Integration of Community Health Workers into Primary Care Health Systems: *The Time for New York is Now!*

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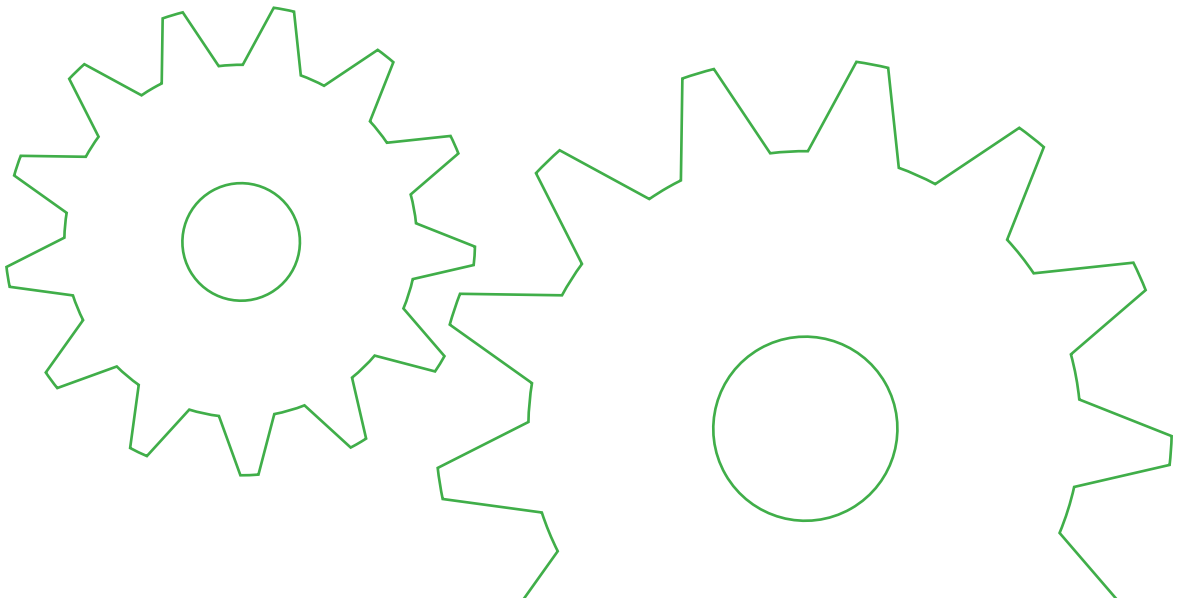

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Introduction

Currently, New York is embarking on several major initiatives to transform the delivery of health care and scale up innovative payment models to optimize health care quality. Medicaid expansion and other systems re-design efforts provide new opportunities to improve population health by bridging clinical systems with communities and neighborhoods. A critical component of these efforts is the engagement of community health workers (CHWs), frontline public health professionals who are trusted members or have a close understanding of the communities they serve through shared racial and ethnic background, culture, language, socioeconomic status, and life experiences. The importance of CHWs in improving health outcomes for underserved and minority communities has long been recognized by federal agencies and national organizations, and more recently by the Patient Protection and Affordable Care Act (PPACA),[1] in which CHWs have been identified as important members of the health care workforce. By acting as bridges between the community and health care system, CHWs have the potential to address health disparities and disseminate efficacious interventions to underserved communities.

With the advent of the patient-centered medical home (PCMH) model, primary care practices increasingly aim to integrate the work of diverse clinical team members to better coordinate care for a patient. There is growing evidence demonstrating the addition of CHWs to the primary care team can improve care for patients with chronic disease at low cost, through activities such as providing education and support, care coordination, and goal-setting for behavior change.[2-7] Within PCMHs, CHWs have played direct or supportive roles in comprehensive care management, care coordination and health promotion, comprehensive transitional care, patient and family support, referrals to community and social support services, and facilitated insurance enrollment.[8, 9-11]

The current health care context affords tremendous opportunities to implement successful, sustainable models of CHW integration into health care systems. In this White Paper, we outline best practices and business case considerations for integration of CHWs into health care systems for policymaker, health systems administrator, and health care advocate audiences. Drawing upon diverse models of CHW integration being implemented across the country, we offer practical solutions to how and why CHWs can be successfully integrated into health care teams and organizations.

The Business Case

The Current Context: New York State Efforts Support Sustainable Models of CHW Integration into Health Care Systems

According to the Center for Medicare and Medicaid Services (CMS), value-based programs provide health care providers with financial rewards for providing high quality care, rather than higher quantity care.[12] Value based health care is closely aligned with the Triple Aim, which can be defined as improving the individual experience of care; improving the health of populations; and reducing the per capita costs of care for populations.[13] Nationally and within New York State, there is widespread interest in exploring how CHW services can play a role in the transformed value-based health care delivery system.[14,15] Under current reimbursement structures, CHWs usually fall under administrative rather than billable medical costs, limiting the scale at which they may be deployed by payors and providers. However, new payment models, alternative to a fee-for-service structure, are currently being tested. For example, through its Innovation Center, CMS has demonstrated interest in models that fund care coordination to improve health outcomes for specific health conditions, including the use of CHWs or similar peer-to-peer or lay workers (e.g. peer navigators) to perform key care coordination functions, funded through payment arrangements such as bundled or episode-based payments, shared savings, or performance-based payments.[16] Similarly, Advanced Primary Care (or APC) is a New York State model designed to spread delivery system transformation through care coordination, connection with community based services, and payment for care coordination and outcomes.[17] This model is yet to be deployed but could serve as a funding vehicle for community health workers depending on the staffing preferences of participating practices.

Beginning in 2011, the Medicaid Redesign Team (MRT) has been tasked with curbing rising Medicaid costs through innovative multi-sector strategies that include a combination of care coordination for all Medicaid members, provider incentives to obtain Patient Centered Medical Home (PCMH) designation, health home expansion to Medicaid recipients with more complex conditions, and setting global spending caps, in addition to innovations focused on addressing the social determinants of health through housing stability and workforce development that would support further health care cost savings, and options that include CHWs as an integral part of the health care team and cuts across all NYS payers.

