RESEARCH REPORT EXCERPT

Advisory Board

How to Scale Chronic Disease Management Programs

Customize ambulatory support to prevent downstream utilization

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Executive summary

Because of the complexity of chronic disease, population health leaders often struggle to find scalable management approaches that improve outcomes and manage utilization. Our survey of chronic disease management programs identified common design flaws that lead to ineffective patient management and unmanaged costs. First, programs often narrowly focus on treating disease in a short-term window (e.g., the 30-day period post-discharge) and miss opportunities to prevent disease and escalation outside those parameters. In addition, providers often overly-segment programs by disease state, leading to gaps in care and unnecessary duplication of resources. Finally, programs may not set clear guidelines for when patients should access high-cost services (e.g., remote patient monitoring, specialty care) leading to inefficient resource use.

This research report offers three recommendations for developing a scalable chronic disease management program:

1 **Find ubiquitous, modifiable patient risk factors.** Rather than segment programs by disease, align services to modifiable risk factors agnostic of chronic condition. Identification tactics include root cause analyses, proactive outreach to engage all in-need patients, and tailored care planning including clinical and non-clinical indicators.

2 **Anchor consistent, long-term services in ambulatory care.** Organizations focus too narrowly on post-discharge care, rather than investing in upstream services that drive longitudinal engagement. Tier intervention options based on patient acuity, matching more costly and time-intensive options to higher risk patients. Key components include self-management support, medication support, psychosocial care, telehealth, and advanced illness care.

3 **Set clear pathways to specialists.** PCPs don't always know when patients can be managed in primary care or when they should be referred to specialty care. Offer decision support with hardwired coordination pathways, including real-time specialty consults and care compacts, to ensure seamless transitions and avoid acute utilization.

IN FULL RESEARCH REPORT

INCLUDED IN THIS EXCERPT

Step 2: Anchor consistent, long-term services in ambulatory care

- Assign care transition responsibilities for all high-, rising-risk admits
- Tailor support to patient acuity by incorporating relevant services:
  - Self-management support
  - Medication support
  - Psychosocial care
  - Telehealth
  - Advanced illness care

Dedicate transitions team to high-readmission care settings

Parkview's dedicated mobile teams support patients discharging to and from SNF

CASE EXAMPLE

Parkview Health
887-bed health system with eight hospitals treating more than 820,000 people • Fort Wayne, IN

At-risk patients discharged from acute settings require support during and up to 90-days after the transition period. Care transitions is often the responsibility of everyone on the care team. But providers can create dedicated teams for transition support when a disproportionate number of readmissions come from one post-discharge care setting.

Parkview Health leaders in Indiana noticed a significant proportion of readmissions were current or recently-discharged skilled nursing facility (SNF) patients. To better manage these patients, Parkview narrowed their SNF network to six facilities. From there, Parkview developed the Rapid Response Team and Continuity of Care Team to co-manage at-risk SNF patients'.

Continuity of Care Team and Rapid Response Team smooth CHF[1] transitions

Continuity of Care Team (CCT)
Multidisciplinary team assesses and treats patients for 90 days post-discharge and has co-medical director duties at partner SNFs.

Rapid Response Team (RRT)
All-paramedic team assists with crisis de-escalation during and after SNF stay and perform safety assessments and check-ups in the home.

Inpatient stay	SNF admission	Discharge home
• Discharge planner informs patient about the SNF network and highlights PAC partners • When possible, hospital-based **CCT** meets with patient in-person to explain program and prepare for transition	• Within 24 hours, **CCT** visits patient at SNF to perform assessments, medication reconciliation, and care planning; **CCT** checks on patients in-person daily for five days and then weekly until discharge • SNF staff can call **RRT** 24/7 when concerned about clinical escalation	• After discharge home, ambulatory care management team owns patient care[2] • If the team detects readmission risk, **RRT** visits patient home, provides protocol-driven care, and communicates with **CCT** to determine right site of care (e.g., home, SNF, inpatient setting) and treatment[3]

$1.5M Program savings to CMS

1) Congestive Heart Failure.
2) Ambulatory care team is assigned to high-risk patients under risk.
3) If patient returns to SNF, CCT social worker visits to determine appropriate next step.

Source: Population Health Advisor interviews and analysis.

