

IMPROVEMENT STRATEGIES MODEL: FACILITY ORGANIZATION AND MANAGEMENT: TEAM-BASED CARE ORGANIZATION

CORE PRINCIPLES OF FACILITY ORGANIZATION AND MANAGEMENT

Facility organization and management includes: the effective organization of facility operations; deployment of human resources in multidisciplinary teams; routine collection and use of information systems to establish targets, monitor progress, and implement ongoing quality improvement initiatives; and the capability of managers to oversee, support, and enforce these processes.

TEAM-BASED CARE ORGANIZATION

Team-based care organization refers to groups of providers with diverse training, education, and capabilities.(1) Working together and leveraging their distinct expertise, these teams are designed to provide comprehensive, coordinated, and efficient primary health care to patients.(2) Effective team-based care involves two central components: comprehensive team composition to meet population health needs and strong team culture focused on communication, respect, and trust between team members.

FACILITY MANAGEMENT CAPABILITY AND LEADERSHIP

Facility management capability and leadership refers to the capabilities of managers and leaders within a facility. Leaders should have relevant skills related to coordination of operations, external/consumer relations, target setting, and human resources.(3) Strong leaders must have or develop particular competencies and personality traits to engage the workforce and manage effectively. Competencies can be defined as the combination of motive, trait, skill, self-image, social role, and body of relevant knowledge.(4) Managers should be properly equipped with the tools, systems, and skills to productively assess the health workforce within a facility and provide supportive supervision.

INFORMATION SYSTEMS USE

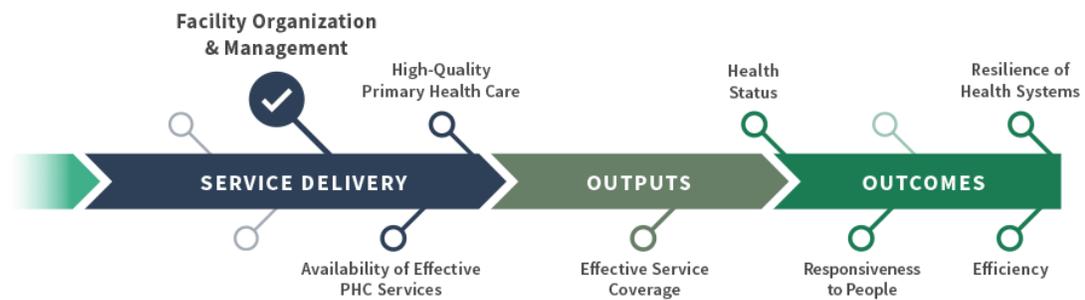
Information systems use is the effective utilization of existing information systems (the infrastructure related to Information Systems is addressed in the Information Systems module within Systems - forthcoming) and the data they produce at the facility level to coordinate care, monitor performance, and drive management. Effective information systems use can support a variety of purposes ranging from priority setting to clinical tasks and education. Information systems should be easy to use with clear expectations of use and systems for monitoring and evaluation and should provide easily accessible information to those who use them.

PERFORMANCE MEASUREMENT AND MANAGEMENT

Performance measurement and management includes both supportive and continuous supervision of staff as well as the routine establishment of performance targets, monitoring of progress towards these targets, and implementation of quality improvement (QI) initiatives to address identified gaps. These measurement systems should be designed with feedback loops to target results to the end users of the data and should be ensconced in larger continuous QI systems.

WHAT COULD YOUR COUNTRY ACHIEVE BY FOCUSING ON FACILITY ORGANIZATION AND MANAGEMENT?

Facility organization and management, when done effectively, can contribute to an array of downstream effects. These may include:



FACILITY ORGANIZATION AND MANAGEMENT: WHAT ARE THE FIRST STEPS?

The four sub-components within Facility Organization and Management (team-based care organization, facility management capabilities and leadership, information systems use, and performance measurement and management) are diverse, addressing elements of workforce, infrastructure, and individual competencies. Consequently, strategies to improve service delivery within facility organization and management are far-reaching, and the best fit for any given context may be highly contingent upon pre-existing structures, systems, and capacities. For instance, improvements in team-based care organization may require the education and integration of a new cadre of providers in one context, while in a second context training for existing team members in respectful teamwork may be needed. Thus, the order in which health systems address sub-components of facility organization and management is dependent upon initial assessments, the magnitude of change needed, and contextual feasibility. The following sequencing of domains is intended to show the interconnectedness of these elements rather than imply a specific pathway that must be followed.

