Service Delivery Innovation Profile

Community Health Worker Agencies Partner With Emergency Medical Service Providers To Identify Frequent Callers and Connect Them to Community-Based Services, Leading to Fewer 911 Calls

Innovation

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Snapshot

Summary

Agencies employing community health workers in three Michigan counties (Ingham, Muskegon, and Saginaw) partner with local emergency medical service providers to identify and refer patients who could benefit from Michigan Pathways to Better Health, a program based on the Pathways Community HUB model and funded by an award from the Centers for Medicare & Medicaid Services. Michigan Pathways to Better Health features a community health worker who connects at-risk individuals to needed community-based medical and social services. The community health worker is assigned by the HUB, which functions as a central point of entry into the program. While implementation varies across sites, the partnerships feature some or all of the following key elements: education of providers about Michigan Pathways to Better Health and who might benefit from it, steps to make referrals to the program as easy as possible, and financial support to cover a portion of the additional costs involved. The partnerships have enhanced access to needed community-based services, leading to less reliance on emergency care among frequent 911 callers.

Evidence Rating (*What is this?*)

Moderate

The evidence consists of pre- and post-implementation comparisons of 911 calls by the five most frequent users of emergency medical services in Saginaw, along with anecdotal reports from all three sites on the program's impact on the frequency of 911 calls.

Developing Organizations

Michigan Public Health Institute received a Centers for Medicare & Medicaid Services award that supports Michigan Pathways for Better Health. The Institute works in partnership with the following lead agencies in each county:

- Ingham County Health Department
- Mercy Health Muskegon, Community Benefit
- Saginaw County Community Mental Health Authority

Date First Implemented

2013

Initial discussions and formal implementation of the various partnerships occurred at different times. In Muskegon County, discussion began in the summer of 2013, with a formal contract in place by January 2014. In Saginaw, discussion began in August 2013, with a contract in place by May 2014 but not fully operational until February 2015. In Ingham County, conversations began in January 2014, with an informal partnership in place by July of that year.

Problem Addressed

- **Many nonurgent, avoidable 911 calls:** Studies have found that 11 to 52 percent of 911 calls come from individuals who do not face urgent health problems.[1] In addition, some callers who do have urgent health needs are experiencing acute exacerbations of chronic conditions that could be potentially avoided through appropriate management in primary care and other community-based settings.

- **Small number of frequent, costly users:** In many areas, a few individuals account for a disproportionate share of nonurgent or otherwise avoidable 911 calls. For example, in Saginaw County in 2012, local emergency medical services (EMS) provider Mobile Medical Response (MMR) transported 93 patients to the emergency department (ED) more than 10 times, including 24 patients transported more than 20 times (one patient was transported 42 times). These 24 patients accounted for 661 transports and over $462,000 in ambulance charges. Another example comes from Muskegon County, where one homeless woman with epilepsy ended up being transported by EMS to the ED every day for 30 consecutive days because of repeated seizures.
- **Subpar quality:** Many of these frequent callers suffer from chronic health conditions (including mental illness or substance abuse) that can be better managed and treated in primary care and other community-based settings.[2] Yet in most cases, EMS responders must transport these individuals to the ED for an evaluation, where overburdened clinicians focus only on addressing acute issues because they do not have the time, resources, or expertise needed to identify and address underlying medical and social service needs. As a result, patients and their family members receive little or no education on appropriate self-management and are not connected to community-based resources (e.g., home health, behavioral health and substance abuse services, public health clinics, food pantries, housing placement services, transportation assistance) that could address their underlying needs. Caring for these individuals also diverts EMS and ED resources from—and potentially undermines the care provided to—those 911 callers who are experiencing acute health crises warranting emergency evaluation.[3]
- **No system to identify and refer frequent callers:** Addressing the underlying medical and social problems of frequent 911 callers requires first identifying these individuals and then enrolling them in a program that can help. Yet most busy EMS providers are not aware of available community-based programs and resources, let alone which patients might benefit from them.