Agnostic of condition, care plans require same components

Care teams should primarily differentiate by services, not chronic disease type

The major components of ambulatory disease management include self-management, medication support, psychosocial care, telehealth, and advanced illness care. However, not all patients need full scale support across each category, nor can most providers sustain such investments. Instead, link services across each category to the patient's acuity level. For example, while basic disease education may work for lower-risk patients to help them self-manage their conditions, high-risk patients may require home visits to cement behavior change.

Key components of disease management

	Self-management support	Medication support	Psychosocial care	Telehealth	Advanced illness care
Low-risk	Offer disease education to equip patients to self-manage	✖	✖	✖	✖
Rising-risk	Offer ongoing disease education (e.g., telephonic) to equip patients to self-manage	Tap into virtual medication counseling to assist in management	Enable patients to seek support for their non-clinical needs	Prolong engagement with low-investment technology	✖
High-risk	Conduct home visits to support behavioral change and drive self-management	Enroll patients in face-to-face medication therapy management	Offer active navigation to social services	Devote high-investment technology to monitor stabilization	Connect patients with home, palliative, or hospice care

Source: Population Health Advisor interviews and analysis.

Educate universally, but follow-up steps depend on acuity

Mayo Clinic standard education program customizes outreach, continuing services

CASE EXAMPLE

Mayo Clinic Health System

Multiple clinic and hospital system • Across Minnesota, Iowa, Wisconsin, Arizona, and Florida

Disease education is the backbone of successful self-management, but a universal approach will not meet the needs of patients across acuity levels. When Mayo Clinic in Wisconsin started investing in chronic disease education as a part of their community benefit strategy, leaders realized these classes already existed in the community. However, attendance was low. Patients weren't interested in attending classes with titles about aging and serious illness.

In response, Mayo's Community Engagement and Wellness Department created their own disease education classes, Living Well with Chronic Conditions and Healthy Living with Diabetes. Facilitators lead interactive sessions on a range of topics to drive wellness education and self-management. The classes are open and applicable for patients of all acuity levels, but the methods of outreach and follow-up support differs based on patient acuity.

Wellness class outreach tactics

- *Low-risk:* Attract patients by advertising classes on promotional flyers, posters, and listservs
- *Rising-risk:* Refer from a provider (e.g., PCP, endocrinologist) who identifies need for additional education
- *High-risk:* Refer from care coordination program if already enrolled

Eligibility criteria

Multiple chronic illnesses (Living Well with Chronic Conditions) or type II diabetes (Healthy Living with Diabetes)

Mayo Clinic's community engagement & wellness department disease education classes

Strategic framing of offerings

Program leaders selected positive names for program (e.g., Living Well with Chronic Conditions, Healthy Living with Diabetes) to reduce perceived stigma of classes

Course components

- Two facilitators lead six weekly 2.5 hour classes
- Includes interactive sessions on: disease-specific information, goal setting, problem solving, healthy eating, relaxation techniques, fitness, communication, stress management, and preventing complications

Connection to continuing services

- *Low-risk:* Connect with peer support services (e.g., mentors, group support programs)
- *Rising-risk:* Refer to behavioral specialist (e.g., dietitian) to support ongoing behavior change
- *High-risk:* Refer to care coordination program if not already enrolled

93%

Class retention rate

Source: Population Health Advisor interviews and analysis.

Health literacy often a primary barrier to patient adherence

Grady Memorial focuses on readability, visuals, and clear timelines

CASE EXAMPLE

Grady Memorial Hospital
Large public hospital part of Emory University • Atlanta, GA

According to the Centers for Disease Control and Prevention, only 12% of adults have proficient health literacy. Basic disease education is unhelpful for patients who are not prepared to absorb clinical information about their conditions and care plans. Providers must screen for and tailor education to health literacy level.

Grady Memorial Hospital in Atlanta partnered with Rollins School of Public Health to create easy-to-read resources for polypharmacy patients with low health literacy. The PILL program uses visual cues to communicate medication regimens. Medication cards and printed timelines provide the color, size, and shape of each pill, along with simplified directions for taking the medication. Of patients receiving a card, 92% found it very easy to understand and 94% found that it helped them to remember information like the purpose of their medications or what time of day to take them.