[Information systems use](#) underlies many aspects of facility organization and management. Planning services, allocating resources, accessing patient information, and evaluating performance or management of a health facility and its staff all require robust facility data originating from information systems that are well integrated into the facility and are easy to use. Building on the inputs to establish these information systems, more efficient use of information systems can be championed by facility leaders and managers. Making use of information systems and relevant data, facility leaders - whose skill sets and responsibilities are encompassed by [facility management capability and leadership](#) - can enact necessary reforms or changes in service delivery, monitor change, and foster a facility culture and learning system which values data use for continual improvement. Data on the size and needs of the population should inform the composition and size of [care teams](#) while the culture, goals, and responsibilities within the teams should be guided and facilitated by leadership. Finally, well-designed [performance measurement and management](#) systems should be used to monitor the functioning of all aspects of a facility, including

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team-based care, information systems, and facility leadership, highlighting gaps and subsequently opportunities for continued improvement. Facility managers should have the necessary training and capability to use data to guide improvement.

What it is

TEAM-BASED CARE ORGANIZATION

What others have done

How to get started

How to succeed

Team-based care organization refers to groups of providers with diverse education and capabilities. (1) Working together and leveraging their distinct expertise, these teams are designed to provide comprehensive, coordinated, and efficient primary health care to patients. (2) Effective team-based care involves two central components: comprehensive team composition and strong team culture focused on communication, respect, and trust between team members.

WHAT SHOULD I KNOW BEFORE BEGINNING IMPLEMENTATION?

The majority of the available literature and toolkits addressing implementation of team-based care comes from high-income countries (HIC) and as such may assume certain structural capabilities such as fully integrated electronic information systems, consistent internet connectivity, adequate human resource supply, and patient access to services. (2,5) Regardless, many of the considerations in these resources are relevant or can be adapted to low and middle-income country (LMIC) contexts.

SERVICE DELIVERY CHANGES FOR TEAM-BASED CARE ORGANIZATION

The Safety Net Medical Home Initiative identified “[Continuous and Team-Based Healing Relationships](#)” as one of eight change concepts for transforming health systems to a Patient-Centered Medical Home model - a primary care delivery model in the United States. In the implementation guide, the following four high-level service delivery changes are discussed as strategies to foster continuous and team-based healing relationships:

- ▶ **Empanel patients** - Empanelment is the process of assigning patients to a provider or care team. While it’s possible to have effective teams without empanelment, effective population health management may be best achieved if members of a team have specific roles for serving the needs of their empaneled population (for instance, CHWs linked to a care team are responsible for proactive population outreach to the empaneled population). See the [empanelment](#) module for how to begin assigning a population to a care team, and see the person-centered care module (forthcoming) for more information on how patients and providers or care teams can work together.
- ▶ **Provide organizational support** - Facility leaders should establish systems to provide organizational support to care delivery teams. This includes developing methods for communication between team members, systems to track patient care, and creating strategies for delegating and ensuring completion of tasks between team members. This should be facilitated by robust and appropriate information systems. Additionally, adequate infrastructure, education, and general [provider motivation](#) mechanisms are necessary to ensure that teams and individual providers are well supported.
- ▶ **Evaluate access** - Facility managers should ensure that patients are able to see their provider or care team whenever possible. Access should be considered from multiple dimensions including financial access, geographic access, and timeliness. All of these dimensions are discussed within the [Access](#) module.
- ▶ **Define roles** - Facility leaders should ensure that all team members have define roles and job descriptions. Clinical and administrative tasks should be distributed among care team members to reflect the skills, abilities, local resources, and credentials of team members. See “team culture” below. (5)

What it is

BUILDING A TEAMWhat others
have done

Defining roles and determining the mix of providers within a care team involves consideration of the patient panel needs, the human resource supply, and national policies for care delivery. No single “ideal” team composition exists, and though the size and composition of teams can vary dramatically, even small teams of two or three providers working together can yield benefits to patients beyond what providers operating individually would be able to achieve.