What They Did

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Patient Population

The program serves adults age 18 and over who are enrolled in or are eligible for Medicare or Medicaid, have two or more chronic conditions, and live in the counties served. Within this population, the program has focused on recruitment of frequent users of health care services—i.e., those who have had five or more emergency department visits or three or more hospitalizations in the past year.

Description of the Innovative Activity

Agencies employing community health workers (CHWs) in three Michigan counties partner with local EMS providers to identify patients who could benefit from Michigan Pathways to Better Health, a program based on the Pathways Community HUB Model, which features a CHW who connects at-risk individuals to needed community-based health and social services. The CHW is assigned by the HUB, which functions as a central point of entry into the program. While implementation varies across sites, partnerships typically feature a mix of the following elements: provider education about Michigan Pathways to Better Health and who might benefit from it, easy referral processes, and financial support to cover a portion of the additional costs involved. Each component is described in more detail below:

- **Education about Michigan Pathways to Better Health:** While each site uses its own variation of the Pathways model, all three partnerships have a knowledgeable individual to periodically educate EMS and in some cases ED providers about Michigan Pathways to Better Health's services and who could benefit from them.
    - **Ingham County:** A CHW from Ingham County Health Department spends roughly 4 hours each week accompanying EMS personnel at the Lansing Fire Department as they respond to 911 calls. During this time, the CHW educates staff about Michigan Pathways to Better Health, particularly the types of patients who could benefit from it. The goal is to get staff to the point that they feel comfortable making such determinations on their own. Prior to deciding on this approach, a CHW spent 20 hours per week onsite at the Lansing Fire Department, processing referrals of patients to

Michigan Pathways to Better Health from paramedics. This approach proved to be time consuming and somewhat inefficient.

- **Muskegon County:** Program leaders at Mercy Health Muskegon met on several occasions with leaders and staff at PRO MED, a local EMS provider, to educate them about Michigan Pathways to Better Health and which patients might benefit from it. These meetings led to development of a contractual arrangement between the two entities (discussed in more detail below). Periodic meetings continued after the contract went into place to clarify respective roles and responsibilities, in particular the fact that PRO MED staff did not have to conduct a formal eligibility screen, but rather should simply pass on the names of those who might be eligible to receive Michigan Pathways to Better Health services. Through a separate initiative, Mercy Health Muskegon stations CHWs in local EDs during particularly busy times. These CHWs can "intercept" transported PRO MED patients who might benefit from the program, conducting an intake screening and assessment as appropriate.
- **Saginaw County:** The Saginaw County Community Mental Health Authority met with leaders of MMR to educate them about Michigan Pathways to Better Health. This meeting produced an agreement under which MMR would hire a staff person to take responsibility for identifying and enrolling eligible patients, with the project covering a portion of this individual's salary (as described in more detail below). Prior to hiring the staff, MMR and HUB entered into a Business Associate Agreement whereby MMR shared data on high utilizers so that HUB staff could contact them about enrolling in the program. After MMR hired this person (a registered nurse with home care experience), the Saginaw Community Care HUB (operated by the Saginaw County Community Mental Health Authority) provided education and training on the program, including having her observe the process for enrolling individuals and assigning them to CHWs and accompany CHWs on home visits.

- **Easy referral process:** Each site's established referral process makes it very easy for EMS and ED providers to refer potentially eligible patients to Michigan Pathways to Better Health.
  - **Ingham County:** EMS providers can quickly access the referral form on a tablet computer they carry with them when they respond

to 911 calls. With two quick clicks, they can send relevant information to the Ingham Health Plan, which serves as the Community HUB for Michigan Pathways to Better Health in Ingham County and hence determines eligibility, processes enrollment, and coordinates program services.
    - **Muskegon County:** EMS providers can fax a form to the Community HUB that provides basic information about an individual who might potentially be eligible for the program. As in Ingham County, the HUB then determines formal eligibility and handles enrollment. (As noted earlier, in some cases CHWs stationed in EDs handle some or all aspects of this process.)
    - **Saginaw County:** As noted above, a registered nurse handles the client outreach, engagement, and referral process for MMR.

