

Patient-Centered Medical Home With Colocation: Observations and Insights From an Academic Family Medicine Clinic

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Abstract

There is a movement in the United States to transform family medicine practices from single physician-based patient care to team-based care. These teams are usually composed of multiple disciplines, including social workers, pharmacists, registered nurses, physician assistants, nurse practitioners, and physicians. The teams support patients and their families, provide holistic care to patients of all ages, and allow their members to work to the highest level of their training in an integrated fashion. Grouping care team members together within visual and auditory distance of each other is likely to enhance communication and teamwork, resulting in more efficient care for patients. This grouping is termed colocation. The authors describe how the use of colocation can lead to clearer, faster communication between care team members. This practice style has the potential to be expanded into various clinical settings in any given health system and to almost all clinical specialties and practices.

Keywords

colocation, family medicine, team approach

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Movement Toward Colocation

There are 2 forces affecting care in the United States: the rise in chronic disease burden of an increasing elderly population and the lack of financial reimbursement and resources prohibiting physicians from addressing diseases in traditional fashion. Models of care that use technology and leverage resources to enable care of larger patient panels have been suggested to address these, one being the patient-centered medical home (PCMH), currently in use in the academic family medicine practice at Mayo Clinic, Jacksonville, Florida, which provides the observations and insights described in this article.

There are 3 fundamental building blocks of the PCMH: team-based care, prompt access to care, and continuity of care.¹ The PCMH model proposes teams made up of physicians, physician assistants, nurse practitioners, and other medical staff, whose training allows them to understand various aspects of care.¹ These teams allow for improved

patient outcomes, higher-quality care, greater savings, and improved staff satisfaction.^{2–5}

PCMH could be enhanced by improved communication. Ambulatory-care health settings could benefit from applying the concepts of relational coordination in clinical teams.⁶ This can be realized by *colocation*, in which team members are grouped together in a single location, within sight and hearing distance of each other. We employ colocation and feel that specific observations from our department may guide other clinics in their efforts to improve relational coordination.

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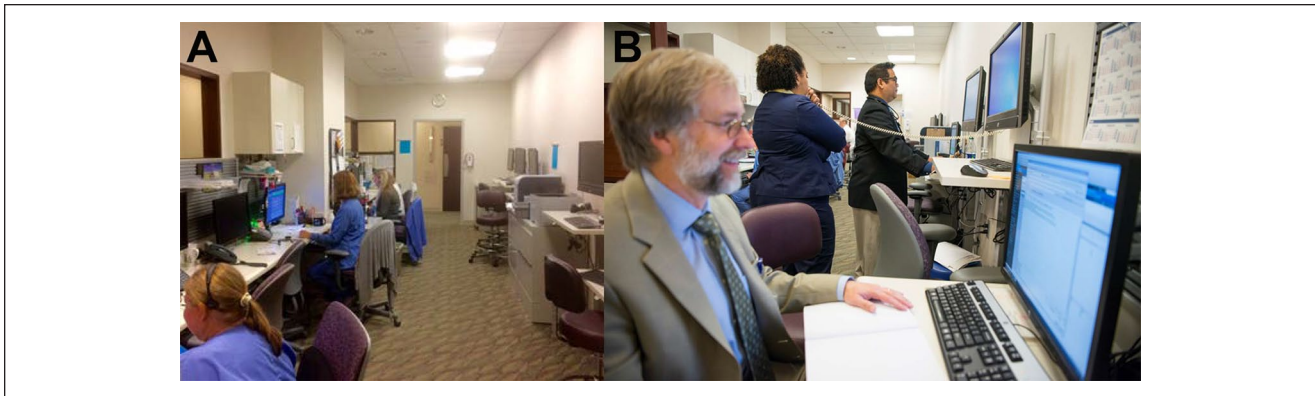


Figure 1. Colocation areas in the Department of Family Medicine, Mayo Clinic, Jacksonville, Florida. (A) Colocation area 1. (B) Colocation area 2.

Background on Colocation Concept

Colocation developed from attempts to improve family medicine practice environments. To address growing frustration among family physicians, and to define their continuing roles, an initiative called “The Future of Family Medicine Project” was started in 2002.⁷ Its goal was to transform family medicine practices to meet the needs of the changing health care environment.⁷ This project, in turn, led to the eventual development of the PCMH by the American Academy of Family Physicians, the American College of Physicians, the American Academy of Pediatrics, and the American Osteopathic Association. The PCMH concept includes physician-led care teams, whole-person orientation, integrated and coordinated care, a focus on quality and safety, and improved patient access to care.⁸

While physician-led teams were becoming more diverse, to include providers, triage staff, nurses, pharmacists, and social workers, our department was transforming into a PCMH. We adopted colocation (Figure 1), which let teams work and support each other in a central physical space where they could readily see, hear, and access each other.

