

# Hospital to Home: Reducing Avoidable Hospital Emergency Department Visits While Improving Stability and Health

## *Initial Report for Program Expansion*

### Background

A recent Robert Wood Johnson Foundation study (Doren, Raven, & Rosenheck, 2013) reaffirmed the common finding that a relatively small group of people use a disproportionate amount of hospital emergency department and inpatient resources. The authors of this study identified that this group is of particular concern because of their high costs and needs that “seem to be poorly met by standard care systems.” These individuals tend to have numerous, complex needs, including chronic health conditions, mental health issues, and housing instability. This frequent usage results in avoidable health care expenses and ties-up emergency department resources unnecessarily. The Affordable Care Act aims to decrease hospital readmissions and associated emergency department use, but this cannot be accomplished by only addressing the healthcare needs of these individuals (Doren, et al., 2013). There is an urgent need to reduce costs and better serve patients by targeting the highest need and highest cost patients with alternative interventions that also target the complex issues affecting their health.

In 2009, the Hospital to Home initiative piloted an alternative intervention with seven individuals that demonstrated promising outcomes. Based on these positive outcomes, the initiative expanded in 2012 to a second cohort of participants, increasing the number of participants from 7 to 25.

# Overview of Hospital to Home

## Characteristics of Hospital to Home initiative

The Hospital to Home initiative targets adults who:

- Used the Regions Emergency Department five or more times in the past year;
- Have one or more chronic medical conditions, such as diabetes, high blood pressure, and traumatic brain injury;
- Have mental illness of a serious nature with or without other occurring disorders, such as substance use disorders; and
- Have long histories of homelessness, specifically those who have been continuously homeless for one year or homeless four times in the past three years (the federal Housing and Urban Development [HUD] definition of chronic homelessness).

Once engaged in the initiative, participants work voluntarily with a person-centered, multi-disciplinary Mobile Community Health Services Team, which provides individually tailored care, based on participant needs and preferences. Serving as the central hub of comprehensive care coordination, the Team is accountable to either provide directly, or arrange for and coordinate, all needed services including physical health, behavioral health, housing, social, and employment services.

The mobility of the Team allows services to follow participants, wherever they are, thus keeping participants engaged in their own plan. Mobile outreach and engagement strategies build and sustain trusting relationships with participants and remove barriers to success. Hospital to Home defines success as achieving the following goals:

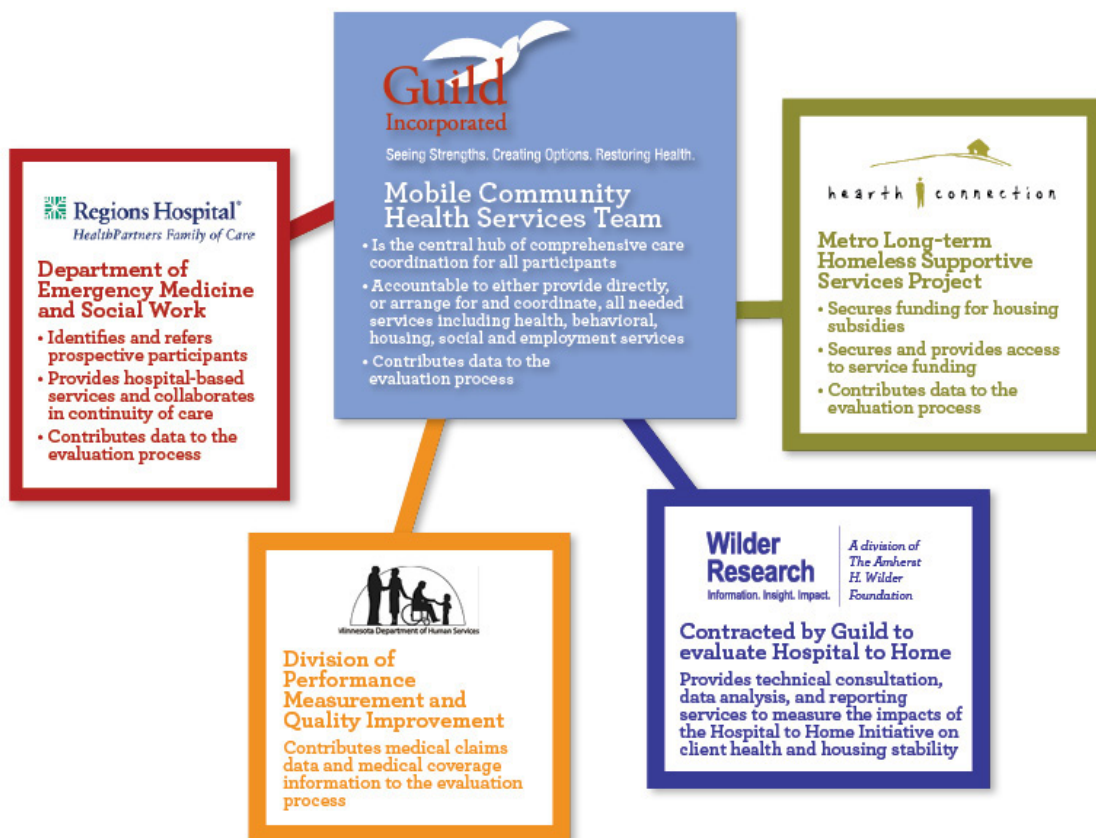
- Support participants in securing stable housing, which is a strong determinant of positive physical and mental health outcomes.
- Reduce participant emergency department visits, thus freeing up emergency department resources for acute medical crises and reducing unnecessary healthcare expenditures.
- Increase participant relationships with primary care clinics so they will seek medical care from clinics rather than emergency departments.
- Assist participants with accessing affordable medications from a limited number of pharmacies to allow for enhanced coordination of care and optimal use of medication to promote health and recovery.

- Promote participant self-reliance and life functioning.

Hospital to Home provides ongoing support, for as long as participants require, for chronic care management. This is a unique approach compared to other initiatives, such as the hospital In-Reach Service Coordination model established in Minnesota in January 2012, which also aims to reduce emergency department and other unnecessary healthcare utilization. In-Reach provides navigator services to individuals who frequently use emergency departments, but these services are limited to a 60-day period, they often focus on acute care management, and they do not include the same level of assistance with securing stable housing as Hospital to Home is able to provide.

## Hospital to Home community partners

Hospital to Home relies on a network of community partners to achieve these goals, as can be seen in the figure below.



# Overview of evaluation

The purpose of the evaluation is to better understand the characteristics and needs of the individuals served by Hospital to Home, and the initiative's impact on participants, including how participation has affected their healthcare use, housing stability, and self-sufficiency.

The current report provides background information about the expanded initiative, including changes from the pilot and baseline information about the participants receiving services under the expanded program in order to provide a context for the services that are provided. Subsequent reports will focus on outcomes for the second cohort. For more information about the pilot initiative that this expansion is based on, refer to the series three reports describing the Cohort I participants (June 2011) and outcomes for approximately one year (December 2011) and two years (November 2012) after enrollment for that group.

For the current report, Wilder Research analyzed existing medical claims data from the Minnesota Department of Human Services, housing and life functioning data from Hearth Connection, and service and participant records from Guild Incorporated. Regions Hospital also provided medical care data to supplement the information received from the Minnesota Department of Human Services.

Healthcare use data is only available through March 2013 because medical claims may be processed for up to one year after a service was received. At least nine months must lapse between the service date and the data retrieval date in order to allow adequate time for the delay in claims processing. To increase consistency, all data included in this report are from participant initiative enrollment through March 2013. The baseline healthcare usage reported is likely an underrepresentation of actual usage because most participants had inconsistent healthcare coverage prior to enrollment.

There are 18 participants included in the Cohort II analysis and 3 participants included in the Cohort I update. To establish a baseline, this report includes Cohort II individuals enrolled before April 1, 2013 and enrolled for at least three months before exiting the initiative.

