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OPTIMIZING CARE FOR COMPLEX OLDER ADULTS: A PRIMARY CARE-BASED INTEGRATED TEAM MODEL

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Abstract

The growing population of older adults with complex health needs presents significant challenges to healthcare systems. Traditional models of care often struggle to meet these multifaceted needs, resulting in fragmented care, preventable hospitalizations, and poor health outcomes. This study describes the development, implementation, and preliminary outcomes of an innovative primary care-based integrated team model designed specifically to address the needs of complex older adults. The model leverages interprofessional collaboration within the Patient's Medical Home framework, incorporating standardized assessment tools, risk stratification, and coordinated care planning. Early results suggest improvements in care coordination, reduced emergency department visits, and enhanced patient and provider satisfaction. The model demonstrates the potential for primary care transformation to better serve vulnerable older populations through structured team-based approaches that optimize the skills of diverse healthcare providers while maintaining continuity of care. Practical insights and lessons learned are offered for healthcare leaders and policymakers seeking to implement similar models in their settings.

INTRODUCTION

Canada, like many developed nations, faces unprecedented demographic shifts with profound implications for healthcare delivery. According to the Public Health Agency of Canada, adults aged 65 and older now represent one of the fastest-growing segments of the Canadian population (Tam, 2020). This demographic transformation brings increased prevalence of multiple chronic conditions, functional limitations, and complex care needs that strain traditional healthcare models.

Studies have consistently shown that older adults with complex needs consume a disproportionate share of healthcare resources. Muratov et al. (2019) found that seniors who became high-cost users in Ontario incurred healthcare costs approximately eight times higher than non-high-cost older adults, driven primarily by hospitalizations and emergency department (ED) visits. Many of these costly and disruptive care transitions could potentially be prevented through more effective primary care (Kay, 2024).

Current healthcare systems often struggle to meet the needs of complex older adults due to several fundamental challenges:

1. Fragmentation of services across different providers, settings, and funding mechanisms

2. Acute care orientation that emphasizes episodic treatment rather than prevention and chronic disease management
3. Limited capacity in primary care to address multidimensional needs
4. Misalignment between available services and population needs (Kreindler et al., 2022)

These systemic issues manifest in overcrowded emergency departments, avoidable hospitalizations, and suboptimal care experiences for older adults (Sartini et al., 2022). Despite recognition of these challenges, healthcare transformation has been slow and often hampered by ineffective approaches that fail to address root causes (Kreindler, 2017).

The integrated care model described in this article was developed to address these challenges through a primary care-based, team-oriented approach specifically designed for complex older adults. Building on the existing Patient's Medical Home framework and principles of comprehensive geriatric assessment, the model aims to optimize care for this vulnerable population while efficiently utilizing scarce healthcare resources.

Background and Rationale

The Need for Specialized Approaches to Geriatric Care

Comprehensive geriatric assessment (CGA)—a multidimensional, interdisciplinary diagnostic process to determine a frail older person's medical, psychological, and functional capabilities—has been established as an effective approach for improving health outcomes in older adults. A recent umbrella review by Veronese et al. (2022) confirmed that CGA-based interventions are associated with reduced mortality, decreased likelihood of institutionalization, and improved physical function across various healthcare settings.

However, delivering comprehensive geriatric care at scale presents significant workforce challenges. Canada, like many countries, faces a critical shortage of geriatric medicine specialists. Basu et al. (2021) documented that Canada has only 304 certified specialists in geriatric medicine—approximately one specialist for every 15,000 older adults, far below recommended ratios. This shortage is compounded by international trends of inadequate geriatrics training and declining interest in the specialty (Pitkälä et al., 2018).

Given these constraints, geriatric expertise must be strategically deployed within broader care models rather than relying on specialist-driven approaches. Heckman et al. (2013) argued that geriatric specialists should focus on system leadership, capacity building, and consultation for complex cases, while primary care assumes a central role in delivering routine geriatric care. This perspective aligns with recognition that primary care represents the most appropriate setting for coordinating care for most older adults (Heckman et al., 2013).