How to get
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Stakeholders should address the following three overarching considerations when building a care team tailored to the needs of the population and reflecting existing resources:

- ▶ **Determining the size of a care team** - The process for determining the size of the care team may differ depending on whether or not the population is empaneled:
 - ▷ Empaneled - If the population is already empaneled, determining the size of the care team involves consideration of the size of the patient panel, how frequently they actively seek care, how often they should be receiving proactive care (see [proactive population outreach](#) module), and demographics or burden of disease specific to the panel (see [local priority setting](#) module). Additionally, decision makers should evaluate the workload and capacity of existing providers. The number of patients a provider sees each day, minutes they spend with each patient, and working hours in the day can help determine the capacity of a given provider, team, or facility. These data can then be remapped to calculate what size care team is needed to provide efficient care while also spending an appropriate amount of time with patients.
 - ▷ Not empaneled - If the population is not empaneled, implementers may consider establishing empanelment to better understand the size and needs of patients. However, implementers can also estimate the panel by enumerating the patients who actively seek care as well as those for whom the facility should be responsible based on geography. Balancing team size relative to the panel is important; if a care team is too large, continuity may be compromised while a small care team may not be able to appropriately manage their patients.(6)
- ▶ **Determining the composition of a care team** - the size and composition of the care team should be considered together. Determining an optimal composition requires consideration of existing cadres within the country - including their skills and training - and it may be useful to map the needs of a patient panel to the competencies of various providers. While each panel will require a different mix of providers based on health needs, facility capability, and geographic access to specialized services, potential cadres that may be included in team composition include: doctors, mid-level practitioners, nurses, clinical assistants, administrative assistants, pharmacists and pharmacy assistants, oral/dental health practitioners, mental health practitioners, vision/eye care practitioners, lab personnel, physiotherapists/occupational therapists, rehab practitioners, social workers, financial assistants, community health workers, team managers/supervisors. The competencies of these cadres will differ based on training curricula and roles and responsibilities in each country.
- ▶ **Delegating responsibilities** - considering the skills and training for each member of the care team as well as rules and regulations within the facility, stakeholders can begin delegating necessary clinical and administrative tasks between team members. More information on delegation is included in the [facility management capabilities and leadership](#) module. However, when delegating responsibilities, it is important to ensure that providers capable of delivering a range of services are available in the facilities at all times in order to facilitate patient access to services and promote integration and comprehensiveness.

What it is

The Cambridge Health Alliance in the United States has a [useful guide](#) for developing care teams, including specific steps to ensure effective delegation of responsibilities:

What others
have done

- ▶ Define goals and develop a shared aim - teams should be able to define their goals for delivering care to their patient panel. These goals can be used as a means to establish team expectations and define performance measurement targets as well as service delivery activities.

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started

- ▶ Define specific, measurable outcomes and objectives - targets and indicators are discussed in more detail in the [performance measurement and management](#) module, but it is important to ensure that facility performance measures encompass team-based care and are mapped to team goals.

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succeed

- ▶ Assign roles for each care team member and define and delegate functions and tasks - this can be accomplished by listing all of the tasks completed within the facility during a typical day and delegating each task to a specific member of the care team. The scope of each task should be clear to all members of the care team, and expectations should be recorded and physically accessible (i.e. pinned in a common area or available on a web portal).

- ▶ Ensure that each team member is competent to perform their defined and delegated functions and tasks - when delegating each task, team leaders should ensure that each team member feels that they have the necessary training and skills to perform the expected tasks. Providers should receive regular in-service training, and there should also be appropriate supportive supervision in place to monitor provider performance.

- ▶ Ensure that clinical and administrative systems are present and able to support team members in their defined work - for instance, if team members are expected to record information about patients or keep appointment systems, there should be standardized systems for doing so, and providers should be trained in their use.

- ▶ Create communication structures and processes - when working with a team of providers it is important to create protected time - such as regular team meetings - to communicate changes in service delivery and review patients or expectations. Creating a team culture is discussed in greater detail below. Additionally, if patients are seen by multiple providers, there should be appropriate systems in place for providers to record relevant information to inform future care and hand offs between providers.