- **Financial support to defray time involved:** Two of the three sites have formal contracts under which they provide financial support to the EMS provider for involvement in the referral process. In Muskegon, Mercy Health pays PRO MED $500 a month to cover the time involved in referring patients. In Saginaw, Saginaw County Community Mental Health Authority pays MMR $28,000 a year, which covers a portion of the cost of salary and benefits for the registered nurse.

Context of the Innovation

The Michigan Public Health Institute is a nonprofit organization dedicated to improving community health in Michigan through research, collaboration, and use of best practices. In 2012, the Centers for Medicare & Medicaid Services (CMS), through its Center for Medicare & Medicaid Innovation (CMMI), made a 3-year award to the Michigan Public Health Institute to implement and operate Michigan Pathways to Better Health. This project is testing whether the Pathways Community HUB model can reduce costs for at-risk individuals in need of community-based medical and social services, including but not limited to frequent 911 callers. Under the model, trained CHWs from the local community, who are employed and supervised by nurses and social workers at Care Coordination Agencies, are assigned to eligible at-risk individuals. The CHWs work with them to complete a comprehensive checklist (needs assessment) and then place them on one or more specific "pathways" (i.e., protocols) that document steps toward desired

outcomes. The CHWs subsequently track progress towards achieving those outcomes. The goal is to reduce avoidable 911 calls, ED visits, and inpatient admissions by proactively connecting patients to needed primary care, specialty care, and social services. Patients typically stay in the program for 3 to 6 months, although individuals whose cases are complex may stay longer. (More detailed information about the Pathways Community HUB model can be found in other profiles available on the Health Care Innovations Exchange, which can be accessed through the Tools and Resources section of this profile.)

Under the award, Michigan Public Health Institute partnered with the Michigan Department of Community Health and four local health agencies that serve as Lead Agencies or HUBs: the Ingham County Health Department, Ingham Health Plan, Mercy Health Muskegon (an integrated health system in western Michigan that is part of Trinity Health), and the Saginaw County Community Mental Health Authority. While initial efforts under the award focused on identifying and enrolling at-risk individuals from partner community care agencies and in-house referral sources (e.g., primary care offices, community-based clinics), leaders at Michigan Public Health Institute and the four agencies began in 2013 to focus on frequent users of health care services. In the process, they became aware of anecdotes and data indicating that a small number of high-volume 911 callers disproportionately used EMS and ED services, often for nonurgent or chronic health conditions. Based on this information, these leaders decided to investigate the merits of forming partnerships with local EMS providers to identify these individuals and connect them to needed resources through enrollment in Michigan Pathways to Better Health.

Did It Work?

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Results

The EMS partnerships have enhanced access to needed health and social services for frequent 911 callers, leading to less reliance on EMS services and lower EMS costs. They have also generated positive feedback from EMS providers, which in turn has sparked interest from other EMS systems.

- **Enhanced access to needed services:** The EMS partnership at each site has successfully identified a significant number of at-risk individuals and enrolled them in Michigan Pathways to Better Health. Since the partnerships launched, the Ingham and Muskegon partnerships have identified and enrolled 68 and 136 individuals, respectively, giving them access to needed medical and social services they otherwise would not have been able to obtain. During her first week on the job in Saginaw, the newly hired registered nurse referred 48 at-risk individuals to the Saginaw HUB.
- **Fewer 911 calls and lower costs:** In Saginaw, MMR has seen a reduction of 153 transports among the 70 to 80 frequent users—individuals who historically had needed six or more transports a year. This reduction translates into approximately $100,000 in cost savings since MMR engaged with Michigan Pathways to Better Health in 2013. Also in Saginaw, use of EMS services among the five highest users fell dramatically, from 76 to 29 transports during the 14-month periods before and after enrollment in the program. One individual, a morbidly obese man who made 79 calls to 911 over a 2-month period, stopped calling altogether after the CHW arranged for him to have appropriate durable medical equipment at home and helped him utilize a natural support system. (In many cases this man had been calling EMS for social companionship.) Anecdotal information from the other two sites also suggests a significant decline in 911 calls among those identified and referred to Michigan Pathways to Better Health. For example, the aforementioned young woman in Muskegon who had visited the ED for 30 consecutive days has not required ED services since being enrolled in the program. Her assigned CHW has helped her to secure housing, attend medical appointments consistently, and understand the importance of adhering to her medication regimen.
- **Positive feedback, leading to interest in additional partnerships:** EMS providers in all three counties offer positive feedback on the program. In Ingham County, this positive feedback has led to requests for the creation of similar partnerships from two additional fire districts.

