



HSX and MANNA: Leveraging Data to Measure Health Outcomes of a Community-based Nutrition Program



Introduction to HealthShare Exchange

Health Share Exchange (HSX) is a health information exchange (HIE), providing secure data exchange to healthcare providers in the greater Philadelphia region, including New Jersey and Delaware. HSX connects hospitals, physician practices, nursing homes, post-acute care facilities, health plans, home care organizations and behavioral health providers. All these organizations need the most accurate and up-to-date information about their patients to provide the best and most efficient care possible.

HSX is expanding the connected healthcare circle by adding community-based organizations (CBOs) in the network of caregivers, moving from an HIE to a Community Information Exchange (CIE). Food banks, housing agencies, benefits coordinators, transportation agencies, community centers and other community service organizations play a vital role in the care of the patient. Through the PA Navigate program, HSX partners with FindHelp to connect health provider organizations with community-based socio-economic support services to create a closed-loop referral system – connecting patients with services and keeping the care team in the loop.

Case Study: MANNA

Metropolitan Area Neighborhood Nutrition Alliance (MANNA), one of HSX's CBO members, is a non-profit organization based in Philadelphia that provides nutritional support to individuals with serious illnesses. The organization delivers medically tailored meals and provides nutrition counseling to those battling serious conditions, such as cancer, diabetes, renal disease and HIV/AIDS. As a member of the Food Is Medicine Coalition (FIMC), MANNA has highlighted the therapeutic power of food as an essential component of medical care.

As an Accredited FIMC Agency, MANNA's program further emphasizes the vital role of food and nutrition in managing and improving health outcomes. The program provides evidence-based meal plans and counseling by registered dietitians for clients to understand and achieve the unique nutritional needs associated with their chronic illnesses – promoting better disease management, reducing hospitalizations and improving quality of life.

HSX supports MANNA's mission by sending real-time notifications to the MANNA team if a client is admitted to a hospital so they can hold meals and, more importantly, notifies MANNA when a client is discharged,



The PA Navigate service enables healthcare organizations to collaborate, using a referral platform, in an effort to serve individuals with needs related to Social Determinants of Health (SDOH).



MANNA tailors a client's meals to support their specific health needs and chronic conditions.



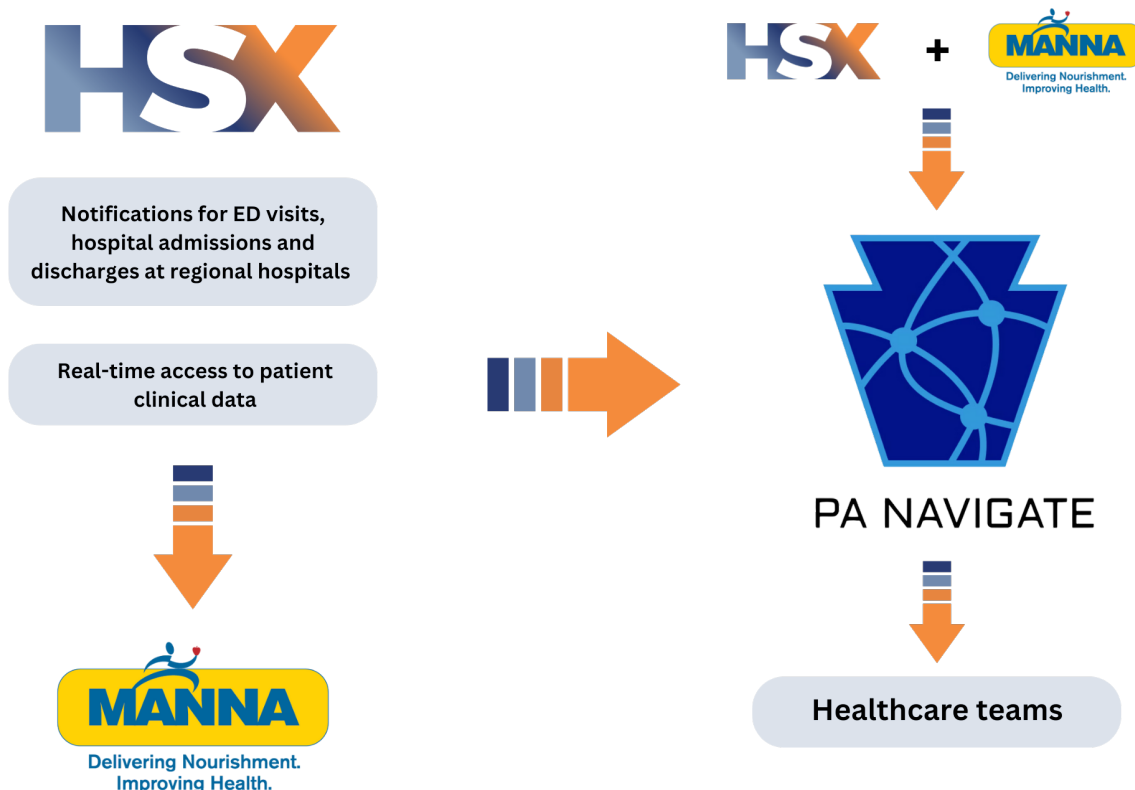
so meal service starts up again when the patient returns home. Through this partnership, HSX also provides MANNA's dietitians with access to individual, patient-level medical data that can be used to further evaluate and monitor their health status.

