Team-Based Care in Resident Clinics

Engage Residents to Lead in Team-Based Care

How Will This Module Help Me?

1. Illustrate the benefits of outpatient team-based care for resident clinics
2. Detail six steps to implement team-based principles into a residency curriculum
3. Provide examples of practices where residents are successfully engaged in outpatient team-based care
Introduction

Primary care physicians (PCPs) are challenged with the task of providing high-quality care for their patients while fielding increasing panel sizes and growing administrative and documentation burdens. As a result, a physician practice without a team is no longer effective. Physician-led team-based care is a strategic redistribution of work among members of a practice team to provide high quality care to a defined panel of patients.

This module focuses on physician-led team-based care for residency teaching clinics; there is a separate STEPS Forward™ module for team-based care for nonteaching primary care practices.

Who is involved in team-based care?

Physician-led health care teams have an anatomy (structure) and physiology (function). Most teams are composed of a core team (usually clinicians, including residents, and medical assistants) and an expanded care team for patients with greater needs (including registered nurse care managers, pharmacists, social workers, behavioral health professionals, and in some cases community health workers, patient navigators, or health coaches.1

Why incorporate team-based care into resident clinics?

For teaching practices that involve residents in their clinical care, effective teams are important for training future physicians to work as efficiently as possible.

In a physician-led team, all team members can provide aspects of care up to their level of training and expertise. At the discretion of the physician, the team can collectively:

- Deliver better quality care;
- Finish the work in the time allotted; and
- Make it possible for patients to access care more promptly.

Teams can improve quality and reduce health care costs beyond what clinicians alone can do. For example, patients in practices with teams at Intermountain Healthcare in Utah had significantly better diabetes and hypertension control and lower health care costs compared with patients in practices without teams.5

Teams can also improve practice financial health by increasing patient care revenues, even with clinicians working fewer hours, taking less work home, and experiencing less burnout.7–9

Six STEPS to Implement an Effective Team-Based Resident Clinic:

1. Assess Your Current Practice State
2. Create a Curriculum for the Residents
3. Create Core and Extended Teams
4. Set Team Schedule
5. Prioritize Team Stability

Copyright 2019 American Medical Association
6. Promote Team Engagement

Assess Your Current Practice State

Begin by evaluating and measuring your current state. Account for all personnel within your practice. Evaluate and document the number of team members and associated skillsets for all residents, faculty, advanced practice providers (NPs, PAs), nurses (RNs), pharmacists, behavioral health specialists, social workers, medical assistants (MAs), and front desk staff. By understanding your existing resources, you are better equipped to design your ideal team.

Process Map Toolkit
Use this tool to outline your current workflows.
(PPT, 2193 KB)

The UCSF Center for Excellence in Primary Care Building Blocks Assessment is one self-assessment tool that can be helpful in assessing the current practice state, including in the area of team-based care. The tool can be accessed on the CEPC website: https://cepc.ucsf.edu/where-are-you-now.

Q&A
How does involving residents in the physician-led team benefit my practice?

Residents are key members of the clinical team, taking care of a panel of patients. By taking the extra effort to ensure residents learn how to work with and lead a clinical team, you will be able to build higher functioning teams and increase patient and staff satisfaction. Quality metrics will improve when residents participate in and co-lead clinic-wide improvement projects.

Create a Curriculum for the Residents

Teaching residents the basics of team structure and team function provides many benefits to both the residents and your practice. Shadowing team members to understand what they do, and how to work with them as a physician, will provide significant benefit for their own future work.

The residency curriculum should include teaching about physician-led team-based care, starting early in the resident’s training. Residents learn in two main ways:

1. Having stable teams in place to experience working with their team members.
2. Intentional teaching within a longitudinal curriculum. Curriculum might include didactic presentation or online learning, Quality Improvement (QI) projects, Care Team case conferences, and education provided by nonphysician team members regarding their roles in patient care. Focus on the concept that a team is responsible for the health of a panel of patients.
Sample University of Colorado Family Medicine Residency Curriculum
Use this as an example of team-based residency curriculum.
(PDF, 69 KB)

Practice Scenario:
At the family medicine residency at Erie Family Health Center in Chicago, the staff is involved
in resident education. To model their principles of collaborative team learning, instruction is
delivered not only by faculty, but also by team nurses, MAs, and behaviorists. MAs and RNs
evaluate the residents twice a year and these evaluations are eagerly received by residents.

