase in research activity included using role modeling, inspiration and perseverance to make visible the value of nurses, midwives and allied health professionals in leading research-based care. Preconceived ideas of who ‘should’ do research challenged the positive culture of critical inquiry. Strategies to support research

activities across the professions require vision, time, infrastructure and buy-in at micro, meso and macro levels, as well as a sustained effort from those directly involved. It would be beneficial to encourage bespoke approaches to help staff translate ideas into practice-based projects as part of capacity, capability and confidence building for research across the clinical workforce. Audit, quality improvement and evaluation activities can lead directly to an increase in research engagement, involvement and leadership among nurses, midwives and allied health professionals, as well as supporting recruitment and retention.

Frakking, T., et al. (2021). **Evaluation of Research Capacity and Culture of Health Professionals Working with Women, Children and Families at an Australian Public Hospital: A Cross Sectional Observational Study.** *Journal of multidisciplinary healthcare, 14*, 2755–2766. Click for full-text.

Commonly reported barriers to research were "lack of time for research," "other work roles taking priority" and "a lack of skill." "Developing skills" was the most common personal motivator.

Friesen, E. L., & Comino, E. J. (2017). **Research culture and capacity in community health services: results of a structured survey of staff**. *Australian journal of primary health, 23*(2), 123–131. Request full-text.

Most participants were unsure of organisational and team level skills and success at generating research. Few reported recent experience in research-generating activities. Barriers to undertaking research included lack of skills, time and access to external support and funding. Lack of skills and success in accessing external funding and resources to protect research time or to 'buy-in' technical expertise appeared to exacerbate these barriers. Community health staff have limited capacity to generate research with current levels of skill, funding and time. Strategies to increase research capacity should be informed by knowledge of clinicians' research experience and interests, and target development of skills to generate research. Resources and funding are needed at the organisational and team levels to overcome the significant barriers to research generation reported.

Albert, N. M., et al. (2016). **Clinical Nurse Specialist Roles in Conducting Research: Changes Over 3 Years.** *Clinical nurse specialist CNS, 30*(5), 292–301. Click for full-text.

Confidence in conducting research, discussion of statistics, and perceptions of motivators and barriers to conducting research did not differ across time period groups. Access to literature and mentors and research knowledge were the most prevalent barriers to conducting research.

DATA & SYSTEMS INFRASTRUCTURE

Bashir, E., et al. (2025). **An IT-driven conceptual framework for research capacity building in integrated academic health systems.** *Discover Health Systems, 4*(135). Click for full-text.

We present a conceptual framework for enhancing research capacity in IAHS using an adapted version of Cooke's RCB model, integrating information technology (IT) as a foundational driver. Cooke's six-principle framework was used as a guiding model and modified by embedding specific IT strategies within each domain. The framework outlines multilevel activities (individual, team, organizational, and supra-organizational) to support skill-building, impactful research, collaboration, dissemination, sustainability, and infrastructure.

Samra, H., et al. (2020). **Utilisation of hospital information systems for medical research in Saudi Arabia: A mixed-method exploration of the views of healthcare and IT professionals involved in hospital database management systems.** *Health information management, 49*(2-3), 117–126. Request full-text.

Six themes contributing to the inefficacy of HIS in medical research in Saudi Arabia emerged from the data: incorrect datasets, difficult data collection and storage, poor data analytics, a lack of system interoperability across different HIS for universal access and negative perception of the usefulness of HIS for medical research.

ADMINISTRATIVE INFRASTRUCTURE

Cimino, J., & Braun, C. (2021). **Building a competitive infrastructure to support clinical research in healthcare institution.** *European journal of clinical investigation, 51*(9), e13641. Click for full-text.

By managing a new infrastructure and centralizing resources and demands, clinical research unit (CRU) has become an effective mechanism for hospital research. The 'infrastructure' or CRU refers to the necessary resources and how the CRU is organized and communicates operationally to conduct clinical research within the institution.

