Population Health Management

Mobile Integrated Health (MIH) Services

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Discussion Points of Interest

- The Opportunity
- EDS Overview
- Henry Ford MIH Overview
- Where are we now?
- What's next?
- Points to Ponder
- Questions

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About Henry Ford Health System

- Founded by auto pioneer Henry Ford; established a unique integrated Health system model in 1915
- 32,000+ employees; 6,200+ Nurses, 540 from Canada. 4,600+ Allied Health Professionals
  - Part Owner of an EMS Service with over 250 Units
    - 100+ Paramedics Directly Employed by HFHS
  - Fourth largest employer in Metro Detroit
  - 2011 Malcolm Baldrige National Quality Award recipient.
- Henry Ford Medical Group (HFMG)
  - 1,200 physicians and researchers
    - comprises physicians and researchers from 60 countries across the globe.
  - The nation's third largest group practice
  - 10,000 clinic visits/procedure per business day
- Henry Ford Hospital (HFH)
  - 880-bed tertiary care, academic & research medical center
  - recognized for clinical excellence and innovation in cardiology and cardiovascular surgery, neurology and neurosurgery, orthopedics and sports medicine, organ transplants, and treatment for prostate, breast and lung cancers.
  - Level 1 Trauma Center
  - 16th largest teaching hospital in the U.S.
    - Partnerships With Michigan State University & Central Michigan University Amongst Others

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1910 Groundbreaking

DETROIT GENERAL HOSPITAL

HENRY FORD ASSUMES CONTROL

AT THE START OF THE 20TH CENTURY, people were flocking to Detroit for jobs in manufacturing plants. The city's rapidly growing population brought with it a critical need for more hospitals. In 1909, a group of prominent businessmen and doctors, including Henry Ford and Harper Hospital surgeon Dr. William F. Metcalf, formed the Detroit General Hospital Association in order to plan and build a new facility called the Detroit General Hospital. The group purchased a 20-acre plot of land at West Grand Boulevard and Hamilton Avenue.

Over the next few years, construction of the new hospital and its supporting buildings stalled numerous times due to financing issues. By the spring of 1914, the situation was dire and the Detroit General Hospital Board was desperate for a solution. On June 2, 1914, Henry Ford sent a letter to the Board offering to finish the hospital and pay back all previous contributions under the condition that he assumed ownership to run the hospital and choose its staff. Mr. Ford's offer was unanimously accepted within 24 hours.

About cont'd

- 4 Community Hospitals
  - Macomb-Clinton Township
  - Wyandotte
  - West Bloomfield
  - Allegiance
- 4 Behavioral Health facilities
- 1 Inpatient Rehabilitation hospital
- 58 Ambulatory sites, including medical centers, outpatient surgery, urgent care and emergency services
- Community Care Services
- Health Alliance Plan Insurance
  - HAP services more than 570,000 members, and partners more than 27,000 health care providers in Michigan.
- HF Physician Network
- HF ACO Started 2016

And There's More… But It's All Relevant

- Clinically Integrated Network
  - CMS ACO
    - Next Generation Model (35,000 beneficiaries)
    - HFMG: 1,600+ physicians and researchers
    - Independent Practice: 1,800+ Providers
  - Henry Ford Physician Network
    - Commercial ACO (60,000 covered lives)
    - 2,000+ Physicians
- Revenue: $6.8 billion; Net income, $86.8 million; Uncompensated care, $456 million.
- Payor distribution: Medicare and Medicare HMO, 42%; Blue Cross, 26%; Medicaid and Medicaid HMO, 17%; Other, 14%.
- More than 115,000 hospital admissions Yearly
  - 61% of hospital admissions are by patients ages 50 and older.
- More than 3.7 million outpatient visits.

Specialty Care Excellence

- Heart & Vascular Institute
  - A leader and innovator in comprehensive care, research and education offering one of the nation's largest and most successful heart failure and transplant programs.
- Brigette Harris – Henry Ford Cancer Institute
- Neuroscience Institute
  - One of the top programs in the country that includes a National Institutes of Health stroke care and research center, a comprehensive epilepsy and Parkinson's disease treatment and surgery program, one of the largest neurosurgery spine programs in Michigan, and the Hermelin Brain Tumor Center.
- Orthopedic Surgery
  - One of the largest and most advanced orthopedic groups in the country
- Transplant Institute
  - Performs organ transplantation of the liver, kidney, pancreas, intestine, lung and heart, as well as bone marrow stem cells. We are the most comprehensive multi-organ transplant program in Michigan and use effective clinical strategies to increase transplant rates while maintaining superior patient outcomes.
- Sports Medicine
  - Premiere Sports Medicine Providers for the Detroit Pistons and the Detroit Lions
  - Includes the Henry Ford-Pistons Center for Sports Medicine Excellence (Pistons Training Facility on Henry Ford Health System Campus

Henry Ford Main (Downtown Detroit) Henry Ford Cancer Institute & Henry Ford Center for Athletic Medicine

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Opportunity: Decision to participate in Next Gen ACO model ("Henry Ford ACO")

- Strives to unite physicians and facilities to provide better care for individuals
- Risk-based arrangement
- ACOs focus on:
  - population health management
  - lowering costs for all involved
  - greater care for patients with chronic conditions
  - improving outcomes
  - financial benefits for beneficiaries and providers
- HFHS believes that as an integrated delivery system; we are well-positioned to achieve optimal care coordination.

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The Opportunity Con't.