Staff are also included in Morbidity and Mortality case conferences held several times per year,
and this dramatically changes the discussion. As one faculty physician describes, involving the
insight of staff morphs the discussion from a focus on pathophysiology to an analysis of systems,
social determinants of health, and care coordination. Residents learn about team-based care and
clinic flow in their R1 year through a training led by the lead nurse and MA. The MA then leads a
2-week follow-up course to answer resident questions. There is a strong culture at the residency
practice of dismantling some of the hierarchy common in many medical clinics. At regular team
meetings, residents review their panel lists with their team to improve clinical quality.

Create Core and Extended Teams
Design your ideal model and create several core teams based on the number of team members, associated
skillsets, and patient needs.

In designing your team, consider the following questions:
1. How many patients are typically seen during a clinic half-day?
2. How many patients can a resident see during a clinic half-day? (The number of patients residents realistically
can see in a half-day depends on several factors, including preceptor availability, staffing ratios, year in
residency, time of year, etc. The typical number seen by residents in a clinic session also often varies based on
residency specialty.)
3. How many teams will you need to create?
4. Who will be working on each team during each clinic session?
5. What are the total numbers of people on each team?
6. What will be the role and responsibility of each team member?
7. Are there gaps in process or skillset that need to be filled?
Example:
A practice has 12 residents, with each resident seeing patients two half-day sessions per week.
This results in a total of 24 resident half-day sessions per week.

<table>
<thead>
<tr>
<th>Mon</th>
<th>Tues</th>
<th>Wed</th>
<th>Thurs</th>
<th>Fri</th>
</tr>
</thead>
<tbody>
<tr>
<td>AM Clinic</td>
<td>AM Clinic</td>
<td>AM Clinic</td>
<td>AM Clinic</td>
<td>AM Clinic</td>
</tr>
<tr>
<td>PM Clinic</td>
<td>PM Clinic</td>
<td>PM Clinic</td>
<td>PM Clinic</td>
<td>PM Clinic</td>
</tr>
</tbody>
</table>

You might create three teams, each with four residents. On each half-day session each team would have one resident in clinic.
Team Roles and Responsibilities
State licensure laws and regulations set the guiderails for the scope of practice of various licensed practitioners. Work with legal counsel before establishing team roles and responsibilities in your state. For example:

- **Medical assistants (MAs)** in many residency clinics are responsible for panel management: making sure that all patients receive their routine chronic and preventive care services in a timely manner. Clinics with MAs doing panel management provide better preventive care for patients while relieving clinicians of this responsibility. During pre-visit planning (PVP), care gaps are identified and addressed with the aid of standing orders. Mammograms, immunizations, annual lab tests, and the like are entered and pended according to protocol. For additional ideas for MA tasks, see Table 1 below.

- **Nurse and Pharmacist Care Managers** can assist in and improve care for many patients. For example, nursing and pharmacist care managers can provide much of the care for patients with diabetes and hypertension, improving the patients’ disease control and reducing a great deal of clinician work. Depending on state laws, physician-approved standing orders or protocols can empower care managers to order and interpret laboratory data and initiate and adjust common non-narcotic medications.

- **Behavioral Health Professionals** can improve care for patients with depression and reduce clinician work. Many residency programs have a dedicated behavioral health professional in each clinic; otherwise, programs could share this resource across various clinics.

*Note: Responsibilities may vary by state law and institution.*

---

Table 1. Team-Based Care: Medical Assistant Tasks

<table>
<thead>
<tr>
<th>Task Category</th>
<th>Responsibilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced Rooming</td>
<td>• Height and weight.</td>
</tr>
<tr>
<td></td>
<td>• Identify chief complaint, complete agenda, solicit top two patient concerns.</td>
</tr>
<tr>
<td></td>
<td>• Allergies, medication reconciliation (remove medications by protocol), pharmacy selection, pend any refills</td>
</tr>
<tr>
<td></td>
<td>• Update medical, surgical, family history.</td>
</tr>
<tr>
<td></td>
<td>• Complete advanced directive (MOPA—Medical Durable Power of Attorney)</td>
</tr>
<tr>
<td></td>
<td>• Screenings: fall, suicide, learning barriers, PHQ2</td>
</tr>
<tr>
<td></td>
<td>• Identify and act on preventive care gaps.</td>
</tr>
<tr>
<td></td>
<td>• Take blood pressure and enter vital signs.</td>
</tr>
<tr>
<td></td>
<td>• Get necessary equipment (biopsy materials, pap, etc.).</td>
</tr>
<tr>
<td></td>
<td>• Obtain brief templated HP/ROS.</td>
</tr>
<tr>
<td></td>
<td>• Standing orders: labs, etc.</td>
</tr>
<tr>
<td>In-room support</td>
<td>• Documentation support of additional HPI and physical exam.</td>
</tr>
<tr>
<td></td>
<td>• Pend any orders and document any patient instructions per health care provider direction.</td>
</tr>
<tr>
<td></td>
<td>• Other &quot;on the fly&quot; support as directed (find team members, complete labs, prepare vaccines, room next patient, etc.).</td>
</tr>
<tr>
<td>Post-visit/checkout</td>
<td>• Administer vaccines, perform blood work as needed, ECGs, other treatments.</td>
</tr>
<tr>
<td></td>
<td>• Schedule follow-up visits.</td>
</tr>
<tr>
<td></td>
<td>• Review plan and instructions with patient.</td>
</tr>
<tr>
<td></td>
<td>• Escort patient to lobby.</td>
</tr>
<tr>
<td>In-basket/message support</td>
<td>• Review patient messages.</td>
</tr>
<tr>
<td></td>
<td>• Call/patient, address any issues possible, pend any orders needed and forward to appropriate health care provider.</td>
</tr>
</tbody>
</table>
Below are two examples of residencies that leverage MAs as part of their core team model:

**Model: Crozer-Keystone Family Medicine Residency’s Center for Family Health (CFH)**

Three color teams, each with 3-4 faculty attendings, two MAs, and 9-10 residents caring for about 2000 patients. An RN care manager, pharmacist, social worker, and psychology students work across all three teams. The teams are divided into six teamlets at each clinic session. Each teamlet consists of one health care provider and one MA.

Several medical students work with teamlets of R2s or R3s. Faculty members usually work with the same MA on their color team. Residents work with any of the six MAs, preferentially with the two MAs from their color team.

<table>
<thead>
<tr>
<th></th>
<th>3-4 Faculty Attendings</th>
<th>3-4 Faculty Attendings</th>
<th>3-4 Faculty Attendings</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 MAs</td>
<td></td>
<td></td>
<td>2 MAs</td>
</tr>
<tr>
<td>9-10 Residents</td>
<td></td>
<td>9-10 Residents</td>
<td>9-10 Residents</td>
</tr>
<tr>
<td>(2,000 Patients)</td>
<td></td>
<td>(2,000 Patients)</td>
<td>(2,000 Patients)</td>
</tr>
</tbody>
</table>

**Model: University of Colorado Family Medicine Residency**

In this model, the traditional clinician visit becomes a clinician-MA team visit. MAs receive rigorous training through the MA Academy and work within standardized protocols. The ratio of MAs to provider is increased to 2:1 or 2.5:1.

2:1 Ratio (MA to MD)
As you design your model, it is important to also determine your extended care team composition. Do you have RN care managers, pharmacists, social workers, behavioral health professionals, physical therapists, community health workers, health coaches, or patient navigators? Often the extended care team supports all the core teams in the practice. Nurses can function effectively as care managers for patients with chronic conditions.12

Q&A

What should the staffing ratio be between MAs and clinicians (residents and other providers)?

Staffing ratios can vary greatly between practices based on practice resources. In general, the higher the staffing ratio, the more expanded the role can be for MAs. In practices where an MA is shared between a few providers, the MA’s role is often limited to traditional MA tasks such as rooming patients and taking vitals. In practices where there is a 1:1 MA to clinician model, MAs can become much more involved in closing care gaps in health care maintenance and chronic care, expanded screenings, and coordinating the flow of the clinic. In the University of Colorado example above, a 2-2.5:1 model allows MAs to become a central part of the care team and clinical encounter by staying in the room during the patient visit, helping with a large part of team-based documentation, and further coordinating care for the patient after having heard the care plan during the encounter.

Can I leverage non-clinical team members in our model?

Yes, there is value in including and designating non-clinical team members. For example, leveraging the support of front desk team members is valuable and essential for creating efficiency. Assess whether your front desk personnel should be assigned to a team or whether they should support all the teams across the practice.

Assigning front desk staff to a team is helpful because the staff get to know the patients on a personal and detailed level. This model enables staff to independently handle more phone calls and electronic messages, resulting in more efficient care coordination across the care team.

Should front desk staff be involved in team meetings and huddles?

Absolutely! Often the front desk staff is aware of patient issues that impact their experience. The patient may have shared why they were late for the appointment or that they have another important appointment at home, work, or in another department.

What is the benefit of our model for the non-clinical team members?