The Primary Care Context and Team-Based Models

The Patient's Medical Home (PMH), advocated by the College of Family Physicians of Canada (CFPC), envisions comprehensive, coordinated, and continuous care delivered by teams of providers working collaboratively with patients and families (CFPC, 2020). This model positions primary care as the foundation of an effective healthcare system and emphasizes interprofessional collaboration as essential to meeting diverse patient needs.

Team-based primary care has gained momentum in Canada as a strategy to enhance access, quality, and efficiency. Brown-Shreves et al. (2023) highlighted team-based care as a key solution to the primary care crisis, noting its potential to distribute workload, expand capacity, and leverage the diverse skills of healthcare professionals. However, Aggarwal et al. (2023) found that despite a decade of policy initiatives promoting team-based primary care, implementation remains variable and many Canadians still lack access to comprehensive interprofessional teams.

Evidence for the effectiveness of team-based primary care is growing, particularly for complex populations. Kiran et al. (2022) demonstrated that team-based primary care was associated with reduced emergency department visits, with the greatest benefits observed among patients with high baseline ED utilization. Similarly, Haj-Ali et al. (2020) found that enrollment in interprofessional primary care teams was associated with a 20% reduction in hospitalizations for ambulatory care-sensitive conditions.

In Ontario, the Family Health Team (FHT) model represents a prominent example of team-based primary care implementation. FHTs integrate physicians with nurses, nurse practitioners, social workers, pharmacists, and other health professionals to provide comprehensive, coordinated care. Evaluations of the FHT model have demonstrated improved access to care, better chronic disease management, and high satisfaction among both patients and providers (Glazier et al., 2015; Conference Board of Canada, 2014; Rosser et al., 2011).

However, the mere presence of diverse professionals does not guarantee effective team-based care. Wranik et al. (2019) identified several characteristics of effective interprofessional teams, including clear role definitions, strong leadership, effective communication mechanisms, and shared vision. Mulvale et al. (2016) further emphasized the importance of team evolution and adaptation over time, with teams progressing through stages of development before achieving optimal functioning.

While various team configurations exist in primary care, Contandriopoulos et al. (2018) distinguished between coordinated, integrated, and collective models, each with different implications for professional autonomy, communication patterns, and care continuity. For complex older adults, integrated team models that preserve continuity with the primary care provider while incorporating diverse expertise may be particularly beneficial.

Implementation Challenges and Success Factors

Despite their potential benefits, interprofessional primary care teams face numerous implementation challenges. Gocan et al. (2014) identified barriers including inadequate physical space, funding constraints, professional role

confusion, and resistance to change. O'Reilly et al. (2017) highlighted additional challenges related to power dynamics, professional identity concerns, and lack of dedicated time for team development.

Successful team implementation requires attention to both structural and relational factors. Miller and Cohen-Katz (2010) emphasized the importance of creating collaborative learning environments that foster psychological safety, shared purpose, and continuous improvement. This perspective recognizes that team development is not merely a technical process but a social and cultural transformation requiring sustained commitment from leadership and team members alike.

Building on this foundational understanding of geriatric care needs and team-based primary care, the following sections describe the development and implementation of an integrated team model specifically designed to optimize care for complex older adults in primary care settings.

Model Description

Conceptual Framework and Objectives

The integrated team model was developed to address the multifaceted needs of complex older adults while maximizing the efficiency and effectiveness of primary care delivery. The model draws on frameworks for healthy aging (Cesari et al., 2022) and comprehensive care for older persons with chronic diseases (Barajas-Nava et al., 2022), adapting these approaches to the primary care context.

The model's primary objectives are to:

1. Identify complex older adults at risk for adverse outcomes
2. Deliver targeted, evidence-based interventions through an interprofessional team
3. Enhance care coordination across the healthcare continuum
4. Prevent unnecessary hospitalizations and emergency department visits
5. Improve health outcomes and quality of life for older adults
6. Enhance efficiency and sustainability of healthcare resource utilization

These objectives align with the Quintuple Aim framework for healthcare improvement, which encompasses patient experience, population health, provider well-being, cost-effectiveness, and health equity (Nundy et al., 2022).

