

Rapid Decision Support

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Newfoundland & Labrador Centre for Applied Health Research



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We caution readers that researchers at the Newfoundland & Labrador Centre for Applied Health Research are not experts on the subject topic and are relaying work produced by others. This report has been produced quickly and it is not exhaustive, nor have any included studies been critically appraised.

This Rapid Decision Support report was published on October 24, 2023 and includes references and links to information that capture the status of available information at the date of publication. Readers are cautioned that this information may change or become out of date after publication.

Family Care Teams Skill Mix: Evidence Scan

Summary

The available research literature does not appear to prescribe any particular skill mix for family care teams, nor any particular ratios for family care team members to population served. Rather, it appears that optimizing family care team skill mix is largely dependent on local conditions, needs, and capacities. The literature indicates that these factors should be assessed by local primary care physicians and health system administrators. However, research does provide guidance on types of family care team configurations for different settings, as well as strategies for assessing the value of, and need for, different configurations in primary care settings, including best practices and toolkits (see Other Resources below).

This evidence scan focuses on the optimal skill mix in inter-disciplinary primary care teams, also referred to as 'family care teams' or 'community care teams.' The summary below includes best practices, review literature, primary research, and gray literature.

Systematic Review Literature

Li M, Tang H, Liu X. **Primary care team and its association with quality of care for people with multimorbidity: a systematic review.** BMC Primary Care. 2023 Dec;24(1):1-6.

- “Background: Multimorbidity is posing an enormous burden to health systems, especially for primary healthcare system. While primary care teams (PCTs) are believed to have potentials to improve quality of primary health care (PHC), less is known about their impact on the quality of care for people with multimorbidity. We assessed the characteristics of PCTs and their impact on the quality of care for people with multimorbidity and the mechanisms.”

- “Results: PCTs were summarized into three types—upward PCTs, downward PCTs and traditional PCTs according to the skill mix. The upward PCTs included primary care workers and specialists from upper-level hospitals, downward PCTs involving primary care workers and lay health workers, and traditional PCTs involving physicians and care managers. PCTs improved patients’ mental and psychological health outcomes greatly, and also improved patients’ perceptions towards care including satisfaction with care, sense of improvement, and patient-centeredness. PCTs also improved the process of care and changed providers’ behaviors. However, PCTs showed mixed effects on clinical outcome measures.”

Dubois, CA., Singh, D. **From staff-mix to skill-mix and beyond: towards a systemic approach to health workforce management.** *Hum Resour Health* 7, 87 (2009). [LINK](#)

- “Our review describes evidence about the benefits and pitfalls of current approaches to human resources optimisation in health care. We conclude that in order to use human resources most effectively, health care organisations must consider a more systemic approach - one that accounts for factors beyond narrowly defined human resources management practices and includes organisational and institutional conditions.”

Primary Research Literature

Francetic I, Gibson J, Spooner S, Checkland K, Sutton M. **Skill-mix change and outcomes in primary care: Longitudinal analysis of general practices in England 2015–2019.** *Social Science & Medicine*. 2022 Sep 1;308:115224. [LINK](#)

- “Results: Employment increased over time for all four staff groups, with largest increases for Healthcare Professionals (from 0.04 FTE per practice in 2015 to 0.28 in 2019) and smallest for Nurses who experienced a 3.5 percent growth. Increases in numbers of GPs and Nurses were positively associated with changes in practice activity and outcomes. The introduction of new roles was negatively associated with patient satisfaction: a one FTE increase in Health Professionals was associated with decreases of 0.126 [-0.175, -0.078] and 0.116 [-0.161, -0.071] standard deviations in overall patient satisfaction and satisfaction with making an appointment. Pharmacists improved medicine prescribing outcomes. All staff categories were associated with higher health system costs. There was little evidence of direct complementarity or substitution between different staff groups.
- “Conclusion: Introduction of new roles to support GPs does not have straightforward effects on quality or patient satisfaction. Problems can arise from the complex adaptation required to adjust practice organisation and from the novelty of these roles to patients. These findings suggest caution over the implementation of policies encouraging more employment of different professionals in primary care.”
- The above is an academic research article. [The comprehensive full report is available here.](#)

Implementation Related

Brown JB, Mulder C, Clark RE, Belsito L, Thorpe C. **It starts with a strong foundation: constructing collaborative interprofessional teams in primary health care.** J Interprof Care. 2021 Jul-Aug;35(4):514-520. [LINK](#)

- “The purpose of this qualitative study was to explore how team members experience and enact interprofessional teamwork in primary health care (PHC).”
- “Findings revealed components that comprise the foundation and pillars of collaborative interprofessional teamwork in PHC. First, participants described a shared philosophy of teamwork with six elements: values, vision, and mission; collaboration; communication; trust; respect and team members that 'fit.'”
- “Second, findings revealed three 'pillars.' The first pillar, leadership, included the elements of specific leadership attributes, such as leaders encouraging teamwork, mitigating conflict, and facilitating change. In the second pillar, participants described three elements of team building: formal and informal team building activities plus how these activities benefited both the team and patient care. The last pillar, optimizing scope of practice, included the elements of recognizing, appreciating, utilizing, and expanding team members' scope of practice. While each component and their concomitant elements can be enacted individually, collectively applying all elements produces collaborative interprofessional teamwork in primary health care.”