A number of strategic planning and policy assessment efforts to support sustainable models of CHW integrations into care have been recently launched in New York State, driven in part by cost savings and policy recommendations led by the state's Medicaid Redesign Team (MRT). Through MRT initiatives, New York achieved a 10% reduction in Medicaid costs over several years, which generated substantial cost savings and consequently secured a Medicaid Waiver in April 2014 to continue far-reaching, innovative strategies to reduce unnecessary hospital readmissions and other expenditures. The resulting Delivery System Reform Incentive Program (DSRIP) has enabled the state to reinvest $8 billion in various strategies aimed to strengthen community-level collaboration and coordination across safety net providers with the ultimate goal of further reducing hospital admissions by 25% over five years.[18] In December 2014, New York also received a $99.9 million State Innovation Model (SIM) award from the Centers for Medicare and Medicaid to implement its State Health Improvement Plan (SHIP),[19] which paralleled the pre-implementation phase of DSRIP. SHIP shared similar targets to reduce hospital admissions by 25%

through various strategies that include value-based payment, advanced primary care, workforce development, and establishing a common platform for metrics and data collection. In contrast to DSRIP, however, SHIP is primary focused on Medicare eligible and privately insured members. The timing and resources afforded by the dual implementation of DSRIP and SHIP offers a unique opportunity to develop and test different care coordination strategies and value-based payment options that include CHW as an integral part of the health care team and cuts across all NYS payers, with a focus on system transformation, clinical improvement, and population health improvement.

Leveraging Health Reform Efforts to Support CHW Integration – Policy Case Studies

Models across the country have already leveraged national and state opportunities as well as alternative models to develop sustainable funding that supports the integration of CHWs into primary care. Table 1 in the Appendix summarizes key mechanisms for supporting CHW integration. Below, we provide four distinct policy case studies of how institutions and jurisdictions have leveraged the health care reform movement to identify financial supports for CHW services.

CASE STUDY

New York Presbyterian's Hospital-Community Model

In 2005, NewYork Presbyterian Hospital (NYP) and local community partners came together to respond to the burden of pediatric asthma in Washington Heights and Inwood, taking into consideration the unique challenges faced by this largely Latino, low-income, immigrant community.[20] The result was the creation of WIN for Asthma – a CHW-driven initiative developed to bridge gaps in care for patients and their caregivers.[21] CHWs from the local neighborhood were based in four community based organizations (CBOs) where they supported patients and their caregivers, connecting them to needed social services while maintaining a strong presence in the hospital where they met with patients requiring immediate support. This hospital-community model enabled CHWs to move fluidly between the community and health care system, effectively serving as a bridge for patients. CHWs provided education, on-going support, accompanied provider visits, and home visits. Findings among program graduates demonstrated a 65% reduction in asthma-based emergency department visits and hospitalizations, and nearly 100% of

community members that received CHW services stated that they feel in control of their child's asthma.

In 2009, NYP leadership agreed to support WIN for Asthma on the operating budget as a result of demonstrated outcomes and the timely alignment with the PCMH designation process across NYP.[22] The revitalized emphasis on culturally sensitive patient care provided an ideal opportunity for WIN for Asthma CHWs to become integrated into the primary care setting. In 2010, CHWs became members of health care teams within five NYP PCMHs where they delivered peer-based, culturally sensitive "asthma 101" education and reinforced goals toward improved chronic disease management.[2] They joined daily team huddles and interdisciplinary meetings, bringing the community perspective into the PCMH setting and providing insight into the social challenges impeding optimal health management. In 2011, WIN for Health was established which expanded PCMH-based education and support to adults with type 2 diabetes. Over 60% of adult patients improved their Hba1c and nearly 100% indicated their confidence in risk reduction.

In 2014, NYP and partners received DSRIP funds to become a Performance Provider System, tasked with addressing the care of 80,000 Medicaid patients. Of the nine funded DSRIP projects in New York City alone, seven include CHWs as a core intervention and also as the main community engagement piece. With a proven 10 year foundation of successful CHW programs, it was the right opportunity to formalize as the Center of Community Health Navigation, encompassing nearly 100 staff across four NYP campuses and its surrounding communities.

CASE STUDY

The Business Case for CHWs: An ACO Health Plan Supports CHW Integration

Hennepin Health is a county based safety-net Accountable Care Organization (ACO) in Minneapolis, Minnesota, created in 2011 through a partnership involving four organizations: a public health department; a public hospital and safety net medical system; a federally qualified health center; and a nonprofit, county-run, state-certified health maintenance organization that serves Medicare and Medicaid enrollees.[23] Hennepin Health is based on the recognition that most of what drives health care utilization and influences health outcomes happens outside of the traditional health care delivery. Only through building relationships and addressing the basic needs of individuals (the social determinants) can we meaningfully improve health.[24]

Hennepin Health's care model is anchored by outpatient clinics that function as patient-centered medical homes.[25] Multidisciplinary care coordination teams include: clinical care coordinators (registered nurses), CHWs, and social workers. These teams work with the clinical care team, community services, and family/caregivers to provide relationship-based care coordination for patients at high-risk for medical utilization and high health care costs. The teams function across the continuum of care including primary and specialty care clinics, the emergency department, the hospital, the home, and in the community settings (e.g., homeless shelters and jails).

Hennepin Health serves a population with high basic and socioeconomic needs, coming from many different cultural, community, and linguistic backgrounds. Hennepin Health made the decision to include CHWs in its care model because of their knowledge of the community, unique perspective into service delivery, and ability to build trusting relationships with individuals who have not been well served by traditional health care delivery systems.

The business case for financing CHWs has been made through the following methods:

- Program outcomes: Internal evaluations of the care co-

ordination model have shown significant reductions in patient utilization of emergency department visits and hospital visits as well as an increase in outpatient primary care utilization. This change in utilization can be associated with reduced system costs, improved coordination of care, improved patient satisfaction, and improved health outcomes.[5,26]

- Top of licensure: Another key selling point of the CHW role is facilitation of all practitioners to work to the top of licensure. CHWs have unique skills to help patients navigate the health system and community resources, build self-management skills, and break down barriers to reach health goals established by the patient. CHWs fill gaps that other time-based providers are unable to fill, which also leads to increased staff and provider satisfaction.
- Reimbursement: In Minnesota, there are some reimbursement options for services provided by CHWs through claims: health care home per member per month (PM/PM) reimbursement and fee for service reimbursement for diagnosis-based education ordered by a medical, dental, or public health provider.[27,28] The ACO health plan pays for these billable services submitted via claims. Hennepin Health dollars have also contributed to the growth and expansion of CHW positions through reinvestment initiatives where the ACO partners determine select programs/services to fund from a portion of the ACO savings.