Matus, J., et al. (2018). **Research capacity building frameworks for allied health professionals - a systematic review.** *BMC health services research, 18*(1), 716. Click for full-text.

The findings of this systematic review have been synthesised to develop a succinct and integrated framework for research capacity building which is relevant for allied health professionals working in publicly funded secondary and tertiary healthcare organisations. This framework provides further evidence to suggest that research capacity building strategies are interlinked and interdependent and should be implemented as part of an integrated 'whole of system' approach, with commitment and support from all levels of leadership and management.

Snyder, D. C., et al. (2016). **Retooling institutional support infrastructure for clinical research.** *Contemporary clinical trials, 48*, 139–145. Click for full-text.

Clinical research activities at academic medical centers are challenging to oversee. Without effective research administration, a continually evolving set of regulatory and institutional requirements can divert investigator and study team attention away from a focus on scientific gain, study conduct, and patient safety. However, even when the need for research administration is recognized, there can be struggles over what form it should take. Central research administration may be viewed negatively, with individual groups preferring to maintain autonomy over processes. Conversely, a proliferation of individualized approaches across an institution can create inefficiencies or invite risk. This article describes experiences establishing a unified research support office at the Duke University School of Medicine based on a framework of customer support.

RESEARCH ROLES

Jarman, H., et al. (2025). **Capacity and Capability for Nursing, Midwifery and Allied Health Professional Principal Investigator Roles in Healthcare Research: A National Survey.** *Journal of clinical nursing, 34*(10), 4202–4211. Click for full-text.

Having more research-active nursing, midwifery and allied health professionals provides career progression, improved staff retention and improves the evidence base for practice. Having a broader range of CI/PIs allows for more targeted and specialty-specific oversight of research studies and streamlines the acceptance process to allow research to be delivered in a more timely manner.

AlFattani, A., et al. (2024). **Enhancing research support services in health organizations by implementing a "Research Concierge Desk", a case study.** *Frontiers in research metrics and analytics, 9,* 1335240. Click for full-text.

The involvement of epidemiologists, biostatisticians, and data scientists is paramount in offering technical and scientific support to health researchers. In our organization, research support services, such as technical, statistical, logistical, and scientific assistance, have been provided to researchers for the past 20 years under the name of "Data Clinic Service"

Kengne Talla, P., et al. (2023). **Clinical research coordinators' role in knowledge translation activities in rehabilitation: a mixed methods study.** *BMC health services research, 23*(1), 124. Click for full-text.

As information managers, linkage agents and facilitators, CRCs play a pivot role in diffusion, dissemination, synthesis and tailoring of knowledge to improve evidence informed practices and quality of care in rehabilitation. The factors influencing CRCs' knowledge translation (KT) activities are mostly linked to the context such as the receptivity of the organization as well as the lack of time and resources, and limited understanding of their roles by stakeholders. Two main suggestions made to enhance CRCs' contribution to KT activities include the harmonisation of expectations between the large research centre and their partner health regions, and better promotion of their role to clinical and research teams.

Divall, P., James, C., Heaton, M., & Brettle, A. (2022). **UK survey demonstrates a wide range of impacts attributable to clinical librarian services.** *Health information and libraries journal, 39*(2), 116–131. Click for full-text.

CLs provide diverse services to clinical teams. They support the continuing professional development and personal research needs of team members, service development needs of organisations, and the information provided contributes to improved quality and safety of patient care.

Flenady, T., et al. (2022). **Research capacity-building for clinicians: understanding how the research facilitator role fosters clinicians' engagement in the research process.** *Health research policy and systems, 20*(1), 45. Click for full-text.

The role of the research facilitator emerged as comprising two main themes: (1) facilitating the research process and (2) engaging expert clinicians as novice researchers. Pragmatically, analysis of data led to the development of a table outlining the responsibilities, skills and attributes related to each theme. Conceptually, theme 1 encapsulates the research facilitators' skills and experience and their role as knowledge brokers and cocreators of knowledge. Theme 2 provides insight into the clinician-centric approach the research facilitators utilized to build and foster relationships and support the clinicians through their research journey.