- ▶ Use data to assess team progress and performance - the use of data is discussed in more detail in the [performance measurement and management](#) module. However, the presence of systems for data collection and analysis is not sufficient to improve performance; care teams must consider how they will receive and incorporate data on their performance through feedback from managers and facility leaders as well as from providers. Based on the frequency of performance reports and facility-level improvement systems, care teams may choose to set aside time on a regular basis to review performance and adapt care processes as needed.(6)

TEAM CULTURE

Effective care teams must not only have an appropriate mix of providers with differing skill sets, but must also function as a singular unit to provide effective, coordinated, and comprehensive care to their population. Collaborative teamwork requires skills that may not be inherent for all providers, and these skills may need to be developed and fostered as a team.(7) Coherent and unified teams should share a sense of collective responsibility and have well-defined but flexible roles and work procedures. Strategies to build strong teams include the following:

- ▶ Identify a facilitator for team building - One member of the team should be responsible for team building. This may include facilitating team huddles, verbally sharing feedback with the team,

and communicating changes in care delivery. This individual does not necessarily need to be the team member with the most education or training, but he or she should have strong interpersonal and leadership skills and understand the goals and purpose of the team. It is important to communicate that this facilitator is not the “leader” of the team, and this person should work to ensure that all members of the team have a voice and contribute to team decisions.

- ▶ Implement regular teamwork training - Teams should have protected time to work on improving their teamwork and understanding how their roles fit with the other members of the care team.
- ▶ Ensure that provider concerns are heard - because transitioning to sharing patients and working in a team may take time and effort, it is important for facility leaders to actively solicit and respond to provider concerns. This can even take place in a structured manner during team meetings. Facility leaders may choose to consider anonymous feedback systems as well.
- ▶ Protect time for holding case conferences - team members can support one another’s continued learning and improvement by reviewing patients together as a team and discussing how they could optimize their specific skills and training to ensure that similar patients receive the best possible care. This is particularly relevant when facilities identify errors or near misses. These instances should be debriefed with the whole team. More information on cultivating a safety culture is discussed in the [Safety](#) module (8)

An upstream and long-term approach to achieving optimal team performance is interprofessional education. Sensitizing providers to the skill sets and values of other cadres during medical or continuing education may make them stronger collaborators when they are part of care teams in facilities. The WHO recommends six action steps for [advancing interprofessional education](#):

- ▶ Agree to a common vision and purpose for interprofessional education and identify key stakeholders.
- ▶ Develop interprofessional education curricula according to principles of good educational practice.
- ▶ Provide organizational support and financial/time allocations for developing delivery of interprofessional education and staff training.
- ▶ Introduce interprofessional education into health worker training programs.
- ▶ Ensure that there are competent staff who are responsible for developing, delivering and evaluating interprofessional education.
- ▶ Ensure that leaders of education institutions/work settings are committed to interprofessional education.(9)

If interprofessional education seems like a tangible long-term strategy in a given context, stakeholders can start by evaluating the current education system and identifying opportunities where interprofessional curricula can be integrated into existing courses or trainings. There are two considerations for interprofessional education: 1) creating a curriculum for a single cadre that draws on lessons and materials from diverse disciplines, and 2) training professionals from different cadres together (i.e. doctors, nurses, midwives, CHWs). The WHO has published a [case study](#) on the integration of interprofessional education program focused on the former consideration at Kamuzu College of Nursing in Malawi.

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WHAT HAS BEEN DONE ELSEWHERE TO IMPROVE TEAM-BASED CARE ORGANIZATION?

What others have done

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A number of low and middle-income countries (LMIC) have introduced primary health care teams in the last few decades. While many of these reforms have experienced success in expanded service coverage and comprehensiveness of services, there is a lack of information on the process of building care teams or the training and support needed to foster effective teamwork in these settings.

FAMILY HEALTH TEAMS - BRAZIL

The Brazilian Family Health Strategy (FHS) was established in 1994, and a primary component of the strategy was the creation of Family Health Team (FHTs). Each FHT includes a general practitioner, nurse, auxiliary nurse, and multiple community health workers (CHWs), and together they are assigned a geographic panel of approximately 600-1000 families. CHWs are particularly valued for their ability to liaise with communities and tailor care to specific population needs.(10) Each CHW is assigned a portion of the team's empaneled population - typically 150 families - where they provide preventive care in communities and homes, perform disease surveillance, and collect vital data.(11) CHWs or similar cadres of providers are commonly included in care teams in LMIC. Particularly in rural areas, CHWs commonly engage in proactive population outreach, data collection, and/or health education activities.