These reinvestment initiatives have been influential in expanding CHWs across the continuum of care. Each of the ACO partners has then been responsible for maintaining the CHW investments through shared savings, fee for service reimbursements, grant funding, or operational funding. Although each of the partner organizations has adopted the CHW role and clearly understands their value, financial sustainability for CHWs is still a journey, as there is no singular source of revenue to sustain them. Hennepin Health is continuing to make the business sustainability case through demonstration of CHW impact on outcomes, cost savings, and revenues.

CASE STUDY

In Massachusetts, Collaborative Partnership Promotes Sustainability

In Massachusetts, key public health stakeholders have collaborated for decades to better recognize and support the CHW workforce. With leadership from CHWs and the state public health department (MDPH), a partnership led to the establishment of the Massachusetts Association of Community Health Workers (MACHW) in 2000. State CHW policy efforts, led by MACHW, MDPH, and the Massachusetts Public Health Association resulted in the inclusion of CHWs in key state health reform legislation (Chapter 58, Acts of 2006). This pioneering health reform law included a provision which required a CHW workforce study and recommendations to the legislature for a sustainable CHW program in Massachusetts.

Of note is that all policy efforts have been linked to promoting sustainability. Successful sustainability and integration of CHWs includes funding mechanisms and resources to support CHW services and workforce infrastructure, but also includes awareness of professional identity, stakeholder engagement, policy savvy, CHW leadership, and coalition-building to promote consensus. With its ability to identify and convene key partners, the state public health department has been able to create opportunities for diverse stakeholders to shape a comprehensive policy agenda. Public and private partners include CHWs, health providers, community-based organizations, community health centers, the state associations for primary care, hospitals, health plans, CHW training programs, advocacy organizations, state agencies, and public and private payers. The collaborative process to define CHWs and establish core competencies has yielded a state definition and

detailed competencies, key components of an emerging profession, and also created ownership across sectors. Additionally, establishment of a state definition of CHWs and of foundational core competencies are key to both insurance coverage for CHW services and provider willingness to incorporate CHWs in new models of delivery.

The Massachusetts CHW Advisory Council made 34 recommendations to the legislature (2009) in four categories: strengthen CHW professional identity, support workforce development (including training and certification), expand financing mechanisms and opportunities, and create a state infrastructure. It was at that time the Office of CHWs at the state public health department was created. Additionally, one prominent recommendation for workforce development was to establish a certification process, which led to the drafting of certification legislation by the CHW leadership of MACHW, and unprecedented swift passage of Chapter 322, Acts of 2010, "An Act to Establish a Board of Certification of CHWs." This Board has drafted regulations, which at the time of this writing are under review, for both voluntary certification of CHWs and for state approval of core CHW training programs. CHW certification is anticipated to include a "grandparenting" pathway for experienced CHWs.

These investments by the state to create infrastructure were leveraged to attract federal (CDC) support for developing workforce policy to support CHW programming. Internal state public health department engagement throughout the agency resulted in "Achieving the Triple Aim: Success with Community Health Workers" (2015), a white paper that makes the business case for the CHW model. Additionally, and of significant note, resources have been dedicated to both agency staff and MACHW to engage the authentic voice of the workforce in all related policy and programming. As Massachusetts Medicaid undergoes complete restructuring in 2016, a partnership of policy partners is equipped with knowledge, information, and policy skills to play an active role in efforts to ensure that CHW services will be covered.

CASE STUDY

Health Homes, Community Health Workers, And Sustainability: NYU Lutheran Family Health Center's Community Case Management Program

NYU Lutheran's Community Case Management (CCM) program is a department within a large health care network. CCM was born out of New York State's Medicaid Health Home initiative in 2012. The program provides a range of care management services to NYU Lutheran Family Health Center's patients with goal of achieving the "Triple Aim" – improved experience, improved outcomes, and more efficient use of health care dollars. The program targets high risk Medicaid patients diagnosed with chronic health conditions, addiction, mental illness, and/or HIV/AIDS whose fragile health status may be compromised by destabilizing biopsychosocial factors. The multidisciplinary team includes Care Managers, Nurse Case Managers, Social Work Case Managers, and CHWs. The Case Management team is embedded throughout the Family Health Centers to maximize patient contact and to promote communication and coordination with the entire care team.

CHWs play a vital role on the care team and are tasked with a variety of responsibilities including outreaching newly identified patients via home visits, office visits, and when the patients arrive in the emergency room and hospital. The CHWs, along with care managers, are members of the emergency response team in crisis situations and are able to engage patients at pivotal moments to improve health outcomes. The CHWs also help patients address unmet social service needs (social determinants of health) identified by the Care and Case Managers. The CHW team routinely performs this service by personally escorting

patients to the identified resource to make certain the patients' needs are addressed. The CHWs' multilingual support, deep roots in the community, intimate knowledge of cultural dynamics, and connection to community resources makes them an invaluable source of support to the patients, the care teams, and the health system.

In order to offset some of the Community Case Management team's costs, NYU Lutheran became a Case Management Agency (CMA) within NYSDOH's Health Home program. In this model, NYU Lutheran Family Health Centers receives a per member per month (PM/PM fee for patients in outreach and enrolled in the Health Home program.

Under DSRIP there is an opportunity to extend the reach of the CHW workforce to patients who do not qualify for the Health Home program but are at-risk of developing more severe health conditions. However, when DSRIP funds are exhausted other means will have to be identified to continue these FTEs. Shared savings pilots and risk-based contracts offer opportunities to demonstrate savings through reduced emergency department and hospital utilization that justify the cost of this additional layer of support.

Best Practices on Integration of CHWs into Clinical Teams – Practice-Based Case Studies

Systems that have successfully integrated CHWs into the clinical care setting have identified several key components essential to preserving CHW identity, function, and value, while maximizing their role as part of a health care team. Below, we provide three distinct practice-based case studies of strategies and best practices institutions have utilized to integrate CHWs into clinical care settings

CASE STUDY

Supporting CHWs in Clinical Systems Through Role Definition And Infrastructure: The Penn Center for CHWs

The Penn Center for Community Health Workers, established in 2013, is a community-academic-health system partnership whose mission is to improve health in low-income populations through the effective use of CHWs. The center used participatory action research to develop IMPaCT, a standardized, scalable CHW model of care. IMPaCT has been found to improve a variety of outcomes including access to primary care, hospital admissions, quality of patient-provider communication, and mental health. These results were used to calculate a return on investment of $2 for every dollar invested and helped justify financial sustainability and rapid scale-up. The center is currently funded fully by Penn Medicine and employs 50 full-time employees who deliver IMPaCT to 2,000 patients per year.