“ Nicole Laverty, MANNA's Chief Operating Officer

“MANNA goes beyond meal delivery. We provide medical nutrition therapy services with meals tailored to a client's medical needs and nutrition counseling and coaching provided by a registered dietitian to improve the client's health and quality of life. The partnership with HSX aids us in our mission to manage and monitor the health of our clients.”

Real-time Data Flow

- » HSX sends real-time notifications for Emergency Department (ED) visits, hospital admissions and discharges at regional hospitals to the MANNA care coordination team. This allows the team to start and stop meal services and avoid disruptions in the client's meals.
- » HSX provides real-time access to patient clinical data: medications, lab results, allergies, chronic conditions and doctor visit notes. This allows MANNA's team of dietitians to have updated health information for client nutrition counseling.
- » Through the PA Navigate project, HSX will send data from MANNA and other Community Organizations to patients' healthcare providers, making the healthcare team aware of community services for the patient.



The partnership with HSX aids us in our mission to manage and monitor the health of our clients.

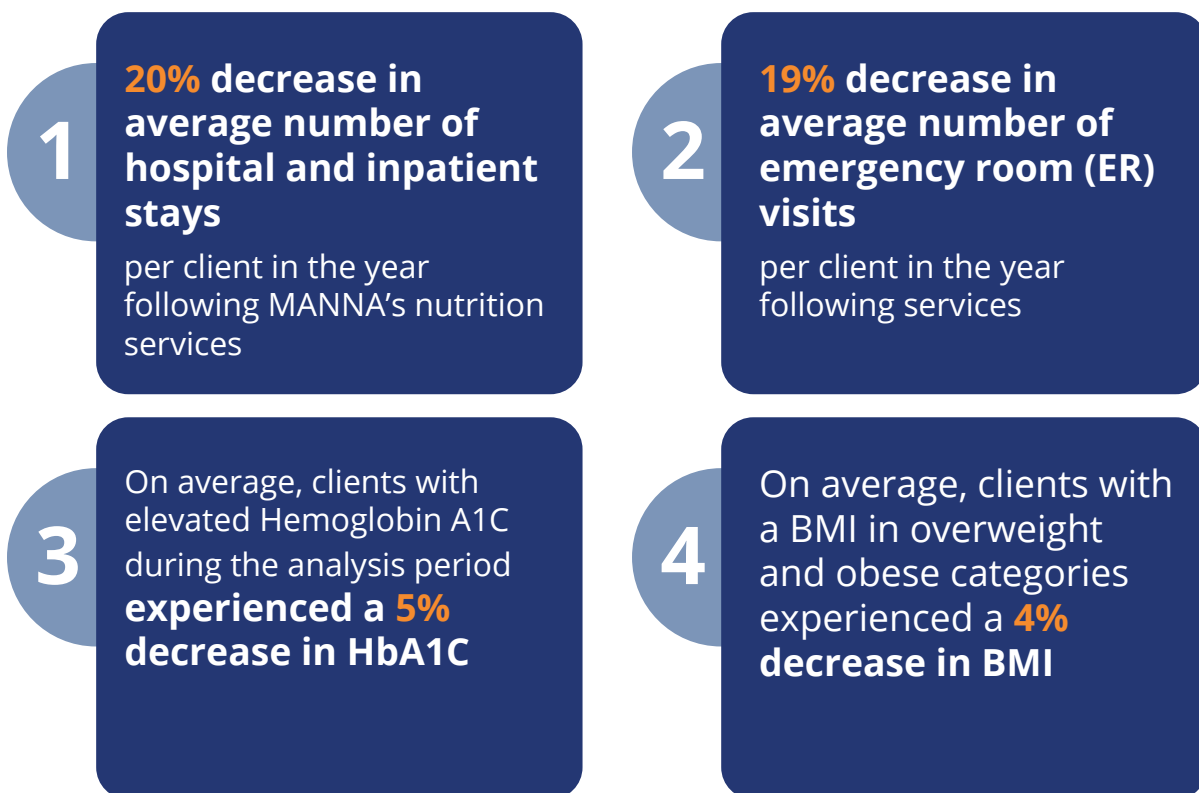
HSX and MANNA: Better Together

MANNA and HSX recently measured the acute care utilization and key health parameters of a cohort of clients enrolled in MANNA's Food as Medicine program in 2022. This analysis looked back on hospitalizations, ER visits, Body Mass Index (BMI), and Hemoglobin A1C (HbA1C) as a measure for diabetes control. HSX was able to match retrospective health records for 786 of MANNA's 972 clients enrolled in 2022. Data from one year prior to the start of MANNA services was compared to data from one year after the start of services.



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The analysis found:



Measure	One Year Before	One Year After	Change
Average # Inpatient stays per client	2.23	1.79	20% decrease
Average # ER visits per client	0.86	0.70	19% decrease