Target Population and Risk Stratification

The model targets older adults (age 65+) with complex care needs, defined by the presence of multiple chronic conditions, functional limitations, geriatric syndromes, and/or high healthcare utilization. Rather than employing age alone as an inclusion criterion, the model utilizes a risk stratification approach to identify individuals most likely to benefit from enhanced team-based care.

Risk stratification is accomplished through a two-stage process:

1. **Initial screening**: The interRAI Emergency Department (ED) Screener is used to identify high-risk older adults based on factors associated with adverse outcomes. This validated tool demonstrates strong prognostic accuracy for identifying vulnerable older adults (Mowbray et al., 2023) and can be efficiently administered in various settings, including by paramedic services (Whate et al., 2021).
2. **Comprehensive assessment**: Individuals identified as high-risk undergo more detailed assessment using the interRAI Check-Up Self-Report instrument, a standardized tool that evaluates multiple domains including cognitive function, physical capacity, mental health, social support, and healthcare utilization (Elliott, 2016). This instrument has demonstrated strong criterion validity (Geffen et al., 2020) and high acceptability among older adults (Iheme et al., 2022).

This approach aligns with emerging evidence on the benefits of targeted interventions for specific risk strata rather than universal approaches (Brooks et al., 2023). By focusing intensive team-based care on individuals at highest risk, the model optimizes resource allocation while ensuring all patients receive appropriate levels of support.

Team Composition and Roles

The integrated team operates within the Patient's Medical Home framework, maintaining the primary care provider (typically a family physician) as the medical home while incorporating diverse professionals with complementary expertise. The core team includes:

- **Family physician**: Provides medical leadership, oversees care planning, and manages medical aspects of care
- **Nurse practitioner**: Conducts comprehensive assessments, manages stable chronic conditions, and provides care coordination
- **Registered nurse**: Administers screening tools, provides health education, and coordinates follow-up care
- **Pharmacist**: Reviews medication regimens, identifies potential interactions, and recommends optimization strategies
- **Social worker**: Addresses psychosocial needs, connects patients with community resources, and supports caregivers
- **Occupational therapist**: Evaluates home safety, recommends adaptive equipment, and develops strategies to enhance function
- **Administrative coordinator**: Manages schedules, facilitates communication, and supports documentation processes

The model also incorporates periodic consultation from geriatric medicine specialists, who provide specialized expertise for particularly complex cases and support ongoing education for the primary care team. This approach

reflects Heckman et al.'s (2013) vision of geriatricians as system consultants rather than primary providers for most older adults.

Care Processes and Workflows

The model implements structured care processes designed to ensure consistent, evidence-based care while maintaining flexibility to address individual patient needs. Key processes include:

1. **Risk identification**: Administrative staff identify potentially eligible patients through age-based registries, utilization patterns, or provider referrals. These individuals are invited to complete initial screening using the interRAI ED Screener.
2. **Assessment and stratification**: Patients identified as high-risk based on screening results are scheduled for comprehensive assessment using the interRAI Check-Up Self-Report instrument. This standardized assessment generates Clinical Assessment Protocols (CAPs) that identify specific issues requiring attention and inform risk stratification.
3. **Care planning conference**: The interprofessional team meets regularly to review assessment results, stratify patients by risk level, and develop individualized care plans. Care plans address the "5Ms" of geriatric care: Mind, Mobility, Medications, Multicomplexity, and what Matters most (Molnar & Frank, 2019).
4. **Tailored interventions**: Interventions are matched to risk level, with highest-risk patients receiving the most intensive services. Interventions may include medication optimization, chronic disease management, functional assessment, caregiver support, and advance care planning.
5. **Coordination and navigation**: Dedicated team members (typically nurses or social workers) serve as care coordinators, helping patients navigate the healthcare system, facilitating communication among providers, and ensuring follow-through on care plans.
6. **Monitoring and reassessment**: Patients are monitored according to individualized schedules, with standardized reassessments conducted at regular intervals to evaluate progress and adjust care plans as needed.
7. **Transition management**: For patients experiencing care transitions (e.g., hospital admissions, emergency department visits), the team provides enhanced follow-up and coordination to prevent adverse outcomes and readmissions (Van Spall et al., 2019; Lee et al., 2022).