PILL's[1] medication timeline placard for patients with low literacy

MEDS	SIMPLIFIED INFORMATION
Simvastatin 20mg	• Take 1 pill at night • For cholesterol
Furosemide 20mg	• Take 2 pills in the morning and 2 at night • For fluid
Insulin	• Inject 24 units before breakfast • Inject 12 units before dinner • For diabetes (sugar)

Jane's Daily Medication Schedule

	Simvastatin	Furosemide	Insulin
8:00-9:00am			
9:00-10:00am		◯ ◯ ☀	
10:00-11:00am		💉	🍽 ☀
11:00-Noon			
Noon-1:00pm		⚠	sugar
1:00-2:00pm			
2:00-3:00pm			
3:00-4:00pm			
4:00-5:00pm			
5:00-6:00pm			💉 🍽
6:00-7:00pm	● zZ	◯ ◯ zZ	

Schedule may include warning signs for when dietary guidelines influence outcomes

Times listed down the rows of the table is more readable when multiple medications are needed

Source: "Health Literacy in the United States," Centers for Disease Control and Prevention, https://www.cdc.gov/healthliteracy/training/page669.html; Smith SG, et al., "Skill set or mind set? Associations between health literacy, patient activation, and health," *PLoS One*, 8, no.9 (2013); Kripalani S, et. al., "Development of an illustrated medication schedule as a low-literacy patient education tool," *Patient Education and Counseling*, 66, no. 3 (2007): 368-77; Population Health Advisor interviews and analysis.

1) Pharmacy Intervention for Limited Literacy.

Centralize resource hubs to drive self-management at scale

SMRC's[1] evidence-based steps simplify notoriously challenging task

CASE EXAMPLE

Self-Management Resource Center
Research organization previously affiliated with Stanford University • Palo Alto, CA

Since all patients with chronic conditions need tools to better self-manage, providers can centralize these resources to make them widely available. Some organizations are creating centralized patient education resource hubs, and others are partnering with vendors or community agencies that have already built effective self-management engines.

Providers across the country contract with the Self-Management Resource Center (SMRC) to implement evidence-based programs that equip patients with the skills to change behavior patterns and the motivation to use their new tools. The SMRC model directs care teams to ground their efforts in patient-centered action planning that prioritizes patient goals, rather than clinical metrics. The care team should then support patients in identifying barriers to their goals and brainstorming potential solutions. With those skills in place, the care team should explain helpful decision-making tactics, encourage reinterpretation of negative beliefs, and showcase peers who model successful self-management.

Equip patients with skills to change behavior patterns

1 **Patient-driven action planning**

- Derive weekly goal from patients' preferences, not provider-centered metrics (e.g., lower blood pressure)
- Ensure goals are small and tangible to begin building patients' confidence levels

2 **Problem-solving support**

- Support patient in identifying problems to target that impact chronic conditions
- Brainstorm potential solutions with patient that incorporate personal support system or external resources

Drive motivation to apply new tools to self-management

3 **Decision-making tactics**

Equip patient with tactics (e.g., pros and cons list, ranking) to inform day-to-day decisions that lead to long term behavioral change (e.g., healthy eating)

4 **Reinterpretation of beliefs**

Use patient engagement tactics (e.g., motivational interviewing) to reframe self-defeating thought patterns

5 **Peer modelling of behavior**

Connect patient to peers (e.g., same chronic condition, demographic background) who successfully self-manage

$815 Total cost savings (for plan and patient) for patients with diabetes due to reduced utilization

Source: Turner R, et al., "Evaluation of a Diabetes Self-Management Program: Claims Analysis on Comorbid Illnesses, Health Care Utilization, and Cost," *Journal of Medical Internet Research*, 20, no. 6 (2018); Population Health Advisor interviews and analysis.

1) Self-Management Resource Center.

Equip rising-risk patients with virtual tools for self-care

myStrength arms patients with interactive education and coping tools

CASE EXAMPLE

Partnership between myStrength and the State of Missouri

Connects Missouri Medicaid patients with evidence-based, HIPAA-compliant mobile and web-based support

Some patients need self-management support beyond educational resources. Rising-risk patients, who may be managing a few chronic conditions, are more likely to be successful with additional virtual tools that simplify care plan adherence.