# Cohort II participant characteristics at enrollment

- The 18 Cohort II Hospital to Home participants range from age 22 to 57 (average = 46 years of age; median = 48 years of age).
- Over three-quarters of the participants (78%) are male and nearly three-quarters (72%) have at least a high school education.
- Two-thirds of participants are identified by Guild Incorporated as White (67%), while the remaining participants are Black/African American (28%) or Hispanic (6%).
- At enrollment, most participants (78%) were enrolled in Medical Assistance, though a couple also received care through the Consolidated Treatment Fund (11%). In addition, 18 percent were covered by Medicare Part A and Part B. One participant did not have any coverage at enrollment.

## Participants had many complex issues at enrollment

At enrollment in Hospital to Home, each participant was screened for mental and physical health conditions and substance use. Based on this screening:

- All participants were diagnosed with at least one chronic health condition, including diabetes, asthma, high blood pressure, hepatitis, traumatic brain injury, heart disease, or stroke.
- Most participants (83%) were diagnosed with a serious mental illness, such as major depression, bipolar disorder, post-traumatic stress disorder, delusional disorder, or schizophrenia.
- A majority of participants (61%) also had a diagnosed substance use disorder.

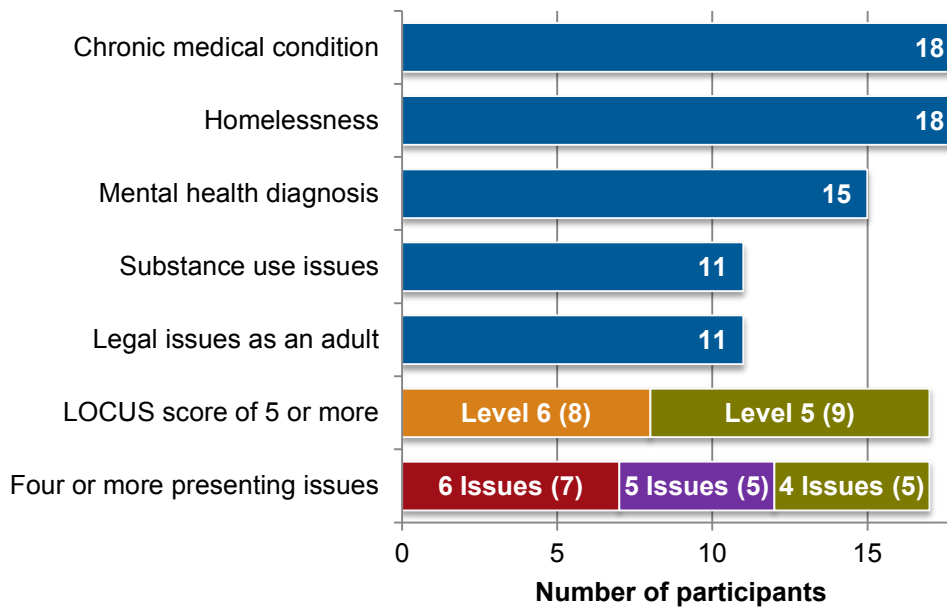
Additional background information was also collected, including criminal histories, experiences with homelessness, and an assessment of the intensity of services needed.

- All participants were homeless and met the federal Department of Housing and Urban Development (HUD) definition for “chronically homeless.” This requires either one continuous period of homelessness lasting a year or more or at least four episodes of homelessness in the past three years. It also requires a disabling condition, as demonstrated by the serious mental illness and chronic health conditions described above.
- According to Minnesota Bureau of Criminal Apprehension records, a majority of the Hospital to Home participants (61%) have a criminal history. One-third who have had between one and nine felonies (average = 5; median = 4). Of the 11 participants’

80 total convictions, most (95%) occurred more than one year prior to enrollment. Criminal histories, particularly felonies, at any point in time can be a barrier to securing and maintaining housing.

- Hospital to Home participants were also assessed with the Level of Care Utilization System (LOCUS) for Psychiatric and Addiction Services to determine their recommended level of care. All participants had a recommended level of care of three or higher, which requires care ranging from high intensity community-based services (Level 3) to medically managed residential services (Level 6). Nearly all participants (94%) were rated at Level 5 or Level 6.