A key benefit of TBC is staying on schedule. Often the front desk staff is the only person patients complain to about a delay. If the team is more efficient, front desk staff will have a more pleasant workday.

How can I engage the front desk staff in team-based care?

The front desk staff can help with medical records by printing a simple medication list and handing it to the patient for their review upon check in. Once a patient is identified as needing an immunization during PVP, the vaccine information statement (VIS) can also be handed to the patient in their preferred language upon check in. It is rewarding for the staff to see an appreciative patient when handed patient education material in a familiar language.

What if phone calls go to a centralized call center?

If phone calls go to a call center or to a phone line that all the front desk personnel answer, it is likely not practical to link front desk personnel to a specific team. In order to leverage front desk staff, you may want to consider a separate phone extension for each team. You can also partner with leadership at the
centralized call center to provide specific scripting, decision triage, or training to those team members handling your clinic’s phone calls.

**Example phone scheduling algorithm:**

1. First try to schedule patient with PCP
2. If PCP does not have availability, schedule with PCP’s clinic team
3. If clinic team does not have availability to meet the patient’s need, schedule with any clinic provider
4. If nothing meets the patient’s need, transfer the patient to a clinic staff/nurse to assist with patient triage and assist in meeting the patient’s needs

Scripts can be written for call center staff to use in scheduling within a team, with language such as “Your primary doctor does not have any appointments left this week, however I can schedule you with another doctor on your home team, the Blue Team, on Tuesday.”

### 4 Set Team Schedule

Adapt and refine team composition as needed. Consider the size of the team’s [patient panel](https://edhub.ama-assn.org/), resources, and number of physician faculty per resident for precepting. Depending on how many team members are in the practice each day, you will want to adjust the team structure. This may entail adding additional physician faculty, advanced practice providers, MAs, etc.

To maintain a streamlined workflow, ensure that clinicians are scheduled equally across clinic sessions and days. Schedule to minimize clinicians or staff having to switch teams due to shifting numbers on different sessions or days. Ensuring a consistent number of clinicians each day will also assist in clinicians remaining on their home team. It is difficult to maintain a model with resources shifting from day-to-day or session-to-session.

When scheduling residents, plan far in advance to ensure they are in clinic on a predictable schedule with minimal variability. Changes after the clinic schedule has been released should be minimized. The more last-minute changes, the more difficult it will be for the clinic to schedule teamlets and teams consistently.

### 5 Prioritize Team Stability

For a team to work well, it needs to be stable. Stability can be enhanced by having the same team members work together every day. Consistent teams communicate and work more efficiently together and are associated with lower burnout among clinicians.\(^\text{15}\)

Co-location of a team is another method of increasing team stability. Team members that work side by side in a common space are able to communicate minute-to-minute, improving team cohesion. In addition to team satisfaction, patient satisfaction also improves as their care teams know them better and vice-versa.\(^\text{13-14}\)

For residency teaching practices, team stability is a major challenge because team members are frequently moved to a different team and patients are often seen by providers not on their home team. Optimizing team stability means creating scheduling systems that prevent team members and patients from being shifted away from their home team. For residents who are constantly going from one rotation to another, stable teams in their primary care practice provide a comfortable home base during their residency.

Once physician faculty, residents, and MAs are assigned to teams and teamlets, the clinic can track if the same teams and teamlets are working together consistently and use the data to improve stability. A manual count from the weekly provider/staff schedule should give the percentage of times in a month that clinicians are assigned to work with their primary MA. This can be further broken down into different clinician types – physician faculty, residents, and NP/PAs. For overall team stability, another metric could be the percentage of half-day clinic sessions in a month in which at least one team member was moved to a different team. This metric can
also be broken down into physician faculty, residents, or MAs. It is often impossible to pair each resident with one MA all the time, so many teaching clinics pair each resident with a small group of MAs (for example, 2-3).

**Practice Scenario:**

At University of Arizona Phoenix Family Medicine Residency, patient appointment cards are printed with the four team colors and names of each team’s physicians (including faculty and residents). Patients identify with their team and the front desk prioritizes making appointments for patients on their team. The residency coordinator does everything possible to schedule residents on their home team.

## Promote Team Engagement

Resident engagement with their teams can be challenging when residents need to be away from the clinic in many other settings for their training. Programs have thus created specific ways to promote resident engagement in the clinic, in addition to scheduling residents to work on the same assigned teams with the same MA’s, nurses, physician assistants, etc. over time.