The state of Missouri contracts with myStrength, a self-management platform designed to support patients with behavioral health conditions. Patients signed up with myStrength can access evidence-based tools to help self-manage behavioral health problems, comorbidities, life events (like a pregnancy), and wellness goals (such as weight management). Machine learning algorithms individualize the patient experience, so the more often patients use the platform, the more it highlights therapeutic resources consistent with their preferences.

myStrength platform's therapeutic services

Guided self-management support

myStrength offers interactive psychotherapy and skill-building programs across six focus areas.[1]

Education and coping exercises

Patients engage with a range of topics related to behavioral and physical health and practice coping skills.

Goal and symptom tracker

Patients set goals and customize symptom trackers (e.g., emotional health, drug use) to measure progress.

Community inspiration board

Patients increase social connectivity by sharing inspirational quotes and images with other users.

$382	6.9	55%	3x
Per member per year savings for Missouri beneficiaries	ROI among Missouri beneficiaries	Decrease in depression scores among all users	Symptom reduction among users vs. patients without access

1) Focus areas include stress, depression, anxiety, substance use, chronic pain, and insomnia.

Source: Population Health Advisor interviews and analysis.

Offer telephonic disease-specific specialist support

Sutter's management program supplements embedded care coordination

CASE EXAMPLE

Sutter Health
24-hospital nonprofit health system • Northern California

Telephonic support is a viable alternative for rising-risk patients who aren't proficient in digital self-management tools but would still benefit from additional check-ins and education reinforcement. Sutter Health in California has a longstanding care coordination program that includes a telephonic disease-specific component. The telephonic service can serve as the entirety of support for rising-risk patients, or can serve as a supplemental piece to the high-risk Care Coordination Program.

The key to Sutter's success is that the telephonic service team specializes in the disease they're working with and they are closely integrated with the Care Coordination Program and PCPs. Services are seamless, and if staff identify patients as needing higher touch support, there is a clear referral process to connect patients with the care coordination program.

Sutter Health's dual approach meets the needs of both rising- and high-risk patients

Telephonic chronic disease management

Disease-specific management (e.g., CHF, diabetes, hypertension, asthma) aimed at rising-risk patients or supplemental to CCP for high-risk patients

Patient identification

Typically from the disease registry post-discharge or referred by the CCP

Staffing

Disease-expert pharmacists and RNs work closely with PCPs

Support Services

Staff offer medication reconciliation, patient education; pharmacists refer cases to RNs upon clinical escalation

Care Coordination Program (CCP)

Transitional program
30 days post-discharge

Interdisciplinary team smooths the transition home, with pharmacist providing comprehensive medication management

Longitudinal program
Undefined timeframe

RN case manager or LCSW serves as primary care coordinator (PCC)[1] who initiates patient outreach, offers ongoing self-management education, and connects to social services

Two-way referrals

Telephonic team refers to CCP if staff detect behavioral health need

9.5%	5.6%	50%
Fewer ED visits	Fewer hospitalizations	Reduced 30-day readmissions

1) Staff is deployed based on root of patient's complexity. The RN supports patients with predominantly clinical, the LCSW patients with predominantly behavioral problems.

Source: Population Health Advisor interviews and analysis.

Use home visits for a holistic view of high-risk needs

UPMC's home visits illuminate social barriers and self-management skills

CASE EXAMPLE

UPMC St. Margaret
250-bed community hospital • Pittsburgh, PA

Virtual and telephonic strategies won't be sufficient for the highest-risk patients, who are multi-morbid, have multiple medications to keep track of, and social barriers that stymie their best efforts. Home visits allow the care team to establish a relationship with the patient and confirm or modify self-reported information. Staff can obtain a full understanding of the patient's context, identify any previously unknown barriers, and address small issues (like fall risks) in the moment.

UPMC St. Margaret's home visit program for patients with COPD began as a grant-funded pilot, but the hospital saw enough benefit to fund the program long term and expand services to patients with heart failure.

UPMC St. Margaret's offers home visits for highest-risk patients with COPD

Eligibility requirements

- Hospitalized for a COPD exacerbation or for pneumonia and has a history of COPD
- Discharged home or to independent living facility without home health care
- Lives within 20-mile radius of hospital

Chronic disease coordinator

- Spends 50% of time identifying patients in inpatient setting and care planning
- Spends 50% of time conducting about eight home visits per week, lasting between 60-90 minutes

Home visit checklist

- ☐ Review patient's action plan developed in the inpatient setting
- ☐ Repeat standardized education protocols to cement learnings
- ☐ Assess patient's living conditions and medical equipment to identify barriers to COPD management
- ☐ Communicate identified clinical challenges with PCPs
- ☐ Connect patient with community resources or social workers to address non-clinical needs

1) Staff is deployed based on root of patient's complexity. The RN supports patients with predominantly clinical, the LCSW patients with predominantly behavioral problems.