Also within the FHS team structure, nurses have both clinical and organizational responsibilities. In addition to patient care, nurses are team leaders and coordinate CHWs. However, one study found that many nurses reported little autonomy, support, and control over their environment in this role.(12) This finding underscores the value of incorporating leadership support, training, and frequent monitoring when implementing care teams. Despite some of these challenges, the FHS has contributed to improvements in health outcomes and coverage, including a decrease in hospital admissions due to diabetes, decrease in child and infant mortality, and increase completion of antenatal care.(11)

EBAIS TEAMS - COSTA RICA

In Costa Rica, primary care teams - called Equipo Basico de Atencion Integral de Salud (EBAIS teams) - include a doctor, nurse, CHW, vital registry data clerk, and pharmacist. Each team member has clear and delineated roles resulting in comprehensive curative and preventive care in addition to education and surveillance activities. While EBAIS teams also provide referrals to higher levels of care, they are able to provide care for 75% of all health consultations.(13) Team members engage in frequent communication to improve coordination and identify the health needs and gaps in their panel. Additionally, the data clerk collects routine epidemiological surveillance and census data that is used to inform management contracts and team performance as well as local priorities. Together, this clear delineation of roles but strong focus on teamwork and communication has contributed to Costa Rica's significant achievements in health outcomes and efficiency in care.

CAMBRIDGE HEALTH ALLIANCE - UNITED STATES

The Cambridge Health Alliance in the United States has undergone numerous innovative reforms to align with a patient-centered model of care. These reforms have been translated into an [Implementation Guide and Toolkit](#). The Cambridge Health Alliance has a comprehensively staffed team including a primary care provider; registered nurse; a medical assistant, medical receptionist, and/or licensed practice nurse; planned care coordinator; clinical pharmacist; registered dietician; and social worker.(6) Although the relevant cadres will differ between countries, the Implementation Guide provides an example of how to map existing cadres to roles and responsibilities within the context of a care team. Multidisciplinary teams at the Cambridge Health Alliance meet for ten minute huddles at least once a day to review the

flow of the day and plan for patient care. This also provides an opportunity for the team to address how they can support each other throughout the day and plan for any anticipated problems. This practice could be valuable for a team of any size; ensuring protected time to discuss workload, challenges, and delegation can help build team trust and understanding of team roles.

INTERPROFESSIONAL NURSING PROGRAM - MALAWI

Kamuzu College of Nursing in Malawi has implemented an interprofessional MSc program in Reproductive Health. This program aims to equip graduates with a better understanding of the skill sets of other practitioners, build their own scope of practice, and prepare them to collaborate in a cross-disciplinary field.⁽¹⁴⁾ Prior to implementation of the program, a diverse group of stakeholders from the college conducted a situational analysis to better understand the landscape of reproductive health and the gap they intended to fill. They found that Malawi had strong national commitment to reproductive health but progress was hindered by inadequate human resources and nonexistent domestic reproductive health training programs. Through this program, they intended to bolster the workforce, improving delivery of reproductive health services and ultimately contributing to improved health outcomes. After this initial analysis, the college assembled teams of professors from fields including bioscience, statistics, reproductive health, public health, and gender to develop an interprofessional curriculum. The curriculum that was subsequently designed was intended to prepare graduates to have strong content knowledge of reproductive health, cultural sensitivity, awareness of opportunities for innovation and creativity, legal and policy knowledge, skills to design and deliver community based care, and research skills. This program was facilitated by robust training for faculty and existing links with non-nursing colleges. It is important to note that this program was specifically for nurses and midwives and did not focus on training with other cadres. Rather, the curriculum was designed to promote an understanding of other disciplines and prepare nurses for multidisciplinary work. More details on this program including academic module descriptions are included in the WHO's [case study](#) of this program.

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WHAT QUESTIONS SHOULD BE CONSIDERED TO BEGIN IMPROVEMENTS?

The questions below may be a useful starting place for determining whether team-based care organization is an appropriate area of focus for a given context and how one might begin to plan and enact reforms:

IS THERE AN EXISTING FORMAL OR INFORMAL SYSTEM OF EMPANELMENT?

As discussed above, empanelment may be a useful starting point when beginning to develop multidisciplinary teams. Panel size and need will help define the quantity and mix of a care team. More detail on how a country may begin the process of empanelment can be found in the [population health management](#) module.

WHAT ARE THE VARIOUS TASKS PERFORMED IN FACILITIES AND WHICH REQUIRE SPECIFIC MEDICAL TRAINING? ARE WORKERS PERFORMING AT THE TOP OF THEIR LICENSE OR PRACTICE? WOULD SHIFTING RESPONSIBILITIES WITHIN THE HEALTH WORKFORCE IMPROVE EFFICIENCY?