Saul, T., et al. (2022). **Influence of a Formal Mentor on Hospital-Based Nurse Research Resources and Outcomes.** *The Journal of nursing administration, 52*(10), 549–553. Click for full-text.

Relationships between hospital research infrastructure, activities, and a designated nurse research mentor were explored in a large health system using survey methodology. Hospitals with a formal mentor reported more research resources compared with those without.

Cato, K. D., et al. (2019). **Linking to Improve Nursing Care and Knowledge: Evaluation of an Initiative to Provide Research Support to Clinical Nurses.** *The Journal of nursing administration, 49*(1), 48–54. Click for full-text.

The LINK project created a formal command and control structure bringing together existing academic resources, including a PhD-prepared nurse researcher, a biostatistician, and a development of a formal research consultation request process.

Visniti, S., et al. (2018). **Research support in health libraries: a scoping review.** *Journal of the Canadian Health Libraries Association, 39*, 56-78. Click for full-text.

Major services areas reported were the creation of new research support positions, and services for systematic review support, grants, data management, open access, and repositories. Additional activities completed by librarians to support researchers include: sitting on ethics review boards, research committees or Animal Care and Use committees, serving as full members of research teams, offering copyright-related services or consent form and research protocol assistance. Reported services also included the creation of tools, portals, or taxonomies, providing non-systematic review search support, creating new library spaces for researchers, providing training in various topics of relevance along the research lifecycle, or leading community-building activities such as forming groups or hubs to connect researchers with potential collaborators.

Wenke, R., et al. (2016). **The role and impact of research positions within health care settings in allied health: a systematic review.** *BMC health services research, 16*(a), 355. Click for full-text.

Emerging evidence suggests that research positions embedded within healthcare settings can influence individual and team based research skills and research participation of AHPs. The majority of studies reported the research positions to provide academic support to individual clinicians and their teams, while developing their own research projects. Other studies reported support for research capacity building at a service and organisational level. Positive changes from these research positions was reported via increased individual research skills and participation and research outputs, improvements in research culture, attitudes and team and organisational level skills.

EDUCATION & TRAINING

Read, K. B. (2019). **Adapting data management education to support clinical research projects in an academic medical center.** *Journal of the Medical Library Association, 107*(1), 89–97. Click for full-text

Librarians and researchers alike have long identified research data management (RDM) training as a need in biomedical research. Despite the wealth of libraries offering RDM education to their communities, clinical research is an area that has not been targeted. Clinical RDM (CRDM) is seen by its community as an essential part of the research process where established guidelines exist.

Sabey, A., et al. (2019). **Building capacity to use and undertake applied health research: establishing a training programme for the health workforce in the West of England.** *Public health, 167*, 62–69. Click for full-text.

We carried out a training needs assessment among local stakeholders and scoped existing provision of research-related training. This informed the development of a programme of free short courses, which were targeted at health and social care professionals including those working in local authorities and the voluntary sector. We aimed to engage professionals working at all levels in these organisations and to promote interprofessional education, to build a research culture. We engaged a variety of educators to provide a range of 1-day courses at an introductory level, which were accessible to practitioners.

APPENDIX

SEARCH METHODOLOGY

A systematic search was conducted for literature. The results were screened by librarians using Covidence.

SEARCH LIMITS

- English-language
- Published within the last 10 years

DATABASES SEARCHED

- Medline – index of peer reviewed articles across health sciences and medicine.
- Embase – index of biomed and pharmacological peer reviewed journal articles.
- Emcare – index of nursing, allied health, critical-care medicine and more.
- PsycINFO – index of psychology and psychiatry peer review journal articles and book chapters.
- Grey literature – Google, Google Scholar, Trip database, Biomed Central Proceedings.

PRISMA CHART