The success of this approach may be explained in part by two key factors. First, the role of CHWs in the IMPaCT model was developed based on interviews with patients and clinicians, and clear CHW role definition has been a

critical component of the program. This role delineation – including workflow, documentation, caseloads, etc. – is detailed in work practice manuals. Second, IMPaCT is a program-level intervention that includes guidelines for hiring, training, supervision, documentation, integration with clinicians, evaluation, and sustainable financing.

Role of CHWs

IMPaCT CHWs do their work in three stages: goal setting, tailored support, and connection to long-term support. First, CHWs meet patients in the health care setting (hospital admission or doctor's appointment) and ask: "What do you think will help you improve your health?" During this conversation, CHWs help patients set their own goals. In the second stage, CHWs provide tailored support to help patients reach their goals. For example, a CHW might accompany a socially isolated patient to a class, exercise with a diabetic patient, or go with a depressed patient to a behavioral health appointment. In the final stage of IMPaCT, CHWs connect patients to sources of long-term support including a CHW-run support group.

The CHW role in this model is described in great detail in the IMPaCT work practice manuals, yet leaves room for flexibility and autonomy. While CHWs follow a structured approach, they allow patients to set their own goals and thus, drive the agenda. CHWs move across the traditional roles of social support, advocacy, and patient navigation to help patients achieve their goals. CHWs in this model do not provide clinical care or even health education. To do so would limit the ability of IMPaCT to scale across different diseases; it might also expose CHWs to a greater patient liability or turf struggles with other clinicians. Instead, if a patient has a clinical issue, CHWs navigate them to the appropriate clinician.

Strong Program Infrastructure

It is tempting to focus solely on the CHW role when creating a CHW program. However, this approach can lead to lack of supervision, support, and sustainability. Beyond the CHW, there are three key roles in the IMPaCT model. First is the director, who is responsible for infrastructure including budget planning, hiring, and quality improvement. Second are coordinators, who are responsible for identifying high-risk patients and measuring outcomes. Third are managers (typically social workers), who supervise a team of four to six CHWs. They review CHW caseloads, provide real-time support for emergencies, provide ongoing training, and help CHWs integrate hospitals and doctors' offices. The responsibilities and protocols for each of these roles are detailed in IMPaCT manuals. Each of these key players uses a common platform – HomebaseTM – for documentation. This custom platform can generate reports and integrate with electronic health records.

IMPACT is a standardized, scalable model that was designed with patient input, and tested in rigorous randomized controlled trials that demonstrate return on investment and improved patient outcomes. We believe it is possible to significantly improve health in high-risk populations across the country using CHW programs, but a key barrier is the rapid scale of high-quality programs. The Penn Center for CHWs is currently launching a Partnership Program in order to help organizations across the country launch and scale effective CHW programs quickly and efficiently.

CASE STUDY

Operationalizing CHWs as Part Of Health Care Teams: Baylor Scott and White Health

Baylor Scott and White Health (BSWH) has employed CHWs in different areas since 2007. Through the two longest running CHW programs, Chronic Disease Education and Community Care Navigation, several key lessons have been learned that have facilitated the implementation of CHW-directed programs.

First, the organization has found these programs to function best when the CHWs are organized into small teams with a centralized manager. Although their CHWs may work in different geographies throughout the Dallas/Fort Worth area, the team structure allows for sharing of best practices and problem solving of difficult cases and also reduces the burden of compassion fatigue. Additionally, having a centralized manager protects the role of the CHW and prevents these employees from having to fill staffing gaps outside of their CHW responsibilities.

Second, the organization has found it important to develop clear practice guidelines for the CHW teams including identified protocols to involve more senior members of the team when necessary. In the Chronic Disease Education program, BSHW uses well-trained CHWs to provide one-on-one coaching to patients around managing their chronic diseases.[29-32] They guide patients through goal setting around lifestyle modifications to improve disease control and help patients overcome barriers to managing their diseases, such as accessing affordable medicines. At times, CHWs may encounter a patient with an urgent health need. The program has developed clear guidelines on timely reporting of these needs and to whom they should be reported, which has been imperative to the safety of the CHW practice and the care of the patient.[33] Additionally, the development of standards of work practice has facilitated scaling the programs to other sites. Clear information around caseloads, work flow, documenting, and supervision allow expectations to be understood by all invested parties.

Third, it is imperative for the CHWs to have access to the electronic health records (EHRs). This facilitates bidirectional information sharing and CHW integration into the health care team. Through EHRs, CHW programs can track high-risk patients and report CHW intervention outcomes. For example, Community Care Navigation CHWs meet with patients in the hospital to facilitate the transition to the medical home. This CHW team has access to the hospital EHRs to allow communication of the outpatient follow-up plan with the discharging social work team. These CHWs also relay important medical information from their hospital stay through documentation in the medical home EHR. Additionally, the Chronic Disease Education CHWs document patient goals and clinical outcomes in the EHR. For example, when helping a patient with diabetes, the CHW may document the patient's goals around diet, exercise, and medication adherence as well as clinical metrics such as HbA1c and blood pressure. This information is also entered into EHR flowsheets, allowing for reports to be generated that identify high-risk patients, such as those with uncontrolled diabetes. Documenting in the EHR allows for tracking of program outcomes as well.

Lastly, through the expanded use of CHWs in the health system, a career track has been developed for the CHW profession (e.g., CHWs have been promoted to supervise other CHWs). The organization's human resources department has CHW job codes to allow for the advancement of CHWs. The job codes maintain the flexibility so important to the role, facilitating the community connection of this work force. Since hiring the first CHWs in 2007, BSWH now has a CHW staff of over 60 in various programs. These lessons learned have helped guide the development of new CHW programs within the health system. We believe that maintaining small teams, having clear practice guidelines, and access to EHRs facilitates the success and growth of CHW programs and improves the function of the whole health care team.

CASE STUDY

Training The Health Care Team on the Value Of CHWs: Bronx Lebanon

The Bronx-Lebanon Hospital is based in the South

Bronx in New York City, a low-income community with persistent inequalities in health. The Chair of the Bronx-Lebanon Department of Family Medicine (BLDFM) became concerned that providers could not achieve lasting health improvements for patients with complex issues. After covering basic diagnostic and treatment issues, medical providers had no time for meaningful discussions with patients. Furthermore, providers could not reach patients who did not come in for care. In 2007, the Department of Family Medicine's PCMH launched a CHW program to address these needs.

The primary role of the CHWs in the BLDFM is care management. Supporting this primary role, CHWs also help their clients connect to services with community partners, facilitate appointments through phone outreach, follow-up and escort as needed, and visit patients in their homes.