Colocation as a Component of PCMH

A study of the PCMH found lower costs, improved clinician and patient experiences, and better care.⁹ *Continuity of care* is critical to any medical home and is achieved, in part, by team members providing office visits and answering questions for the same patient panels. Colocation in our department has enabled questions and concerns from patients and families to be addressed in real time, without delays caused by having to locate clinicians or wait for them to answer messages (Figure 2). Of note, we found that team members must still work together to assure specific questions are delivered to the correct individuals, and physicians answering messages are not bombarded with undifferentiated questions.

Patient access can be challenging and, at times, appears to be more difficult than achieving continuity of care,¹ but teamwork makes it easier to achieve prompt access.¹⁰ Colocation in our department has allowed for prompt answers to questions regarding access and optimal scheduling. If the patient’s physician is present, that physician is often able to clear an appointment slot if notified early.

Patient-centered care is a central theme of the PCMH but may increase intervals between office visits. As a result, interval care may need to be provided by staff, such as registered nurses. Less complex problems can be addressed by teams in colocation and not necessarily by physicians in clinic, allowing more time for the latter to address more complex issues. As patient-centered outcomes become more important to policy makers and health care managers,¹¹⁻¹³ colocation may enable lead to these by improved communication.

With more patients using electronic communication, it is important to achieve faster response times to questions and appointment needs. Effective teams are known for high-quality communication,¹⁴ and colocated teams may obtain physician input more quickly.¹⁰

Preclinic huddles provide time for planning and are an important part of the PCMH. Colocation facilitates ongoing smaller huddles, enabling knowledge-sharing more quickly, reinforcing goals.¹⁴ Although registered nurses, licensed practical nurses, and medical assistants are very knowledgeable, stalemates in decision making still occur, which are expeditiously resolved in PCMH colocation, compared to when physicians, in particular, were situated in offices or separate precepting areas.¹⁰

Mutual respect among team members is another benefit; this has been apparent in our department, as the trust level regarding care provided by each member has increased with colocation allowing for problems to be raised and solved immediately. The physicians witness the abilities of team members and are immediately privy to management decisions.