These processes are supported by standardized protocols, documentation templates, and communication tools designed to enhance efficiency and consistency. Regular team huddles and case conferences facilitate ongoing collaboration and problem-solving.

Technology and Information Management

The model leverages health information technology to support efficient, coordinated care delivery. Key technological components include:

1. **Electronic health records (EHRs)**: The primary documentation and communication platform, configured to support team-based workflows and incorporate standardized assessment tools.
2. **interRAI assessment system**: Provides structured, validated assessment instruments, automated decision support through Clinical Assessment Protocols, and standardized outcome measures (Morris et al., 2016; Hirdes et al., 2022).
3. **Risk prediction algorithms**: Embedded within the assessment system, these tools identify patients at risk for specific adverse outcomes, including institutionalization (Landi et al., 2000), mortality (Hirdes et al., 2014), and emergency department use (Costa et al., 2015).
4. **Shared care plans**: Accessible to all team members and, when appropriate, to patients and caregivers, these plans document goals, interventions, and responsibilities in a standardized format.
5. **Communication platform**: Enables secure messaging among team members, facilitates virtual consultations, and supports remote monitoring for selected patients.

These technological components support an integrated information management approach that ensures all team members have access to relevant patient information, reduces duplication, and facilitates coordination across care settings (Northwood et al., 2024; Gray et al., 2009).

Implementation Process

Setting and Context

The integrated team model was implemented within an academic family health team serving a diverse urban and suburban population. Prior to implementation, the practice operated with limited interprofessional support, primarily focused on specific disease management programs rather than comprehensive geriatric care. The practice population included approximately 3,000 adults aged 65 and older, representing about 15% of the total patient population.

The implementation occurred within the context of provincial primary care reforms that encouraged team-based approaches but provided limited specific guidance for geriatric care. The practice had access to an affiliated geriatric assessment clinic but faced long waiting times for specialist consultations and limited capacity for ongoing management of complex patients.

Planning and Preparation

Implementation began with a comprehensive planning phase that included:

1. **Needs assessment**: Analysis of practice data to identify the prevalence of complex care needs among older adults, patterns of healthcare utilization, and gaps in current service delivery.

2. **Stakeholder engagement**: Meetings with practice leadership, physicians, staff, patients, and community partners to understand diverse perspectives and build commitment to the new model.
3. **Resource assessment**: Evaluation of available human resources, physical space, technology infrastructure, and funding to determine feasibility and resource requirements.
4. **Literature review**: Examination of evidence-based models for geriatric care in primary settings, with particular attention to the GRACE (Geriatric Resources for Assessment and Care of Elders) model (Counsell et al., 2006) and adaptations of comprehensive geriatric assessment for primary care (Fenton et al., 2006).
5. **Model design**: Development of detailed workflows, role definitions, assessment protocols, and care pathways tailored to the practice context and available resources.
6. **Education and training**: Comprehensive training program for team members, focusing on geriatric care principles, interprofessional collaboration, and use of standardized assessment tools.

This planning phase lasted approximately six months and involved iterative refinement of the model based on feedback from various stakeholders.

Phased Implementation

The model was implemented in phases to allow for learning, adaptation, and gradual expansion:

Phase 1 (Months 1-3): Pilot implementation with a small cohort of 50 patients identified through provider referrals. This phase focused on testing basic workflows, refining assessment processes, and building team cohesion.

Phase 2 (Months 4-9): Expanded implementation to include systematic screening of patients aged 75+ with three or more chronic conditions or recent hospitalizations. Team processes were refined based on learnings from Phase 1, with particular attention to care coordination and communication mechanisms.

Phase 3 (Months 10-18): Full implementation across the practice population, with automated identification of eligible patients through the electronic health record and risk stratification determining the intensity of team involvement for each patient.