Average HbA1C*	8.22	7.78	5% decrease
Average BMI**	33.6	32.2	4% decrease

*Clients with HgA1C values <6.5% for the duration of the 2-year analysis period were excluded.

** Clients with starting BMI < 25 were excluded.

For the Hemoglobin A1C data we included clients with at least one measurement in the year before and the year after the start of services. We excluded clients whose HbA1C results were under 6.5 during the entire period, since they may not have had diabetes or had well-controlled diabetes during the entire period. For the BMI data, we excluded clients with a BMI of <25, since clients in normal and lower BMI categories may have needed to maintain or gain weight.

The Power of Data

With HSX and MANNA, we were able to describe changes in healthcare utilization and health outcomes of people battling chronic health conditions before and after receiving nutritional support in their community. The cohort of clients had a reduction in hospitalizations and ED visits after participating in MANNA's program. Analysis of clients who received MANNA's meal and nutrition counseling services saw the need for acute care decrease by 20% in the year following the start of nutrition support. Clients also showed improved diabetes control one year following MANNA's program.

This partnership shows how CIEs and CBOs can work together to improve care coordination and document outcomes that may be associated with community-based services. Better care coordination and collaboration between health and community teams can improve health, enhance quality of life, and reduce avoidable healthcare utilization and spending.

Both health systems and health plans benefit from reduced utilization of acute care resources. This analysis points to promising reductions in costly healthcare utilization, such as hospitalizations and ED visits, that may be associated with the use of community-based nutrition support, such as MANNA's Food Is Medicine Program, in conjunction with CIE networks such as HSX.

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