Source: Crimson Continuum of Care interviews and analysis.

Virtual pharmacy consults are sufficient for rising-risk

University of Missouri's centralized virtual program scales program reach

CASE EXAMPLE

University of Missouri Health Care (Mizzou)
Five-hospital health system including 60+ outpatient clinics and nine pharmacies • Columbia, MO

Without medication management support, rising-risk patients with polypharmacy needs are vulnerable to clinical complications and may elevate to the high-risk acuity category. Virtual consults help provider stabilize rising-risk patients while reserving access to intensive support for the most acute patients.

The University of Missouri developed a virtual pharmacy program to support PCPs primarily in managing the medications of their rising-risk patients. This served as an opportunity for the organization to lower medication expenses, reduce complications, and improve outcomes.

Virtual Pharmacy Review Program (ViPRx) pharmacist responsibilities

Pre-PCP visit medication review

- Patient appears in EHR task list five days before PCP visit
- Pharmacist reviews patient's medical history, including medications and other diabetes registry clinical indicators; reviews take 30-75 minutes
- Recommends physician interventions prior to visit

Post-PCP visit evaluation of prescriptions

- E-prescription triggers alert for ViPRx pharmacist to review prescription prior to fill and intervene if needed
- Pharmacist also reviews and documents whether physician followed recommendations

Post-hospital discharge medication review

If patient is hospitalized or visits ED, EHR alerts for ViPRx pharmacist, who reviews any discharge medications

$100K
Reduction in drug expense for enrolled patients; attributed to discontinuation of medication

$10.50
Approximate per member per month reduction for enrolled patients

1) Staff is deployed based on root of patient's complexity. The RN supports patients with predominantly clinical, the LCSW patients with predominantly behavioral problems.

Source: Pharmacy Executive Forum interviews and analysis.

In-person pharmacist support aids the highest-risk

Geisinger ensures seamless access to medication therapy management

CASE EXAMPLE

Geisinger Health System
13-hospital system across Pennsylvania and southern New Jersey

High-risk patients with polypharmacy needs find it challenging to keep track of medication regimens. Devote dedicated staff and appointment time to execute medication therapy management with high-risk patients in-person. When face-to-face, pharmacists are better able to sort though the range of medications and catch any gaps in understanding on the medication regimen.

Geisinger Health System implemented an award-winning Medication Therapy Disease Management program. It co-locates clinical pharmacists in primary and specialty care clinics so they can provide in-person medication support via warm handoffs from providers.

Geisinger's in-person medication therapy management development process

Implement program across system

1 Select clinics in which to embed clinical pharmacists

- Leaders analyze data to identify target patients and clinic sites with at least 700 eligible complex patients
- 85% of pharmacists are embedded in primary care, 15% in specialty

2 Drive PCP buy-in for a successful program launch

- Leaders visit clinics to engage partners early on, educate them on the role of embedded pharmacists, and showcase program outcomes (e.g., improved clinical metrics)

Execute MTDM[1] with high-risk patients

3 Use two-pronged referral process to identify and enroll holistic list of target patients

- Pharmacists use dashboards and an auto-referral platform to identify patients for outreach
- PCPs refer patients in-person to reduce care gaps with warm handoffs

4 Prioritize conditions to manage by determining intervention's potential impact on outcomes

- Pharmacist time is based on "value of the touch," or which disease states they can most impact with their expertise
- Staff schedule 60-minute initial appointment within one week of the referral; then follow-ups every 2-4 weeks based on acuity

18% Reduced ED visits[2]	18% Reduced hospitalizations	23% Lower annual total care costs

1) Medication Therapy Disease Management.
2) All results show impact of program on patients with atrial fibrillation.

Source: Population Health Advisor interviews and analysis.