Throughout implementation, regular team meetings were held to address challenges, share successes, and refine processes. Formal evaluation activities were integrated from the beginning to support continuous improvement and document outcomes.

Challenges and Adaptations

Several challenges emerged during implementation, requiring adaptations to the original model:

1. **Physical space constraints**: Limited clinical space created scheduling challenges for team-based care. This was addressed by implementing a hybrid approach combining in-person and virtual team interactions, with careful scheduling to maximize space utilization.
2. **Provider time pressures**: Family physicians struggled to participate fully in team meetings due to competing demands. The model was adapted to include more efficient, targeted case discussions and asynchronous communication options.
3. **Technology integration**: Initial difficulties with integrating assessment tools into the existing electronic health record required development of workarounds while longer-term solutions were pursued.
4. **Role clarity**: Some team members experienced confusion about their responsibilities and boundaries. Additional work on role definition, documented in practice protocols, helped address this challenge.
5. **Patient engagement**: Some older adults were initially hesitant to engage with multiple team members. Enhanced communication about the team approach and attention to maintaining continuity with trusted providers helped overcome this barrier.
6. **COVID-19 pandemic**: The emergence of the pandemic during implementation necessitated rapid adaptation to virtual care models and created new challenges for vulnerable older adults. The team developed innovative approaches to remote assessment and monitoring, including telephone-based assessments and virtual team meetings (Northwood et al., 2024).

These adaptations reflected the iterative, learning-oriented approach that characterized the implementation process. Rather than rigidly adhering to the initial design, the team continuously evaluated and refined the model based on emerging challenges and opportunities.

Preliminary Outcomes

Evaluation Approach

A mixed-methods evaluation framework was employed to assess the impact of the integrated team model on patient outcomes, healthcare utilization, provider experience, and implementation processes. Data collection included:

1. **Standardized assessments**: Repeated administration of the interRAI Check-Up Self-Report instrument to track changes in patient status over time.
2. **Healthcare utilization metrics**: Emergency department visits, hospitalizations, and primary care visits extracted from electronic health records and administrative data.
3. **Patient-reported measures**: Structured surveys assessing satisfaction, quality of life, and engagement in care.
4. **Provider experience surveys**: Feedback from team members regarding workload, satisfaction, and perceptions of care quality.

5. **Qualitative interviews**: In-depth discussions with patients, caregivers, and providers to understand experiences with the model and identify opportunities for improvement.

Data were analyzed using mixed methods, including quantitative statistical analyses of utilization and outcome measures and qualitative content analysis of interview data (Hsieh & Shannon, 2005).

Patient Outcomes

Preliminary results after 18 months of implementation showed promising trends in patient outcomes:

1. **Functional status**: Among high-risk patients enrolled in the model for at least 6 months, 68% maintained or improved functional status as measured by ADL and IADL scales, compared to historical baselines showing typical functional decline in this population.
2. **Medication appropriateness**: Potentially inappropriate medications were discontinued or doses adjusted for 42% of patients following pharmacist review, with particular improvements in psychotropic medication use and pain management.
3. **Symptom management**: Significant improvements were observed in pain control (37% reduction in patients reporting daily pain) and mood symptoms (29% reduction in depression scale scores) from baseline to 6-month follow-up.
4. **Patient experience**: Satisfaction surveys indicated that 86% of patients reported improved coordination of care, 78% felt their concerns were better addressed, and 82% expressed greater confidence in managing their health conditions.
5. **Caregiver burden**: Among patients with identified caregivers, measures of caregiver stress decreased by an average of 24% following implementation of enhanced support services and respite care arrangements.

These outcomes align with previous research on comprehensive geriatric assessment and integrated care models, suggesting that the primary care-based approach successfully translated key elements of specialist geriatric care to the primary care setting.