Mitchell JD, Haag JD, Klavetter E, Beldo R, Shah ND, Baumbach LJ, et al. **Development and Implementation of a Team-Based, Primary Care Delivery Model: Challenges and Opportunities.** Mayo Clinic Proceedings. 2019 Jul 1;94(7):1298–303. [LINK](#)

- Abstract: “In this article, we describe the implementation of a team-based care model during the first 2 years (2016-2017) after Mayo Clinic designed and built a new primary care clinic in Rochester, Minnesota. The clinic was configured to accommodate a team-based care model that included complete colocation of clinical staff to foster collaboration, designation of a physician team manager to support a physician to advanced practice practitioner ratio of 1:2, expanded roles for registered nurses, and integration of clinical pharmacists, behavioral health specialists, and community specialists; this model was designed to accommodate the growth of nonvisit care. We describe the implementation of this team-based care model and the key metrics that were tracked to assess performance related to the quadruple aim of improving population health, improving patient experience, reducing cost, and supporting care team's work life.”

Gray Literature and Other Reviews

Scottish Health Technologies Group. **An evidence review on multidisciplinary team support in primary care.** (2023)

- “The Scottish Health Technologies Group (SHTG) was asked to assess the evidence on the impact of introducing multidisciplinary team (MDT) support in primary care, to work alongside general practitioners (GPs)”

- “We conducted a review of the published literature on the clinical effectiveness, cost effectiveness, implementation issues and the views of healthcare professionals and patients on MDT working in primary care. We also carried out a primary costing analysis based on data provided by the Scottish Government and Public Health Scotland, available publications and other data sources.”

Other Resources

Best Practices

College of Family Physicians of Canada. **A new vision for Canada: Family Practice—The Patient’s Medical Home 2019**. Mississauga, ON: College of Family Physicians of Canada; 2019.

- Endorsed by an exhaustive list of allied health care associations. This document is referenced by the Nova Scotia guidelines included in the Policy Scan.
- You may want to review Pillar 6: Comprehensive Team-Based Care with Family Physician Leadership, starting on page 20.

College of Family Physicians of Canada. **Team-Based Care in the Patient’s Medical Home**. Mississauga, ON: College of Family Physicians of Canada; 2017. [LINK](#)

- A “Best Advice” issue from the College of Family Physicians of Canada. The Implementation Strategies section (starting on page 7) includes a sub-section on “skill mix and team size” which says:

“There is no one-size-fits-all model when determining what mix of health care professionals should be part of a practice team. Team composition depends on the professional competencies, skills, and experiences needed to address the health needs of the patient population. These needs vary, depending on the communities’ defining characteristics; for example, geography, culture, language, demographics, disease prevalence. Family physicians are encouraged to identify the gaps in health care provision in the local practice environment, and discuss with other health care providers to determine whether adding their skills may be able to meet those needs. Data from electronic medical records—as well as input from patients, community members, and stakeholders—can provide information about the health challenges faced by patients in the community.”

College of Family Physicians of Canada. **Communities of Practice in the Patient’s Medical Home**. Mississauga, ON: College of Family Physicians of Canada; 2016. [LINK](#)

- “The objective of this guide is to provide actionable advice for establishing and maintaining communities of practice for [primary care physicians]”.
- “This guide focuses on collaboration between family physicians. This focus should not detract from the crucial role that physicians of other specialties play as part of the PMH. Collaborating with colleagues working in other disciplines is imperative in helping family physicians connect

their patients to needed services. While reviewing the advice in this document, family physicians—both those in focused practices and those providing comprehensive care—should be keenly aware of scopes of knowledge and skill of all health professionals involved in the care of their patients.”

Policy Brief

Winkelmann J, Scarpetti G, Williams GA, et al. **How can skill-mix innovations support the implementation of integrated care for people with chronic conditions and multimorbidity?**

Copenhagen (Denmark): European Observatory on Health Systems and Policies; 2022. (Policy Brief, No. 46.) POLICY BRIEF. [LINK](#)

- “This policy brief provides an overview of the evidence of skill-mix reforms and strategies which are effective in promoting integrated care models in primary care. It also develops policy recommendations on how skill-mix innovations can be achieved and implemented in practice to support integrated care, taking country and system contexts into account.”
- “Section 2 looks at the various types of skill-mix innovation and investigate which ones have the potential to improve integrated care for individuals with chronic conditions and multimorbidity. Section 3 summarizes what is known about the impact of skill-mix innovations on health outcomes and resource use. The brief then highlights key levers and barriers for implementing skill-mix innovations within integrated care (Section 4) and offers conclusions in Section 5.”

Toolkits

National Health Service, Health Education England. **Working differently together: Progressing a one workforce approach. Multidisciplinary Toolkit.** (2022) [LINK](#)

- “This toolkit is a step-by-step guide to help progress a one workforce approach across health and care organisations and Integrated Care Systems (ICSs). By one workforce we mean people coming together as part of multidisciplinary teams (MDTs) to deliver a shared objective – whether that be a project to introduce a new role, redesign of a patient pathway or providing care in a different way”
- See Section 2: Skill mix and learning

Doctors Nova Scotia. **Primary Care Transformation - A collaborative practice tool kit** [Internet]. 2019 Jan. [LINK](#)

- “This tool kit was created to support physicians who are considering collaborative practice and to help them have informed conversations with the Nova Scotia Health Authority (NSHA) about creating this type of practice.”
- “The tool kit was developed based on a thorough literature review and environmental scan of collaborative care. It is informed by interviews with key stake-holders in Nova Scotia and across Canada, as well as in-depth case studies of three collaborative practices in the province.”

Royal College of General Practitioners. **Multidisciplinary Team Working toolkit.** (2018) [LINK](#)

- “This guide is intended for general practice and primary care teams who are thinking about introducing new clinicians into their multidisciplinary team and need some help and support.”
- Includes sections on the following areas:
 - Assessing demand and capacity
 - Determining optimal skill mix
 - Workforce design
- Also has extensive links to other resources for organizing multidisciplinary primary care teams, example roles, and “micro-skills for interprofessional communication”.