All CHWs are trained in the core competencies recommended for New York: outreach and community mobilization, community/cultural liaison, case management and care coordination, home-based support, health promotion and health coaching, system navigation, and participatory research.[34] Given that communication is key to their work, CHWs are trained to use active learning, listening techniques, and how to use verbal and nonverbal cues. They learn how to "power with" rather than "power over" the client, emphasizing coaching approaches. Lastly, disease-specific training (e.g., asthma management, diabetes prevention) is offered through subsequent in-service trainings.

A unique aspect essential to ensuring the success of the program is that training is bidirectional; not only are CHWs trained, but other health care providers also receive training in how to work with CHWs as members of the team. Hospital leadership recognized that staff needed to understand the mission and vision of the CHW program. Because most clinical staff have little familiarity with the CHW model, they needed to learn how to work as a team with CHWs. Training has led to better integration of the CHWs, along with an elimination of the tension between the CHWs and other members of the team. In addition, when new members are added to the family medicine care teams (e.g., residents, attending physicians, nurses, registrars), CHWs are introduced as key members of the care team. The department also takes advantage of opportunities to help clinical staff understand how CHWs are integrated into the care team: Continuing Medical Education courses, rounds with CHWs, team meetings, and staff meetings.

Departmental leadership has consistently viewed CHWs as assets for the entire PCMH, complementing and enhancing the work of other team members. CHWs participate in all departmental care team meetings where they present detailed patient care narratives focusing on cultural, social, and communication issues. In team meetings, CHWs became the patient's advocate, helping the team stay truly patient-centered. Other team members have come to understand and appreciate that CHWs can discover information about the real circumstances of a patient's life that patients do not readily share with other members of the team. As the depth of the connections between the CHWs and patients became evident at weekly team care management meetings, the team recognizes their considerable contributions to care coordination.

Recommendations

We propose the following recommendations for health care systems and other organizations considering integration of CHWs into primary care teams to meet the changing needs of our current health care context:

1. **Make the Business Case for CHW Integration into Primary Care Teams at the Organizational Level:** There is a strong need to systematically capture and document the process of CHW integration, the impact of CHW programs on the social and health outcomes of patients, and the costs and associated benefits afforded by CHWs. Being able to demonstrate health outcomes and cost-savings are essential elements to demonstrate the sustainability of CHWs as a workforce and integrate CHWs into primary care teams as a strategy to improve population health. Ensuring that organizational leadership is aware of the various funding opportunities for CHW programs can reinforce efforts to make the business case for CHW integration into primary care teams.

2. **CHW Roles Must be Clearly Defined at the Organizational and Primary Care Team Levels:** CHWs perform numerous roles including outreach, community mobilization, community/cultural liaison, system navigation, case management and coordination, health promotion and coaching, home-based support, family engagement, participatory research, social support, and advocacy.[8,35] Defining and continually aligning the role of CHWs – particularly within the context of differentiating the roles of other health professionals on the team – is important in order to minimize any potential turf issues and maximize the impact of CHWs by focusing their efforts on the unique role they can play in bridging community and clinical settings for patients. Similarly, clearly defining tasks that multiple team members may play is critical to minimizing duplication of efforts. For example, nurses may engage in the task of care coordination related to a patient's clinical treatment protocols while CHWs may engage in care coordination related to a patient's transition from clinic to home. It is also essential to clearly define the CHW role at the organizational level in order to demonstrate organizational commitment to the CHW model and articulate how they can contribute to improving population health.[6] These processes can be facilitated by creating clear hiring guidelines, training CHWs and other team members on their expected roles, and aligning clinic protocols accordingly. Ensuring that CHW input is sought and incorporated into such protocols in an ongoing, iterative fashion can also help facilitate the success of such programs.

3. **Developing Mechanisms for CHWs to Provide Feedback to Health Care Teams:** Programs that have successfully integrated CHWs into primary care teams and health care organizations have fostered an environment in which the CHW feedback is valued. Specific mechanisms for supporting this feedback includes the participation of CHWs in staff meetings, care coordination, and debriefing meetings with physicians, social workers, RNs, and other members of the primary care team.[36]

   Mechanisms for feedback are particularly important when CHWs are situated outside of the clinic setting. For example, at community-based organizations – such as WIN for Asthma, presented above – although based in the community, CHWs join daily team huddles and interdisciplinary meetings at clinical sites.

   The ability of CHWs to access and enter patient information into EHRs is critical and facilitates their

integration into the health care team.[36,37] In "Technical Guidance for States Implementing Community Health Worker Strategies," the CDC recommends that states "allow and promote CHW access to EHR systems to facilitate follow-up with patients, communication with providers on the care team, and patient referrals to community resources."[37,38] For example, CHWs working with the Penn Center and Baylor Scott and White Health have access to EHRs or other platforms through which they can enter and access patient notes for bidirectional information sharing and health care team integration. In addition to medical information, structured data fields can be created within EHRs for CHWs to document social characteristics on the patient population, which may inform their care management and treatment, such as language or translation needs, or unusual circumstances in the patient's home.

Finally, emerging technological innovations including mobile support, mobile data collection, point of care decision support, and case management by CHWs can be facilitated by partnerships with mobile health technology organizations.[37]

4. **Strong Supervision and Administrative Infrastructure to Support CHWs:** At the organizational and systems-level, there is a need for strong and structured supervision of CHWs, standardized protocols, and access to the appropriate tools and systems for documentation of efforts. Such supervision and infrastructure is needed to ensure that CHWs aren't pulled into administrative duties that fall outside of their role and scope of practice. Opportunities should be made available to CHWs to interact with clinical teams to review caseloads, debrief, and learn from each other. Training CHW supervisors is also important to ensure that they are well equipped to deal with issues such as compassion fatigue and staff burn-out, as well as that adequate protocols are in place in the event that a CHW's patient requires urgent medical care, since CHWs often interact with patients outside of the clinical setting.