### 1. Presenting issues at enrollment



### Participants have high rates of healthcare use

One of the primary goals of Hospital to Home is to decrease the number of participant emergency department visits by increasing comfort and relationships with consistent primary care clinics so they will seek medical care from clinics rather than emergency departments. The initiative also assists participants in accessing consistent preventative medical care, so as to decrease the need for medical services over the long-term.

- Participants had a high rate of healthcare use in the year prior to Hospital to Home enrollment. During that time, participants had a total of 165 emergency department visits and 471 primary care clinic visits. Most of these visits took place in the three months before enrollment, when participants had 106 emergency department and 265

clinic visits. This equates to about two healthcare visits per person per week during that three-month period.

- Individual participants' healthcare use varied widely. Participants had between 5 and 43 emergency department visits (average = 10; median = 8) and between 0 to 133 clinic visits (average = 26; median = 17) per person in the year prior to enrollment.
- Some participants were very mobile when accessing care. Participants visited a total of 11 different emergency department locations, including individual participants visiting between one and six locations (average = 2). Clinic use took place in 88 different clinic or specialist locations and individual participants visited an average of 10 different clinics or specialist locations, with an average between 1 and 22 locations.

Hospital to Home seeks to help participants gain more consistent and reliable healthcare, including access to medications. Participants need access to affordable medications with enough consistency to allow for the optimal use of medication to promote health and recovery. The goal is, therefore, to moderate participants' pharmacy usage and assist participants in building relationships with a limited number of pharmacies.

- In the year leading up to Hospital to Home enrollment, participants had a total of 210 pharmacy claims, including 92 claims in the three months just before enrollment.
- Participants had a wide range of pharmacy claims, from 0 to 59 claims per person (average = 12; median = 9), in the year before enrollment.
- Participants accessed 131 different medications, total, in the year before enrollment, including between 0 and 44 medications per participant (average = 13; median = 9).
- These claims came from 16 different pharmacies, and individual participants visited between zero and six different pharmacies (average = 3).

### **All participants had long histories of homelessness**

One of the cornerstones of Hospital to Home is housing stability for participants. Safe, stable housing is a strong determinant of physical and mental health outcomes. By securing stable housing, participants will have the ability to develop stability in other facets of their lives as well, including healthcare usage.

- All participants were homeless at enrollment.
- Participants' length of homelessness prior to enrollment ranged from 1 to 23 years (Average = 7 years, Median = 5 years). Six participants have been homeless for at least 10 years.

- Most participants (78%) were securely housed in private rental units in the community within four months of enrollment in Hospital to Home using a rental subsidy. Legal or medical issues prevented the remaining participants from establishing regular housing within this timeframe.

### **Participants had varying levels of self-sufficiency**

One of the core goals of Hospital to Home is to increase participants' health and self-reliance. The Arizona Self-Sufficiency Matrix assesses participants' ability to meet these goals and the level of support required to do so.

- In the retrospective ratings of participants' self-sufficiency, participants were very low in most domains.
- In particular, participants scored low in the areas of housing, employment, food security, family relationships, and mental health, all of which may impact one another, especially those that pertain to basic needs.
- At enrollment, there was greater variation in participant self-sufficiency in the areas of healthcare, legal issues, life skills, community involvement, and substance abuse due to differences in presenting issues and existing access to services across the participants.



# Cohort I updates

There are currently three remaining participants in the first Hospital to Home cohort. Four of the pilot participants died while enrolled in the initiative. The cause of death was available for three of these individuals, and in each case, the cause was related to the health conditions that originally made them eligible for the initiative. The remaining participants have been served by the Mobile Community Health Services Team for approximately three years as of April 1, 2013.

## Healthcare usage

The remaining three participants continued the patterns previously documented for Cohort I healthcare usage over time. Since enrollment, all three participants have continued to dramatically decrease their use of emergency departments and use primary care clinics far more frequently than emergency departments. This is consistent with the Hospital to Home goal of increasing participant relationships with primary care clinics so they will seek medical care from clinics rather than emergency departments.