Support rising-risk in self-managing social needs

ZSFG[1] volunteers connect patients to needed community resources

CASE EXAMPLE

Zuckerberg San Francisco General
Large public hospital • San Francisco, CA

The root of clinical complications for many patients is often their psychosocial needs. Patients escalate when providers lack a routine method for linking social services to clinical care plans.

To prevent psychosocial referrals from going unfilled, Zuckerberg San Francisco General in California uses clinic-based volunteers to actively connect patients with community services.. The San Francisco Department of Health funds three part-time supervisory roles to manage the program. Beyond those costs, the model operates on fundraising efforts and volunteers.

Resource navigation help desk operations

Volunteer action	*Key to success*
1 Once a patient is roomed, volunteer conducts a laptop-based screening questionnaire to surface social needs	Volunteer uses language that ensures patients don't feel targeted and are comfortable disclosing information, e.g.,: "*We ask these questions to all patients.*"
2 Volunteer and patient collaboratively determine what type of support services would be helpful and what concrete next steps to take to obtain that support	Volunteers are local pre-health students who are familiar with the area and reflect the patient population in languages spoken to make it easy to relate to patients
3 Volunteer alerts the clinic's behavioral assistant or social worker of any patient needs that require their expertise	Clinics with volunteers often include social workers or behavioral assistants to support higher-level patient needs concurrently
4 Volunteer documents identified needs and action steps on secure platform and administrative supervisor inputs into EMR	With HIPAA[2] constraining volunteer access to EMR, secure platform allows for information to be documented accurately and accessible while waiting to be entered

1) Zuckerberg San Francisco General.
2) Health Insurance Portability and Accountability Act.

Source: Population Health Advisor interviews and analysis.

Offer psychosocial care navigation to high-risk patients

Penn[1] uses community health workers for ongoing non-clinical support

CASE EXAMPLE

University of Pennsylvania Health System
Six-hospital health system • Philadelphia, PA

High-risk patients often experience the most entrenched versions of non-clinical needs. Given the scope of their challenges, high-risk patients require specialized, hands-on support to begin to stabilize. Often, community health workers (CHWs) take on this role. These staff aren't clinically trained, but hired because of their engaging personalities and personal experiences in the community. These traits allow them to gain patients' trust and drive activation.

The University of Pennsylvania Health System developed an effective CHW model called IMPaCT. CHWs use an automated workflow management tool with an integrated risk algorithm to identify target patients in real time, either upon admission or in the outpatient setting. Length of support depends on the needs of the patient. It can range from two weeks for post-discharge support to six months to drive long-term behavioral change.

CHWs support chronic disease patients with social support and behavioral change

Risk algorithm informs CHW outreach

HOMEBASE, an automated workflow management tool integrated into UPHS's EMR, identifies eligible patients in real time across inpatient and outpatient settings

Intake assessment centers around patient goals

CHW leads 60- to 90-minute conversation with patient during primary care visit to develop a relationship, uncover psychosocial needs, and set care plan goals

CHW engages patient in ongoing support

CHW connects with patients at least weekly in the manner most comfortable to the patient (e.g., home visits, over the phone, in cafes)

Impact of UPenn's CHW program

2:1	30%	30%	12%
Financial ROI	Decrease in hospitalizations	Decrease in multiple readmissions	Increase in primary care access

Eligibility criteria

Publically insured, 2+ conditions, living in at-risk zip code, identified by geomapping

1) University of Pennsylvania Health System. .

Source: Population Health Advisor interviews and analysis.

Extend patient education for the rising-risk with texts

Chicago supplements self-management with automated reminders

CASE EXAMPLE

University of Chicago Medicine
571-bed hospital that partnered with mHealth Solutions • Chicago, IL

Patients need reminders to reinforce self-management best practices between touchpoints from their care team. Otherwise, providers run the risk of patients reverting to unhealthy behavior patterns. Rising-risk patients can benefit from virtual reminders. Virtual reminders can be automated, drive continued care plan engagement at scale, and identify any potential escalation in conditions.

The University of Chicago uses a relatively low-cost strategy to engage patients remotely. Staff use text reminders to continue educating and reminding patients about elements of their care plan. The program uses a vendor, mHealth Solutions, to set up automated texts for patients with diabetes. Each message is customized based on a set of questions that nurses administer to newly enrolled patients.

Automated text messages sent to patients with diabetes at University of Chicago

What is your weight today?

Do you need a prescription refill?