Evidence Rating *(What is this?)*

Moderate

The evidence consists of pre- and post-implementation comparisons of 911 calls by the five most frequent users of emergency medical services in Saginaw, along with anecdotal reports from all three sites on the program's impact on the frequency of 911 calls.

How They Did It

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Planning and Development Process

While specific planning and development processes varied by site, key steps typically included the following:

- **Identifying frequent 911 callers as a priority:** As noted, early efforts under the award tended to focus on generating referrals of at-risk individuals from other sources. As the leaders of the three agencies began conducting outreach visits in the community to describe the award and the goals of the program, they began to hear stories and in some cases see data that made it clear that frequent 911 callers should be a high-priority target.
- **Choosing partners:** In two of the three counties (Muskegon and Saginaw), the choice of EMS partner was relatively clear, given that one company dominated in each market. In Ingham County, however, there are multiple fire districts that handle EMS calls. Ingham HUB leaders began by meeting with the regional EMS office (which covers three counties) to introduce Michigan Pathways to Better Health and get names and contact information for the heads of all local EMS providers. After this meeting, the Ingham HUB contacted each organization head via e-mail, which generated responses from two organizations—Lansing Fire Department and a private EMS transport company. Ultimately, the decision was made to focus initial efforts on the Lansing Fire Department, as its leaders expressed strong interest in the idea and demonstrated a clear understanding of the goals of the proposed partnership.
- **Ironing out partnership details:** In each county, the leaders of the two partnering organizations met on several occasions to iron out details of the arrangement, including contractual terms (if a contract was being used) and the specific roles and responsibilities of each partner. In most cases, meetings still take place on a periodic basis to make sure the partnership continues to work effectively; for example,

Ingham HUB leaders meet on a quarterly basis with their peers at the Lansing Fire Department.

Resources Used and Skills Needed

Staffing: Program-related staffing varies by site. In Ingham County, a CHW spends 4 hours per week on related activities, primarily accompanying Lansing Fire Department EMS personnel on their 911 responses. In Muskegon County, existing staff at Mercy Health and PRO MED incorporate program-related activities into their ongoing responsibilities. In Saginaw County, MMR hired a full-time registered nurse to handle the identification and referral of eligible individuals.

Costs: Program-related costs similarly vary by site. In Ingham County, direct costs equate to roughly one-tenth of the cost of a full-time CHW (4 hours per week), or roughly $5,000 a year. In Muskegon County, program-related costs total $6,000 per year ($500 per month). In Saginaw County, program-related costs total roughly $28,000 to help cover salary and benefits for the nurse.

Funding Sources

Costs for the EMS partnerships are covered out of a 3-year, $14 million award (#1C1CMS331025) from CMMI (part of CMS); this award funds the entire Michigan Pathways to Better Health program. A fourth year of program operations is being partially funded by a no-cost extension from CMS.

Michigan Public Health Institute and the three implementation sites are actively seeking foundation or institutional funding to keep the Michigan Pathways to Better Health infrastructure whole and functional until contract arrangements are made with public and private insurance entities to cover HUB and CHW services.