For example, some programs now start residency with a clinic orientation, where residents spend extra time in the clinic in the beginning of their training to learn about the roles of their team members and how they will function in the clinic as resident providers. This can involve shadowing sessions where the resident shadows an MA or nurse in the clinic and the nursing staff teach the resident about their roles. At the McGaw Northwestern Family Medicine Residency Program at Erie Family Health Center, MAs and RNs take a role in collaborative team education, where they teach residents about clinic flow or skills like spirometry and are also asked to evaluate the residents twice a year.

Other programs schedule ongoing times for residents to engage in clinic-related tasks and roles outside of direct patient care as part of their curriculum. For example, this might involve time to review population management for their panel of patients alongside their team members. Scheduling time and creating ways for residents to participate in clinic and team meetings is also helpful for engagement—typically when this is not built into the resident schedule, other responsibilities will prevent residents from attending and engaging in larger discussions for clinic improvement. In addition to ensuring residents have an active role in clinic improvement and leadership, at Cambridge Health Alliance residents and MAs also receive training on giving mutual feedback on how they are working together and how their teamwork can improve, and take the time to do this as often as possible.

## Q&A

How can QI projects help promote engagement?

The most effective way for residents to learn how to conduct QI projects and lead clinic improvement is by leading a project, rather than passively participating. This is accomplished by building QI projects around a practice transformation curriculum. Residents will need basic QI methodology education, completed in a didactic or workshop setting.

Physician faculty mentorship will be key to guiding project selection that benefits both the resident and the clinic. In addition, faculty can engage clinic leadership to support the project by confronting any barriers that may arise.

A resident group project, such as a class project, is generally more successful than an individual resident project. One example is a class project completed by residents at the University of Colorado on chronic opioid refill visits. Patient visit workflows were developed for MAs to collect a urine toxicology, verify there
is an up-to-date opioid agreement, and check the prescription monitoring program database during the rooming process.

Developing a schedule that assigns residents to work on or lead the QI project during rotations when they are in the clinic helps organize and sustain the project over time. Performing the QI project with their team allows residents to gain an understanding of the importance of the team. The QI team might include clinic leadership, support staff, nurses, social work/care management, behavioral health specialists, pharmacists, and patients. Asking patients how well the team coordinated their care is a worthwhile metric. Partnering team members with residents on QI projects also creates a pathway for team members to sustain projects after residents graduate.

### Conclusion

For residents to learn how to lead an effective team in their future careers, they need to experience an effective team during their residency. Stable teams are a challenge in residency teaching clinics because residents are in clinic part-time due to their educational need to rotate to different services. A number of residency clinics have made great strides to meet this challenge and implement effective teams.

### AMA Pearls

Persistence pays off. Developing the right team structure and team culture requires a compromise between the ideal state and what is possible now.

Tracking data at the team level is essential for team building. Knowing how different teams compare on clinical performance (eg, preventive care, diabetes/hypertension outcomes), operational excellence (eg, continuity of care, team stability), and patient/team member experience can engage teams in healthy competition in improving quality metrics.

Residents and staff need to be engaged in the work of team building since they are the primary stakeholders in this process. Perfection is not possible in a teaching clinic; improvement is.

### Learning Objectives

1. Explain the benefits of outpatient team-based care for resident clinics
2. Outline team structure and tools for building stable teams for residents
Article Information

AMA CME Accreditation Information

Credit Designation Statement: The American Medical Association designates this enduring material activity for a maximum of 0.50 AMA PRA Category 1 Credit™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Disclosure Statement: Unless noted, all individuals in control of content reported no relevant financial relationships.

ABP MOC Statement: Successful completion of this CME activity, which includes participation in the activity and individual assessment of and feedback to the learner, enables the learner to earn up to 0.50 MOC points in the American Board of Pediatrics' (ABP) Maintenance of Certification (MOC) program. It is the CME activity provider's responsibility to submit learner completion information to ACCME for the purpose of granting ABP MOC credit.

ABIM MOC Statement: Successful completion of this CME activity, which includes participation in the evaluation component, enables the participant to earn up to 0.50 Medical Knowledge MOC points the American Board of Internal Medicine's (ABIM) Maintenance of Certification (MOC) program. Participants will earn MOC points equivalent to the amount of CME credits claimed for the activity. It is the CME activity provider's responsibility to submit participant completion information to ACCME for the purpose of granting ABIM MOC credit.

ABONHS MOC Statement: Successful completion of this CME activity, which includes participation in the evaluation component, enables the participant to meet the expectations of the American Board of Otolaryngology's Maintenance of Certification (MOC) program. It is the CME activity provider's responsibility to submit participant completion information to ACCME for the purpose of recognizing participation.

References