In addition, one participant had no pharmacy claims in the last two years while the other two participants have had a notable increase in their pharmacy claims since enrollment. However, these claims are coming from a total of four pharmacy locations, which indicates improved consistency in accessing medication for the two participants.

Participants' inpatient hospital stays have also decreased since enrollment. In the third year of enrollment, only one participant had one stay for one day.

### 2. Changes in Healthcare Usage Over Time (N=3)

	Participant A		Participant B		Participant C	
	One year before enrollment	Three years after enrollment	One year before enrollment	Three years after enrollment	One year before enrollment	Three years after enrollment
<b>Emergency department visits</b>	32	9	5	0	21	7
<b>Clinic visits</b>	23	33	12	11	28	88
<b>Pharmacy claims</b>	53	77	12	0	23	57
<b>Inpatient hospital stays</b>	3	1	0	0	1	0

*Data provided by MN Department of Human Services*

## Housing stability

Of the three participants still enrolled in Hospital to Home, one has remained stably housed since enrolling in 2010. The other two participants have experienced some housing disruptions in the past year, which resulted in doubling-up with family or partners for between three and six months before being rehoused. In both of these cases, Hospital to Home staff have been actively involved in rehousing the participants.

# Initiative changes based on lessons learned

The Hospital to Home pilot offered important lessons that have served as opportunities to strengthen the initiative in the expansion. The key lessons learned are described below along with the steps that have been taken by the Hospital to Home staff and partners to address these lessons and improve efforts.

## **Lesson 1: Collaboration and coordination among partners is essential**

Hospital to Home has consistently relied on strong partnerships and high levels of collaboration. During the pilot stage, many of these partnerships evolved to meet the emerging needs of the initiative. As the initiative expanded, there was an opportunity to refine the partnerships and formalize expectations between partners. As recruitment and screening materials for the expansion were being collaboratively created with each of the initiative partners, roles were clearly defined for each stage of the process. For instance, Regions Emergency Department staff were responsible for identifying individuals who may be eligible and verifying eligibility based on medical conditions and emergency department visits recorded in their system, and Guild Incorporated staff were responsible for contacting potential participants, recruiting participants through partner agencies, and conducting an intake. This conscious effort increased efficiencies and ensured that all steps were addressed, but not duplicated.

In addition to these formal steps, the initiative has also benefitted from relationship building throughout the pilot and the expansion. Over time, relationships have deepened between partner agencies and with other community organizations important to service delivery. One example of this has been demonstrated during the recruitment of the second cohort. Partnerships with other agencies serving overlapping populations, such as local homeless shelters or non-profit organizations serving homeless individuals, were used to identify additional potential participants, verify homelessness histories, and locate participants they were trying to recruit, rather than waiting for their next trip to the emergency department. About half of the Cohort II participants were recruited from partner organizations.

## **Lesson 2: Funding demands can affect service delivery**

In a health home model, there is a designated primary provider (i.e., personal physician or clinician) who is responsible for coordinating care across all elements of the healthcare system. In the Hospital to Home initiative, the health home function is customized to fit the needs of a high-risk, mobile population which has multiple, complex conditions. Guild Incorporated's Mobile Community Health Services Team fulfills the care coordination function and essentially serves as the health home for the participants. The Team, which includes nursing and mental health professionals, is responsible for collaborating with all

known healthcare providers to assure seamless, planned, and integrated care. In addition, services follow the participant regardless of living arrangement, a feature of service delivery that is necessary to engage, build, and sustain relationships with participants over time. The Team goes to where the participant is (e.g., in-home, in-community, in a hospital, on-the-street, etc.), carefully tailoring services to fit diverse and distinctive needs, preferences, and individual goals.