Healthcare Utilization

Changes in healthcare utilization patterns provided additional evidence of the model's impact:

1. **Emergency department visits**: A 31% reduction in ED visits was observed among high-risk patients enrolled in the model for at least 12 months, compared to their utilization in the 12 months prior to enrollment. This reduction was particularly pronounced for potentially preventable ED visits related to chronic disease exacerbations.
2. **Hospitalizations**: Hospital admissions decreased by 27% among enrolled patients, with even greater reductions (35%) in 30-day readmissions following discharge. These findings align with research by Haj-Ali et al. (2020) on the impact of interprofessional primary care on hospitalization rates.
3. **Primary care utilization**: The pattern of primary care visits shifted from primarily reactive, urgent visits to more planned, preventive encounters. Overall visit volume remained similar, but the nature of interactions changed substantially.
4. **Long-term care placement**: Among patients at high risk for institutionalization based on initial assessment, 82% were still living in the community after 12 months, exceeding expected rates based on risk profiles. This finding is consistent with research showing reduced institutionalization rates for older adults receiving comprehensive geriatric assessment (Veronese et al., 2022).
5. **Specialist referrals**: Appropriate specialist referrals increased by 18%, while potentially avoidable referrals decreased by 25%, suggesting more effective triage and management within primary care.

These utilization changes suggest potential cost savings and more efficient use of healthcare resources, though formal economic evaluation is ongoing.

Provider Experience

Feedback from healthcare providers offered insights into the model's impact on professional experience and team functioning:

1. **Satisfaction**: Provider satisfaction scores increased from baseline in all professional categories, with particularly notable improvements among family physicians who reported greater confidence in managing complex older patients.
2. **Workload and burnout**: Initial implementation increased workload for some team members, but by 12 months, measures of professional burnout had decreased for most providers. Family physicians reported that team support allowed them to focus more effectively on complex medical decision-making.
3. **Team development**: Qualitative data revealed evolution in team dynamics over time, progressing from initial role confusion to more integrated functioning with clear communication patterns and mutual respect for diverse expertise.
4. **Professional growth**: Team members reported enhanced skills and knowledge related to geriatric care, with 89% indicating they had acquired new competencies through participation in the model.
5. **Scope of practice**: All professional groups reported practicing closer to their full scope, with particularly significant changes for pharmacists, social workers, and occupational therapists who assumed expanded roles in patient care.

These findings align with literature on high-performing primary care practices, which consistently identifies team cohesion, role clarity, and professional satisfaction as key characteristics associated with quality care (Beaulieu et al., 2013).

DISCUSSION

Implications for Practice

The integrated team model described in this article demonstrates the feasibility and potential benefits of implementing structured, team-based approaches to geriatric care within primary care settings. Several key insights emerge that may inform practice in other settings:

1. **Risk stratification is essential**: Given limited resources, targeting team-based interventions to those at highest risk for adverse outcomes is critical for maximizing impact. The two-stage screening and assessment approach efficiently identified patients most likely to benefit from enhanced care.
2. **Standardized assessment tools provide value**: The use of validated, comprehensive assessment instruments facilitated systematic identification of patient needs, guided care planning, and enabled measurement of outcomes over time. The interRAI suite of tools proved particularly valuable for its standardized approach and embedded decision support (Heckman et al., 2013).
3. **Role clarity supports team functioning**: Clear definition of professional roles and responsibilities, balanced with flexibility to address emerging needs, facilitated effective team collaboration and prevented duplication or gaps in care.
4. **Care coordination requires dedicated resources**: Intentional attention to care coordination, including dedicated personnel and structured processes, was critical for managing complex care needs across multiple providers and settings.
5. **Technology must support workflow**: Health information technology played an important role in supporting team communication and care coordination, but required careful attention to integration with existing systems and workflow alignment.

These insights align with broader literature on implementing comprehensive care models for older adults with chronic conditions (Barajas-Nava et al., 2022) and highlight the importance of tailoring implementation to local contexts while maintaining fidelity to core model elements.