It may be useful for facility managers to list the day-to-day clinical and administrative tasks as well as roles and responsibilities within the facility to better understand how care teams would alter service delivery. This knowledge - in conjunction with panel information - may help define care team size and necessary expertise.

WHAT IS THE CURRENT MIX OF PROVIDERS IN THE COUNTRY? HOW DOES THEIR TRAINING AND SCOPE OF WORK DIFFER?

Understanding what cadres exist in the given context will help facility managers plan the most efficient care team. If there are gaps in the competencies of the health workforce, educational programs catering to these gaps may be a long-term strategy for bolstering the health workforce, and in-service training should also be pursued to improve competencies of the existing workforce.

IF CARE TEAMS WERE INSTITUTED, WHO WOULD BE RESPONSIBLE FOR GUIDING TEAM TRAINING AND FOSTERING A VISION FOR TEAM-BASED CARE?

In order to facilitate a strong team culture, there must be designated strategies to guide teams towards unification and teamwork. A team leader should be selected to guide communication between members of the care team, and protected time should be scheduled to ensure that teams are able to meet to discuss service delivery changes, debrief patients, and improve care processes.

IF CARE TEAMS WERE INSTITUTED, HOW WOULD THIS CHANGE IN SERVICE DELIVERY BE COMMUNICATED TO PATIENTS?

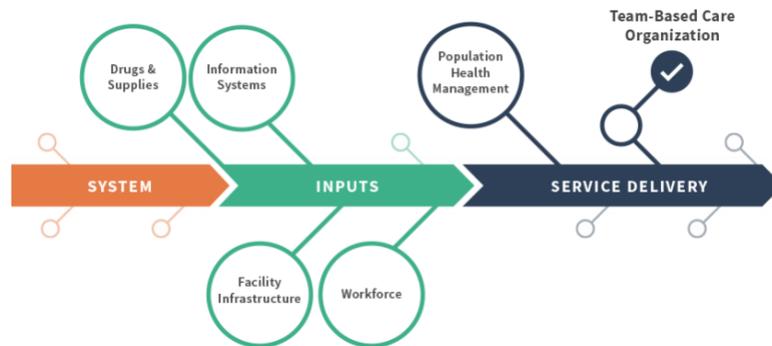
If patients are not used to being cared for by a team of providers, shifting to a team-based model may be a significant change. As such, it is important that patients understand how this new structure will change service delivery and their interactions with the health system. Changes can be communicated during visits or more proactively in community gatherings.

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WHAT ELEMENTS SHOULD BE IN PLACE TO SUPPORT EFFECTIVE IMPROVEMENTS?

In order to enable successful implementation of care teams, the following elements of the PHCPI Conceptual Framework should be in place or pursued simultaneously:



C1.C EMPANELMENT

While empanelment is not absolutely necessary for the development of care teams, information on a patient panel can help facilitate the establishment and effectiveness of teams. Data on panel size, demographics, burden of disease, and geographic spread will help determine the number of providers, mix of expertise, and distribution of tasks within teams. For instance, if most of the panel is spread across a large geographic area and their needs are primarily preventive, more community health workers who can provide proactive care in homes and communities may be necessary compared to a periurban area with a high burden of communicable diseases.

B4, C4.A, & C4.B WORKFORCE, PROVIDER AVAILABILITY, AND PROVIDER COMPETENCE

In order to establish robust care teams, facilities must have access to an adequately sized and well-trained health workforce. There must be an appropriate quantity and mix of available providers to serve the needs of the facility and panel, and these providers must be distributed equitably. However, even in areas with a sufficient number of providers, absenteeism should be monitored to ensure that providers reliably show up to work and fulfil their responsibilities. Additionally, the workforce must possess certain competencies. These include clinical competencies and personality traits that make them likely to be strong team members. In addition to clinical providers, there must be individuals with the skills to fulfill managerial and administrative roles in facilities. These are all critical elements that must be in place in order to implement an effective team-based care organization and are discussed in greater detail in the [Availability of Effective PHC Services](#) module.

B1 & B2 DRUGS & SUPPLIES AND FACILITY INFRASTRUCTURE

Care teams must be supported by adequate inputs in order to effectively carry out their duties. For instance, in order for pharmacists to effectively carry out their roles in a team, they must have access to a reliable supply of essential drugs. Additionally, while some services can and should be delivered outside of the facility (such as those discussed in the [proactive population outreach](#) module), it is important to have a physical facility where community-based providers can gather and where necessary medicines, equipment, and supplies can be kept.

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