It's 8 o'clock. Time to take your medication.

Eating foods low in salt can lower blood pressure.

$437

Net savings per patient in 2014; with program cost of $375 per patient, total cost of health care per patient declined by $812

Source: Washington T, "Texting Improves Diabetes Management, Lowers Health Costs Study Finds," *ScienceLife, University of Chicago Medicine & Biological Sciences*, February 3, 2014, http://sciencelife.uchospitals.edu/2014/02/03/texting-improves-diabetes-management-lowers-health-costs-study-finds/; Population Health Advisor interviews and analysis.

Reserve remote monitoring for high-risk patients

UVA equips PCPs with skills and technology to track high-risk patients

CASE EXAMPLE

University of Virginia Health System
600-bed academic health system • Charlottesville, VA

High-risk patients benefit from more in-depth telehealth investments. Assigned care team members should be fully informed in real time of patients' clinical indicators so that staff can intervene if patients begin to escalate. Otherwise, patients may worsen to the point of acute admission without the primary care team's knowledge.

UVA originally developed its remote patient monitoring program for patients with CHF post-discharge so that PCPs can up-to-date on patients' key health indicators. In the current iteration of the program, "advocates" meet high-risk patients with CHF during their inpatient stay to offer and explain the remote patient monitoring option available to them. They own the monitoring support for patients in the first 30 days, following up telephonically to reinforce the transition plan, connect patients with PCPs, and monitor data. At 30 days, advocates hand off patient management to the PCP who can choose whether or not to extend remote monitoring for another 30 days—which is all billable through the CMS 99091 code.

"Advocate" owns RPM for 30 days; PCP owns ongoing RPM management

Advocate post-discharge support

Staff[1] implement RPM for high-risk patients with CHF and monitor for first 30-days

1 Inpatient stay

Meets patient to explain RPM offering, educate patient on how to submit daily measurements (e.g., blood pressure, weight), and distribute the technology (i.e., iPad, blood pressure cuff, pulse oximeter, scale)

2 48 hours post-discharge

- Offers telephonic follow-up to reinforce transition plan, administer depression screening, and schedule PCP visit
- Monitors patient remotely; involves PCP in care if data suggests escalation

3 30 days post-discharge

- Hands patient management and remote monitoring responsibilities off to PCP and submits all recorded data through the shared EMR
- PCP determines whether to extend remote monitoring for another 30 days using CMS 99091 billing code

Eligibility criteria

All cause, all payer, history of admissions, unstable vitals 30 days post-discharge

PCP ongoing management

4 Ongoing management

Continues to review patient progress remotely; responds to EMR alerts indicating potential clinical escalation

1) For example RNs, NPs, SWs, dietitians, health coaches.

Source: Population Health Advisor interviews and analysis.

Offer house calls for home bound patients

CMS' Independence at Home demonstration drives case for home care

CASE EXAMPLE

Centers for Medicare and Medicaid Services Innovation Center
Innovation arm launched the Independence at Home demonstration program

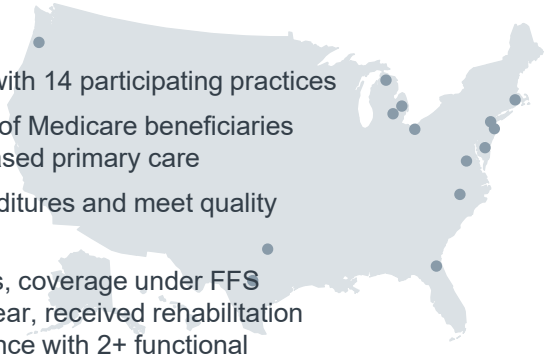
The sickest patients may be too frail to easily access care in the ambulatory space. Limited mobility can reduce the volume of primary care touchpoints and introduce fall risks. Offer house calls for patients who still can be managed effectively in primary care, but can't easily leave the house.

CMS launched the Independence at Home demonstration program in 2012 to spur innovation in this field. Fourteen practices across the country joined in to improve patient outcomes, reduce costs, and receive incentive payments tied to high performance.