System-Level Considerations

Beyond practice-level implications, the experience implementing this model suggests several considerations for healthcare systems seeking to better serve complex older adults:

1. **Payment models matter**: Fee-for-service payment structures can create barriers to team-based care by incentivizing volume over comprehensive management. Alternative payment models that recognize the value of team-based approaches are needed to sustain such innovations.
2. **Workforce development is critical**: Building capacity for geriatric care in primary settings requires investment in training and education for all team members, with particular attention to core geriatric competencies across disciplines.
3. **Physical infrastructure influences team functioning**: Many primary care settings were designed for physician-centric care and lack adequate space for team collaboration. Future facility planning should incorporate physical environments conducive to team-based care.
4. **Performance measurement should align with goals**: Traditional performance metrics may not adequately capture the value of comprehensive geriatric care. Systems that incorporate patient-reported outcomes, function, and quality of life are needed to demonstrate impact.
5. **Scale and spread require support**: Moving from successful pilot implementations to system-wide adoption requires infrastructure for knowledge translation, implementation support, and ongoing quality improvement.

These considerations highlight the need for aligned policy approaches that create enabling conditions for team-based geriatric care rather than focusing solely on practice-level interventions.

Limitations and Future Directions

Several limitations of the current model and evaluation should be acknowledged:

1. **Implementation context**: The model was implemented in an academic practice with existing team infrastructure and leadership commitment to innovation, which may limit generalizability to other settings with fewer resources or different organizational cultures.
2. **Evaluation timeframe**: The 18-month evaluation period provides preliminary insights but may be insufficient to demonstrate long-term sustainability and outcomes, particularly for endpoints such as institutionalization and mortality.
3. **Sample size**: The relatively small number of patients enrolled in the initial implementation limits statistical power for detecting changes in some outcomes, particularly rare events like hospitalizations.
4. **Lack of randomized design**: The pragmatic, quality improvement approach to implementation and evaluation precluded randomized assignment, introducing potential selection bias and limiting causal inference.
5. **Cost analysis**: While utilization changes suggest potential cost savings, comprehensive economic evaluation incorporating implementation costs and long-term outcomes is still ongoing.

Future research and development directions include:

1. **Quality indicator development**: Refinement of quality indicators specific to primary care-based geriatric services to support performance measurement and quality improvement, building on existing interRAI quality indicator systems (Martin-Khan et al., 2024; Morris et al., 2013).
2. **Technology enhancement**: Development of more integrated digital tools to support assessment, care planning, and coordination across settings, with particular attention to interoperability and user experience.
3. **Training modules**: Creation of standardized training resources for primary care teams implementing geriatric care models, focusing on both clinical competencies and team functioning.
4. **Implementation toolkit**: Development of practical implementation guidance to support spread to diverse primary care settings, incorporating lessons learned from initial implementation.
5. **Policy recommendations**: Formulation of evidence-informed policy recommendations to address systemic barriers to implementing team-based geriatric care in primary settings.

These future directions aim to build on initial promising results to create sustainable, scalable approaches to meeting the complex needs of older adults in primary care settings.

CONCLUSION

The integrated team model described in this article represents a promising approach to addressing the complex needs of older adults within primary care settings. By combining structured assessment, risk stratification, interprofessional collaboration, and coordinated care planning, the model demonstrates potential to improve patient outcomes, enhance provider experience, and optimize healthcare utilization.

Key elements contributing to the model's success include standardized assessment tools, clear team roles and responsibilities, dedicated care coordination, and continuous learning and adaptation. Challenges encountered during implementation highlight the importance of attention to workflow integration, physical infrastructure, and organizational culture in supporting team-based approaches.

Preliminary outcomes suggest meaningful benefits for both patients and providers, with reductions in emergency department visits and hospitalizations indicating potential system-level impacts as well. While further evaluation is needed to confirm long-term outcomes and cost-effectiveness, the model offers a practical approach to translating evidence-based geriatric care principles to primary care settings with limited specialist resources.

As healthcare systems continue to grapple with the challenges of an aging population, primary care-based models that effectively integrate diverse professional expertise offer a promising path forward. By building capacity for comprehensive geriatric care within the medical home, such models can help ensure that complex older adults receive the right care, in the right place, at the right time—ultimately supporting the goal of healthy aging for all.

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