Multiple funding sources are used to support the comprehensive activities and services of the initiative. While “braiding” multiple sources together increases the solvency and sustainability of the initiative, this strategy also introduces additional administrative complexity. Internal systems need to ensure all requirements for each funding source are met and that the “braid” can be pulled back apart to report to each of the funders on how the money was spent. One example of this complexity is that the funding for Cohort II focuses primarily on addressing chronic homelessness while the funding for Cohort I focuses primarily on addressing chronic health conditions. Because there are participants from both cohorts still being served, this difference reduces flexibility and increases administrative and service delivery challenges to ensure that all requirements for both funding streams are being met while maintaining consistency and continuity of services to all participants.

### **Lesson 3: Housing stability is an essential foundation**

The ability to get and keep people housed is at the foundation of managing chronic health conditions and achieving optimal health outcomes. In the pilot, Hospital to Home successfully connected participants to stable housing within three months of enrollment. The rental subsidies administered by Hearth Connection were essential to this result. In the expansion, Heath Connection still administers some of the housing subsidies, though most are provided by HUD’s Supportive Housing subsidy, which is administered by Guild Incorporated. Participants pay 30 percent of their income towards their housing. Combining this with a rental subsidy makes basic housing affordable and is key to breaking the cycle of homelessness. Once housed, continued support from the Team included forging relationships with landlords, monitoring living conditions, and intervening as needed to mitigate the risk of eviction. Without both the upfront and continued support, and on-going access to a rental subsidy, participants would likely not have been able to maintain their stable housing over time. This emphasis on housing is continuing into the second cohort of the initiative.

## Lesson 4: Recognizing mortality changes practice

In the first Hospital to Home cohort, four participants died while engaged with the initiative. Three participants died due to the chronic health conditions that made them initially eligible for the initiative and the fourth participant did not have a cause of death available. The death of these participants serves as a reminder that the individuals enrolled in Hospital to Home have complex, chronic health conditions. While the initiative aims to assist individuals in accessing the appropriate care at the appropriate place and time, no effort could eliminate the healthcare needs for these individuals. The recognition of mortality has changed the practices of Hospital to Home staff. There is now specific staff training about end-of-life issues and supervision around death and dying. The initiative is also now aligning more closely with hospice and all participants are developing advanced healthcare directives with staff. Finally, the initiative has shifted the goals to place more emphasis on helping participants seek appropriate care and increasing the quality of their lives. The staff and partners involved in the pilot initiative strongly believe that they successfully increased the quality of the lives of the participants they reached, and those who have died did so with dignity and support that they may not have otherwise had.

# Next steps

The changes sought by the Hospital to Home initiative are significant and long-term. Therefore, it will take time before all of the initiative impacts can be seen, and the initiative will continue to evolve to meet participants' emerging needs. In the coming year, Hospital to Home staff and partners are planning to take the following steps to continue to strengthen the initiative.

- **Continue evaluating participant outcomes.** It is important to continue to track and document the changes participants are making in their healthcare usage, housing stability, and self-sufficiency in order to demonstrate the initiative's impact and identify opportunities for enhancement. The next reports in this series will be released in February of 2015 and 2016, and they will capture approximately one and two years of participant outcomes, respectively.
- **Assess participant satisfaction with Hospital to Home.** Hospital to Home staff and partners will gather participant feedback about their experience with the initiative, in order to gather a more complete picture of the impacts of Hospital to Home. The findings from this satisfaction assessment will be included in the February 2015 evaluation report.
- **Deepen understanding of factors contributing to re-admissions and ED visits.** The Hospital to Home team will develop a process, using root-cause analysis techniques, to review each hospital admission, re-admission, and ED visit (when known) as soon as possible following the events. This will help us understand why it occurred and identify opportunities to reduce the likelihood of recurrence.
- **Revise and maintain the Care Coordination Guide.** Guild Incorporated and Regions staff will revisit and refine the Care Coordination Guide to articulate agreement as to "who does what" in order to increase our success in managing care transitions (e.g., hospital admissions and discharges).

# References

Doran, K.M., Raven, M.C., & Rosenheck, R.A. (2013). What drives frequent emergency department use in an integrated health system? National data from the Veterans Health Administration. *Annals of Emergency Medicine*, 62(2), 151-159.

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## For more information

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