Key components that lead to successful CHW integration into primary care teams and health care systems are mutually reinforcing (See Figure A)

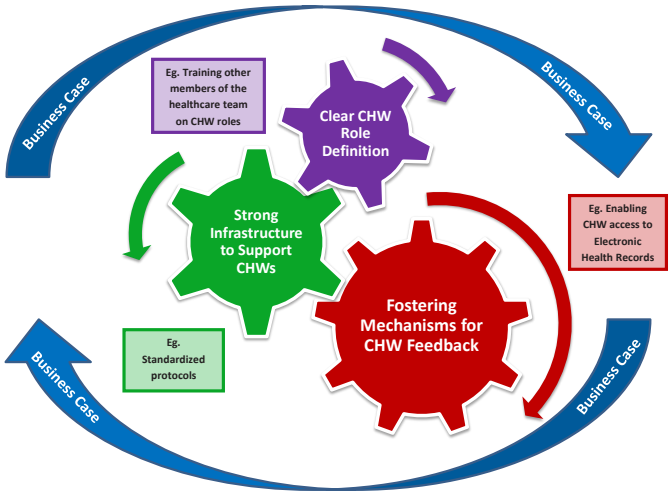

Figure A: Key components for successful Community Health Worker integration into primary care teams

Conclusion: CHW Integration Into Primary Care Systems Meets the Needs of our Changing Health Care Context

The time for CHW integration into primary care health systems in New York State is now. There are a multitude of financial opportunities available through federal, state, and other resources (see Table 1 in the Appendix) to support CHWs and these prospects are likely to grow. At the same time, health care systems are being confronted with addressing social determinants of health (SDH) to maximize population health impact. New York State's Delivery System Reform Incentive Program (DSRIP) has designated billions of dollars over a five year period to reduce the number of hospital admissions by 25% and addressing SDH is a key strategy to achieve this goal. An SDH and CBO Subcommittee was formed during the planning phase and chose to prioritize five SDH categories, including neighborhood and environment; economic stability; education; health and health care; and social, family, and community. The committee also specified that patients can be engaged "through outreach and navigation activities, leveraging CHWs, peers, and culturally competent CBOs...".[39] There are challenges, however, to ensuring that the CHW model is integrated successfully and efficiently, while preserving the nature and role of CHWs to contextualize community concerns. Health care administrators and policy-makers must be cognizant of these critical operational issues and create standards for implementation of programs. This paper describes best practices that can be leveraged to surmount these challenges. The time is ripe for organizations and providers to improve the way they serve our most vulnerable populations by integrating CHWs into primary care teams.

Appendix

Table 1: Sustainability Strategies

PROGRAM/ FUNDING MECHANISM	DESCRIPTION	EXAMPLES IN THE FIELD	TAKE ACTION
FEDERAL SOURCES			
Patient-Centered Medical Homes (PCMH)[40]	• PCMHs must encompass the following 5 functions and attributes: 1) care coordination, 2) patient-centered, 3) coordinated care, 4) accessible services, 5) quality and safety[41]. • Health plans and the state are providing grants or contracts that will be provided to eligible entities to establish community-based interdisciplinary, inter-professional health teams that will support PCMHs.	• Bronx-Lebanon Hospital Center www.bronxcare.org • NewYork Presbyterian www.nyp.org	• Find out more about the PCMH http://bit.ly/2eFKLLX • Attain PCMH recognition in New York on.ny.gov/2fgo0Pm • Attain PCMH recognition outside of New York http://bit.ly/2eFKLLX
Health Homes[42]	• Health Homes must provide six core services to Medicaid patients with two or more chronic conditions, one chronic condition and at-risk for a second, or a diagnosis of either HIV/AIDS or a Serious Mental Illness (SMI): - comprehensive care management; - care coordination and health promotion; - comprehensive transitional care from inpatient to other settings; - patient and family support; - referral to community and social support services; - use of health information technology to link services. • The PPACA provides for payment to designated providers, a team of health care professionals operating with such a provider, or a health team.[43]	• NYU Lutheran http://bit.ly/2fgjzUK	• Find out more about Health Homes http://bit.ly/2eMsr1N • Make a Health Home referral in New York on.ny.gov/2dXkVBS • Find out about Health Homes in your state http://bit.ly/2dL4o0J
Maternal, Infant, and Early Childhood Home Visiting Program (MIECHV)[44]	• Offers services within the home to provide parents with information and support around positive parenting, nurturing homes, and child development during pregnancy and through the child's first years of life. • The PPACA includes support to assess, strengthen, provide, and improve programs and services for families who reside in high-risk communities.	• Montefiore Home Care http://bit.ly/2f7XB7g • NYU Lutheran Family Health Centers Sunset Park http://bit.ly/2evZnNo	• Find out more about maternal and child home visiting programs http://bit.ly/2dL7Qsg • MIECHC Programs in New York on.ny.gov/2fgnGAd
Health Benefit Exchanges[45]	• Health Benefit Exchanges offer health insurance coverage through an insurance marketplace available to eligible individuals and employers. • State and federal grants are awarded to entities to have navigators (also known as in-person assistance workers and outreach and enrollment workers) and Certified Application Counselors conduct outreach and education to people about Exchanges and assist people in enrolling.	• Morris Heights Health Center http://bit.ly/2f7XWqJ • Bronx-Lebanon Hospital Center www.bronxcare.org	• Get health insurance coverage for individuals, families, and small businesses in New York nystateofhealth.ny.gov • Get health insurance coverage for individuals, families, and small businesses outside of New York http://bit.ly/1yDX4hp
Center for Medicare and Medicaid Innovation[46]	• The PPACA authorized $10 billion through Fiscal Year 2019 to establish the new Center for Medicare and Medicaid Innovation (CMMI) under CMS. The goal of the CMMI is to test innovative payment and delivery models in Medicare, Medicaid, and CHIP. • Since its launch, the CMMI has issued a number of opportunities for new Medicare, Medicaid and the Children's Health Insurance Program (CHIP) care delivery and payment models for states, providers, and other entities.[16]	University Emergency Medical Services http://bit.ly/2eGSR4o	Learn more about the CMS Innovation Center innovation.cms.gov