IAH[1] demonstration spurred home-based disease management for most frail patients

Demonstration overview

- Launched in 2012 by the Affordable Care Act with 14 participating practices
- Aimed to improve outcomes and reduce costs of Medicare beneficiaries with multiple chronic conditions using home-based primary care
- Motivated practices to reduce Medicare expenditures and meet quality measures with incentive payments
- Eligible beneficiaries had 2+ chronic conditions, coverage under FFS Medicare, 1+ inpatient admission in the past year, received rehabilitation services in the past year, and required assistance with 2+ functional dependencies (e.g., walking, feeding)



14	10K+	$7.8M	$89	$5.3M
Participating practices	Enrolled beneficiaries	Total CMS savings across all practices	Average savings per beneficiary	Incentive payments across 7 practices

1) Independence at Home.

Source: "Independence at Home Demonstration," CMS, https://innovation.cms.gov/initiatives/independence-at-home/; "Independence at Home Demonstration Corrected Performance Year 2 Results," CMS, https://www.cms.gov/newsroom/fact-sheets/independence-home-demonstration-corrected-performance-year-2-results; Population Health Advisor interviews and analysis.

Improve primary care team comfort with ACP[1]

Partners[2] promotes team-based approach to serious illness care

CASE EXAMPLE

Partners HealthCare
Nonprofit, integrated health system • Boston, MA

Some patients will require end-of-life support as a part of their care, but primary care teams are often uncomfortable having those conversations. However, patients without advance directives are less likely to have their end-of-life goals met and more likely to experience unnecessary procedures. Primary care staff must feel confident initiating advance care planning conversations to ensure patients' wishes are met.

Partners HealthCare in Boston realized the importance of equipping the broader primary care team with the ability to comfortably engage in these conversations. Partners developed the Serious Illness Conversation Program in collaboration with Ariadne Labs to equip primary care teams to initiate and complete effective serious illness conversations. The goal is to increase the prevalence of advance care planning conversations system-wide.

Serious illness conversation program increases prevalence of ACP conversations

TRAINING	TOOLS	SUCCESS
• Primary care team members (PCP, SW, and RN) undergo a small group three-hour training • Trained actors simulate a range of patient reactions to serious illness conversations in practice sessions with participants	**1 Conversation guide** Partners created an easy-to-use serious illness conversation guide incorporated into the EMR[3] for trained care team members **2 Coaching calls** Palliative care specialists hold monthly calls for team members to ask tailored questions **3 Billing codes toolkit** Palliative care task force created toolkit and hosts telephonic trainings to support providers in implementing and documenting ACP codes	• Promotes serious illness care delivery aligned with patients' goals and values • Training ensures advance care planning is an organizational norm **85%** Of PCPs at Massachusetts General Hospital have undergone ACP training

1) Advance care planning. 2) Partners HealthCare. 3) In collaboration with Dana Farber.

Source: Population Health Advisor interviews and analysis.

Keep disease-specific considerations in mind

Centralized management programs don't ignore disease idiosyncrasies

Centralizing disease management efforts has many benefits. Care teams are able to treat patients holistically, rather than by diagnosis. It also streamlines efforts, reducing duplication and saving resources. However, different conditions (including CHF, COPD, diabetes, asthma, and behavioral health diagnoses) require varying approaches to overcome specific barriers to care. Best-in-class programs incorporate disease-specific nuances into care planning across programmatic components.

Disease-specific considerations to inform care planning

	CHF	COPD	Diabetes	Asthma	Behavioral health
Barriers to effective care	Later-stage patients struggle with mobility, restricting ability to travel to appointments and perform ADLs[1]	Patients may experience stigma or self-blame due to potential association with smoking	Behavior change can be particularly complex with deep roots in family or cultural traditions	Symptoms can persist even with clinical care if patients remain in unhealthy living environments	Lack of providers, patient barriers (e.g., stigma, education), and reimbursement challenges hinder treatment adherence
Treatment considerations	**Remote patient monitoring** can garner significant ROI and reduce travel to and from appointments	Engagement practices[2] **reduce judgmental language** and normalize patient experience	**Peer support** and **group visits** are often helpful for encouraging lasting behavioral change, incorporating family members when possible	Consider home visits to identify and **address environmental risk factors** given the negative impact of environmental stressors on asthma	**Behavioral health integration in primary care** reduces service line silos, decreases access barriers, and offers more holistic patient support

1) Activities of Daily Living.
2) Motivational interviewing, shared decision making, etc.,

Source: Population Health Advisor interviews and analysis.

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