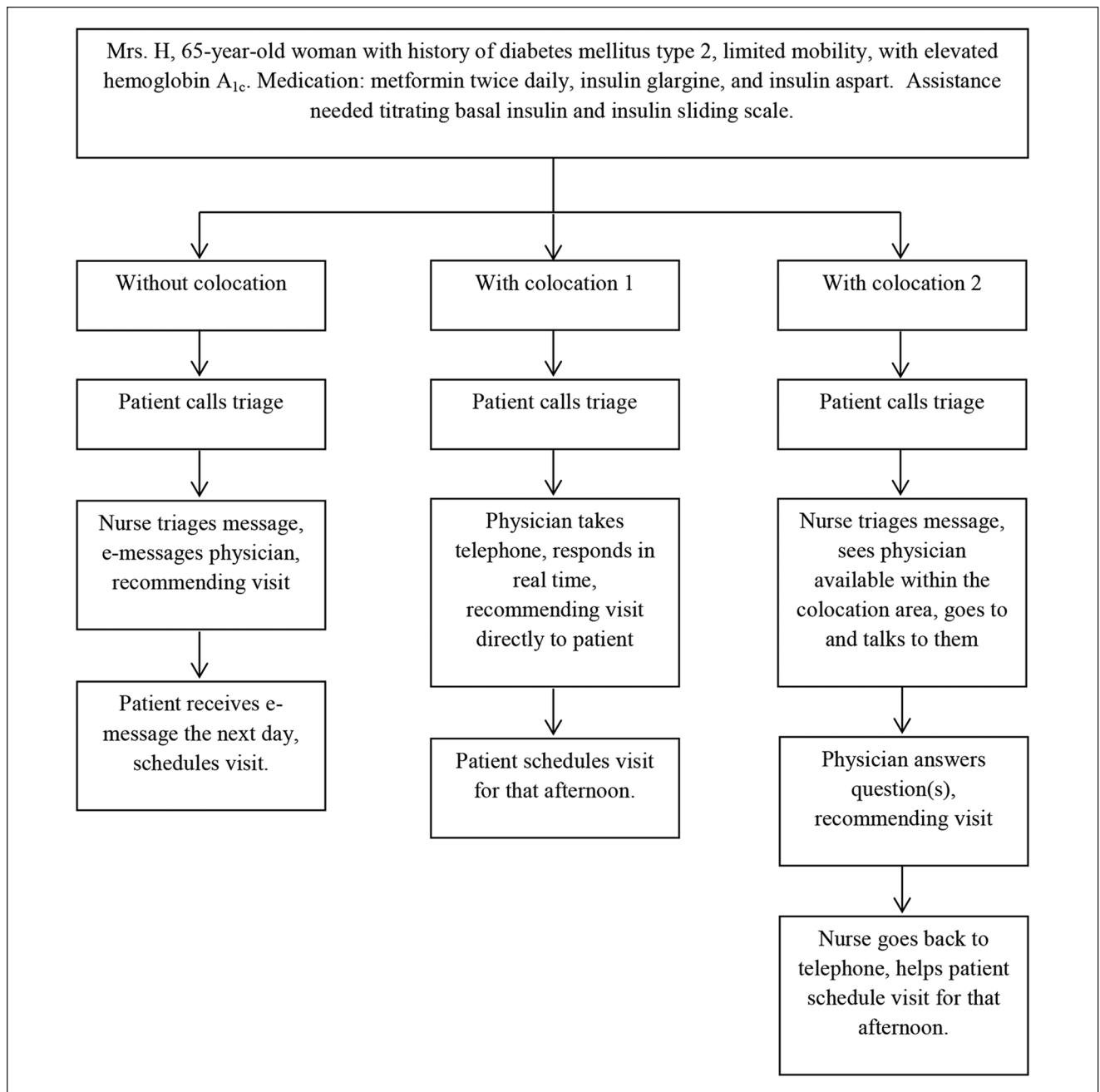


Figure 2. Comparison of patient question scenario, with and without colocation.

Camaraderie and staff satisfaction are other potential benefits; both have been improved, in part, by colocation in our department. The decreased volume of electronic communications has also led to positive implications for burnout.

Rationale for Colocation

Relational coordination focuses on maintaining work relationships among interdependent employees with varying functions. Care teams are characterized by a focus on problem solving, accuracy, and frequent and timely communication,

with mutual respect, shared knowledge, and shared goals.¹⁵ They can benefit from work processes based on relational coordination. As clinics nationwide move to systems that rely more on teams, PCMH colocation may be of benefit, as it has been with us.

Challenges of Colocation

There are several challenges, including team member attitudes toward, and understanding of, colocation. Colocation can be perceived as a barrier to attending to nonclinical

aspects of physicians' jobs. For example, attending to publications and presentations in between patient appointments may be more difficult in somewhat noisier colocation settings.

Clinicians may view colocation as "coming down from the ivory tower," the position of high esteem that physicians have traditionally been accorded. They may also feel that colocation removes "ownership" of patients. The PCMH concept leads to a shared team-ownership paradigm, resulting in improved outcomes without increasing staff effort.

Team members may perceive colocation as physician "supervision" rather than "collaboration." While the possibility of immediate praise for a good patient outcome exists, there is also the possibility of immediate reprimand because actions can be observed and instantly critiqued.

The realization of PCMH colocation as beneficial may be necessary before "buy-in" happens. However, as a clinic reaches a critical mass of team members familiar with colocation, it is logical to assume that the practice will become standard. Efforts should then shift from transitioning to, to improving existing, colocation.

Future Directions

Specialty colocation may be implemented in the future, especially for specialties that directly impact patients seen in family medicine. For example, colocation of psychiatry and family medicine has resulted in improved outcomes in cardio-metabolic disorders.¹⁶ *Virtual colocation* may be employed when physical colocation is not possible.¹⁷ Relational coordination experts could translate lessons learned within 1 department, to interdepartmental colocation. Existing colocation can also be analyzed for maximization.

Protocols help team members provide care for less complex medical challenges; however, patients often do not fit perfectly into algorithms. Greater coordination in a limited amount of time becomes vital. With colocation, physicians may be able to activate resources faster. For example, they could prompt medical assistants to obtain records, nurses to provide immunizations, and schedulers to obtain earlier appointment dates, all more expeditiously. However, standardizing guidelines is still important, and colocation should not be treated as a solution for addressing all patient concerns. Guidelines and algorithms will always be beneficial in team-based care, as these can help manage the volume of patients' questions and concerns.¹⁸

Clinicians will need to alter their mind-sets while in colocation, as it is not simply a way for them to delegate care.¹⁹ It simply allows for equal responsibility and access, with patients' health being the most important factor.

Colocation's benefits for patients could be reinforced by studies comparing outcomes in 2 settings, 1 colocated and 1 non-colocated, both with similar patient demographics and team profiles. For example, a study could show that

medication errors are fewer with colocation. Similarly, colocation effects on workflow could be studied, looking at the speed and efficiency with which messages and concerns are addressed.

Conclusions

Relational coordination inherent in colocation facilitates transformation to the PCMH model, by allowing stronger communication, greater shared knowledge, and faster achievement of patient goals. PCMH colocation strengthens huddle benefits.

In terms of downsides, colocation does require designated workspaces, a small increase in resources, and buy-in from team members.

PCMH requires a transition from an "I" to "we" paradigm. For PCMH colocation to succeed, there must be a shift from care in independent settings, to ones in which team members are in physical proximity. In high-functioning clinics, colocation could be advantageous for both patients and team members.

Authors' Note

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