Table 1: Sustainability Strategies *(continued)*

Area Health Education Centers (AHEC)	• AHECs are nonprofit organizations that provide workforce development for those pursuing careers in the health field. • Training plans must now include CHWs in interdisciplinary training.	Manhattan-Staten Island AHEC www.msiahec.org	Find an AHEC near you http://bit.ly/2dXIvj9
Hospital Readmission Reduction	Ends reimbursement for hospitals of Medicare patients deemed preventable. Hospitals are developing programs and partnerships to improve post-discharge community-based care. CHWs can play a significant role in bridging hospital and community.	NewYork Presbyterian: Transitions of Care http://bit.ly/2eGm6qM	Find out more about the PPACA Rules on Reimbursement for Preventable Hospital Admissions http://bit.ly/2ebzpM8
Community Health Needs Assessments (CHNA) & Community Health Improvement Plans	Non-profit hospitals are now required to conduct CHNAs every three tax years and to engage a range of stakeholders, including from the community and those with special expertise in public health. Based on this assessment, hospitals must develop a CHIP to guide the use of their Community Benefits dollars. CHWs would be good sources of information for the CHNA.	NYU Langone Medical Center http://bit.ly/2fgmE7B	Learn more about CHNAs and Community Health Improvement Plans http://bit.ly/2eGI266
STATE SOURCES			
Delivery System Reform Incentive Program (DSRIP)	Grant funding for five years to transform health care delivery for the Medicaid insured population in New York. Focuses on preventable admissions and decreasing utilization by 25%. Funding can be used to develop new interventions to support this transformation and in many projects across the state CHWs are included as expanded members of care teams.	• Baylor Health http://bit.ly/2dJ9krN • DSRIP in New York State (Project IDs: 2.a.i., 2.c.i., 3.b.i., 3.f.i.) http://on.ny.gov/2dXkMhP	• Learn more about DSRIP kaiserf.am/1IsHjZl • Learn more about DSRIP in New York on.ny.gov/2ew1p0n
State Innovation Model (SIM)	Grants that aims to integrate care and services and create a continuum of care that links physicians and community-based resources.	Columbia Memorial Health columbiamemorialhealth.org	Learn more about State Innovation Models in New York State on.ny.gov/2ew51PO
OTHER			
Payer Supported	CHW services can be reimbursable by public payers (e.g. Medicaid, Medicare) and private payers, including fee-for-service and managed care models.[47]	• EmblemHealth emblemhealth.com • Examples in five states http://bit.ly/2ebwpje	
Managed Care Organizations/ Accountable Care Organizations	Groups of doctors, hospitals, and other health care providers, who come together voluntarily to give coordinated high quality care to their Medicare patients.	• Hennepin Health hennepinhealth.org • Montefiore Health System www.montefiore.org	
Operating Budgets of Hospitals	Organizations can include the salaries of CHWs and other program costs as a part of their planned budgets as ongoing, known expenses. This is often supported in the context of the community benefit for many non-profit hospital systems.	NewYork Presbyterian: WIN for Asthma http://bit.ly/2dLaEWk	
Supported by Municipal Funds	City tax dollars may be leveraged and allocated to support CHW programs within city health agencies, health care or community settings	New York City Department of Health and Mental Hygiene Harlem Health Advocacy Partner http://bit.ly/1TqbGpV	

Table 2: Case Study Sites

PROGRAM	CONTACT	WEBSITE
Baylor Scott and White Health	**Erin Kane, MD** Baylor Community Care Medical Director, Community Care Navigation and Chronic Disease Education Email: Erin.Kane@BSWHealth.org	www.diabetestoolkit.org
Bronx-Lebanon Department of Family Medicine	**Doug Reich, MD** Chairman Family Medicine Bronx-Lebanon Hospital Center Email: dreich@bronxleb.org	www.bronxcare.org/our-services/family-medicine
Hennepin Health	**Ross Owen, MPA** Director A-1024 Government Center 300 South Sixth Street, MC: 106 Minneapolis, Minnesota 55487 Phone: 612/543-1324 E-mail: ross.owen@hennepin.us	www.hennepinhealth.org
Massachusetts Association of Community Health Workers	**Gail Hirsch, MEd** Office of Community Health Workers Massachusetts Department of Public Health 250 Washington St, 4th floor, Boston, MA 02108 Phone: 617.624.6016 Email: gail.hirsch@state.ma.us	www.mass.gov/dph/community-healthworkers
NYU Lutheran's Community Management Program	**Jason A. Hyde LMSW, M.Ed.** Assistant Vice President of Community Case Management NYU Lutheran Family Health Centers 5411 2nd Avenue Brooklyn, NY 11220 Phone: 347-377-3066 Email: jason.hyde@nyumc.org	www.lutheranhealthcare.org
Penn Center for Community Health Workers	**Shreya Kangovi, MD, MSHP** 1233 Blockley Hall 423 Guardian Drive Philadelphia, PA 19104 Phone: 215-573-0295 Email: kangovi@upenn.edu	http://chw.upenn.edu
New York Presbyterian Hospital, WIN for Asthma	**Patricia Peretz, MPH** Center for Community Health Navigation at NewYork Presbyterian Hospital Phone: 212-305-4065 Email: pap9046@nyp.org	www.nyp.org/clinical-services/ambulatory-care-network-programs/win-for-health

Table 3: Related CHW Reports & Publications

TITLE	PUBLICATION SOURCE	AUTHORS
CHWS & THE AFFORDABLE CARE ACT		
Integrating Community Health Workers Within Patient Protection and Affordable Care Act Implementation (2015)	Journal of Public Health Management and Practice	Nadia Islam, PhD; Smiti Kapadia Nadkarni, MPH; Deborah Zahn, MPH; Megan Skillman; Simona C. Kwon, DrPH; Chau Trinh-Shevrin, DrPH
Integrating Community Health Workers into a Patient-Centered Medical Home to Support Disease Self-Management among Vietnamese Americans: Lessons Learned. (2015)	Health Promotion Practice	Ashley Wennerstrom, PhD, MPH; Tap Bui, BS; Jewel Harden-Barrios, MEd; Eboni G. Price-Haywood, MD, MPH
Community Health Workers and the Patient Protection and Affordable Care Act: An opportunity for a research, advocacy, and policy agenda (2014)	Journal of Health Care for the Poor and Underserved	Megha Shah, MD, MsC; Michele Heisler, MD, MPA; Matthew Davis, MD, MAPP
The Impact of Integrating Community Health Workers into the Patient-Centered Medical Home (2014)	Journal of Primary Care & Community Health	Luz Adriana Matiz, MD; Patricia J. Peretz, MPH; Patricia G. Jacotin, MPH, MBA; Carmen Cruz; Erline Ramirez-Diaz; Andres R. Nieto, MPH
Community Health Worker Opportunities and the Affordable Care Act (ACA) (2013)	Maricopa County Department of Public Health	Health Resources in Action of Boston
Making the Connection: The Role of Community Health Workers in Health Homes. (2012)	NYS Health Foundation	Deborah Zahn; Sergio Matos; Sally Findley, PhD; April Hicks, MSW
A Critical Link for Improving Health Outcomes and Promoting Cost-effective Care in the Era of Health Reform (2010)	NYS Health Foundation	Jacqueline Martinez, MPH; James R. Knickman, PhD
STATE-LEVEL RECOMMENDATIONS		
Community Health Workers in California: Sharpening Our Focus on Strategies to Expand Engagement (2015)	California Health Workforce Alliance	Andrew Broderick, MA, MBA, Kevin Barnett, DrPH, MCP
Paving a Path to Advance the Community Health Worker Workforce in New York State: A New Summary Report and Recommendations (2011)	NYS Health Foundation	Sergio Matos; Sally Findley, PhD; April Hicks, MSW; Yasmine Legendre, MPA; Licy Do Canto
INTEGRATING CHWS WITHIN HEALTH SYSTEMS		
Trusted Voices: The Role of Community Health Workers in Health System Transformation (2015)	Community Catalyst	Martina Bresciani
Society of Behavioral Medicine (SBM) position statement: SBM supports increased efforts to integrate community health workers into the patient-centered medical home (2015)	Translational Behavioral Medicine	Denise M. Hynes, PhD, MPH, RN; Joanna Buscemi, PhD; Lisa M. Quintiliani, PhD on behalf of the Society of Behavioral Medicine Health Policy Committee
RECOMMENDATIONS/BEST PRACTICES		
From Rhetoric to Reality – Community Health Workers in Post-Reform U.S. Health Care (2015)	The New England Journal of Medicine	Shreya Kangovi, MD, MS; David Grande, MD, MPA; Chau Trinh-Shevrin, DrPH
Bringing Community Health Workers into the Mainstream of U.S. Health Care (2015)	Institute of Medicine	Mary Pittman, DrPH; Anne Sunderland, MPH; Andrew Broderick, MA, MBA; Kevin Barnett, DrPH, MCP
Best Practice Guidelines for Implementing and Evaluating Community Health Worker Programs in Health Care Settings (2014)	Sinai Urban Health Institute	Melissa Gutierrez Kapheim, MS; Jamie Campbell, MPH
Penn Center for Community Health Workers: Step-by-Step Approach to Sustain an Evidence-Based Community Health Worker Intervention at an Academic Medical Center (2016)	American Journal of Public Health	Anna Morgan, MD, MSc; David Grande, MD, MPA; Tamala Carter, CHW; Judith Long, MD; Shreya Kangovi, MD, MSHP