Tools and Resources

More information about Community HUBs can be found in separate guides, available at:

- Connecting Those at Risk to Care: The Quick Start Guide to Developing Community Care Coordination Pathways

- Pathways: Building a Community Outcome Production Model
- A Step-by-Step Guide to Building a Pathways Community HUB

Additional information about the Pathways model can be found in other related Health Care Innovations Exchange profiles, available at:

- Program Uses "Pathways" to Confirm Those At-Risk Connect to Community Based Health and Social Services, Leading to Improved Outcomes
- Community Health Navigators Use Pathways Model to Enhance Access to Health and Social Services for Low-Income, At-Risk Residents

Adoption Considerations

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Getting Started with This Innovation

- **Understand laws and regulations related to ambulance transport:** State laws generally specify under what circumstances a 911 caller must be transported to the ED, and any deviations from established processes generally must receive approval. Reimbursement can also be an issue, as in many cases ambulance companies may be paid only for a transport to the ED.
- **Engage 911 service providers early:** Planners should Invite EMS representatives to the table as a key stakeholder at the beginning of the planning process, as they can help in developing effective diversion options and hence reducing utilization.
- **Address potential loss of revenues:** In some communities, EMS providers may be reluctant to form this type of partnership because of its potential to reduce reimbursement from health plans, some of which pay only if the individual is actually transported to the ED. In these instances, it may be necessary to incorporate a financial component into the partnership to help minimize any negative impact. The implementation of provisions of the Affordable Care Act will create financial incentives for EDs to avoid unnecessary transports, since EDs will be penalized for every patient treated at the ED who does not have an emergent condition. This provision will inevitably lead to penalties for EMS providers as well and hence motivate their interest in Michigan Pathways to Better Health as a diversion program. In addition, initial

discussions should highlight the growing movement among payers to reward value rather than volume. In particular, attention should be drawn to increased adoption of payment models that do not provide additional reimbursement for "frequent -flyer" patients—i.e., those who repeatedly call 911 or have multiple ED visits or inpatient admissions over a short period of time.

- **Clarify respective roles and responsibilities:** It is useful to spend time upfront defining the specific roles and responsibilities of each party. Initial confusion over the role of EMS providers in Muskegon in screening and assessing patients led to a delay in getting that partnership working effectively. At one point, leaders at Mercy Health considering ending the arrangement with PRO MED due to a lack of referrals. The issue was resolved after multiple conversations that focused on clarifying the respective roles of EMS providers and the Community HUB.
- **Start small and consider expansion over time:** Planners should begin by establishing one effective partnership and then use its success to forge additional partnerships over time. For example, Ingham HUB recently began training leaders and staff at two other area fire districts after they heard about Michigan Pathways to Better Health from their peers in Lansing.

Sustaining This Innovation

- **Continue education efforts:** Ongoing education about Michigan Pathways to Better Health and available community-based resources helps to ensure that EMS providers remain comfortable identifying those who could potentially benefit from the program, particularly given high turnover rates among EMS personnel. The goal should be to give them the tools and knowledge to make an initial judgment, not to do it for them. That said, EMS providers should not be expected to conduct formal eligibility screening; this task typically remains with the Community HUB.
- **Look beyond EMS to other agencies serving frequent users:** EMS providers are not the only community-based agencies that frequently come into contact with at-risk individuals who disproportionately use health care services. Other medical and social service agencies (e.g., behavioral health providers, housing agencies, homeless shelters, food

pantries) also serve this population, and their leaders might be interested in a similar kind of partnership.

Spreading This Innovation

As noted, the Ingham HUB recently expanded its education and training efforts related to Michigan Pathways to Better Health to two additional fire districts, with the goal of teaching EMS personnel to identify and refer those who might benefit from the program.

Other Info

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More Information

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Innovator Disclosures

Dr. Beane, Ms. Edokpolo, Mr. Sartorius, and Ms. Lindsey reported having no financial or business/professional relationships related to the work described in this profile, other than the funders listed in the Funding Sources section.

Footnotes

1. Dale J, Williams S, Foster T, et al. Safety of telephone consultation for "non-serious" emergency ambulance service patients. Qual Saf Health Care. 2004;13:363-73. [PubMed]

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Contact the Innovator

Funding Sources

Centers for Medicare & Medicaid Services

Developers

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