Table 3: Related CHW Reports & Publications *(continued)*

SPECIFIC MODELS		
Accountable Care for the Poor and Underserved: Minnesota's Hennepin Health Model (2015)	American Journal of Public Health	Lynn A. Blewett, PhD, Ross A. Owen, MPA
Community Health Workers in Primary Care Practice: Redesigning Health Care Delivery Systems to Extend and Improve Diabetes Care in Underserved Populations (2014)	Health Promotion Practice	Ashley Collinsworth, MPH; Madhulika Vulimiri, Christine Snead, BSN, RN, CPHW; James Walton, DO, MBA
Patient-Centered Community Health Worker Intervention to Improve Posthospital Outcomes: A Randomized Clinical Trial (2014)	JAMA Internal Medicine	Shreya Kangovi, MD, MS; Nandita Mitra, PhD; David Grande, MD, MPA; Mary L. White; Sharon McCollum; Jeffrey Sellman; Richard P. Shannon, MD; Judith A. Long, MD
Community Health Workers as Drivers of a Successful Community-Based Disease Management Initiative (2012)	American Journal of Public Health	Patricia J. Peretz, MPH; Luz Adriana Matiz, MD; Sally Findley, PhD; Maria Lizardo, LMSW; David Evans, PhD; Mary McCord, MD, MPH
The Effectiveness of a Community Health Worker Outreach Program on Health care Utilization of West Baltimore City Medicaid Patients with Diabetes, With or Without Hypertension (2003)	Ethnicity & Disease	Donald O. Fedder, DrPH, MPH; Ruyu J. Chang, MD, PhD; Sheila Curry, MS; Gloria Nichols, BSP, PhD
CHW ROLES/BENEFITS		
Achieving the Triple Aim: Success with Community Health Workers (2015)	Massachusetts Department of Public Health	
Building a Consensus on Community Health Worker's Scope of Practice: Lessons from New York (2012)	American Journal of Public Health	Sally E. Findley, PhD; Sergio Matos; April L. Hicks, MSW; Ayanna Campbell, MD, MPH; Addison Moore; Diurka Diaz, MA

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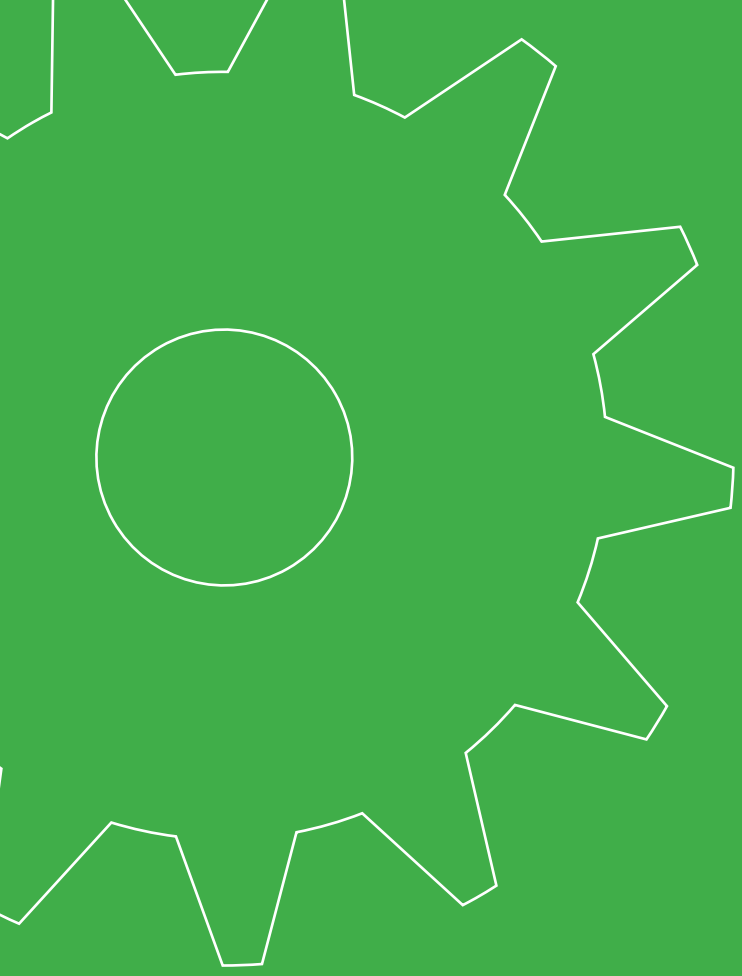

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