- Sudden acceleration on the journey to value
  - New Next Generation ACO with upside and downside risk (+/- 80%)
  - Full risk for internal HMO network contracts (MA, Commercial)
  - Partial risk for selected external HMO contracts

Tipping Point:

  - ~30% of provider revenue with "downside" risk
  - ~85% of provider revenue from value-based contracts

Strategic approach:

– Rapidly identify important points on the continuum with opportunity

– Promote integration of clinical services to eliminate waste

- Improving reliability and effectiveness of high cost/high risk care processes
- Reduce variation in high cost/high risk medical decision making
- Align resources to better serve high cost/high risk population needs

How do we create sustainable value?

How do we avoid borderline admissions?

Where do we have the opportunity to impact?

We met with System ED leadership to develop a collaborative partnership and discuss a better way to approach avoidable admissions, and came up with an intervention that would:

- Make outpatient and other resources available for ED patients within 24-48 hours of ED discharge
- Offer these resources to ED providers
- Coordinate the resources selected by ED providers prior to patient's discharge from the ED
- Estimated that an avoidance rate of 5% was possible to achieve in the first year

EDS (EMERGENCY DISPOSITION SUPPORT) PROGRAM IS BORN!

Evolving Healthcare Economics??

Who determines the value of the services provided?

UPSTREAM: ED

How do we avoid unnecessary admissions?

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…….EDS (EMERGENCY DISPOSITION SUPPORT PROGRAM IS BORN!

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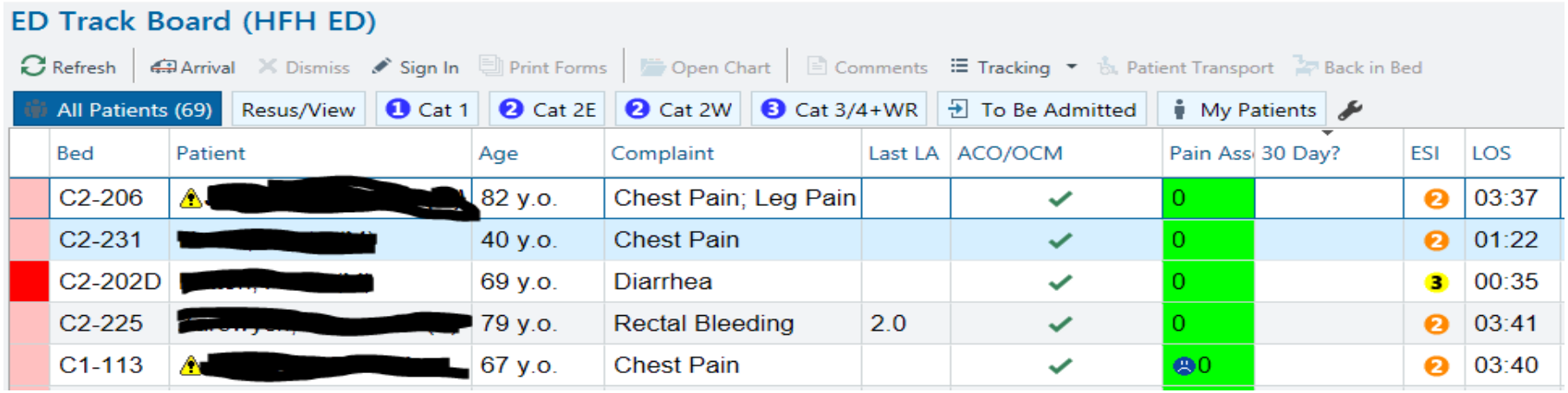
EDS Program Overview: Launched 01/2016

- The EDS Care Coordinator (Previously Known as an EDS Navigator)
  - Embedded in ED
  - Paramedic Skillset
  - Conducts a review of the patient's chart, current condition, recent Hx., etc.
  - Investigates available outpatient resources including availability, suitability, payer approval etc.
  - Discusses resources with ED physician and collaborates to create outpatient treatment plan
  - Presents treatment plan to patient and facilitates outpatient interventions

High-level EDS Workflow

- EDS Care Coordinator follows ED track board identifying patients in current populations



ED Track Board (HFH ED)

Refresh | Arrival | Dismiss | Sign In | Print Forms | Open Chart | Comments | Tracking | Patient Transport | Back in Bed

All Patients (69) | Resus/View | 1 Cat 1 | 2 Cat 2E | 2 Cat 2W | 3 Cat 3/4+WR | To Be Admitted | My Patients

Bed	Patient	Age	Complaint	Last LA	ACO/OCM	Pain Ass	30 Day?	ESI	LOS
C2-206	[redacted]	82 y.o.	Chest Pain; Leg Pain		✓	0		2	03:37
C2-231	[redacted]	40 y.o.	Chest Pain		✓	0		2	01:22
C2-202D	[redacted]	69 y.o.	Diarrhea		✓	0		3	00:35
C2-225	[redacted]	79 y.o.	Rectal Bleeding	2.0	✓	0		2	03:41
C1-113	[redacted]	67 y.o.	Chest Pain		✓	0		2	03:40

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High-level EDS Workflow

- ED staff alerted of patients' EDS Population status upon opening chart
  - Alerts ask provider to discuss case with Care Coordinator if observation/admission could be avoided through appropriate use of outpatient resources
  - First BPA fires when provider first opens the patient's chart
  - Second BPA fires at disposition if observation or admission orders are placed
  - Additional alert stays in background of chart

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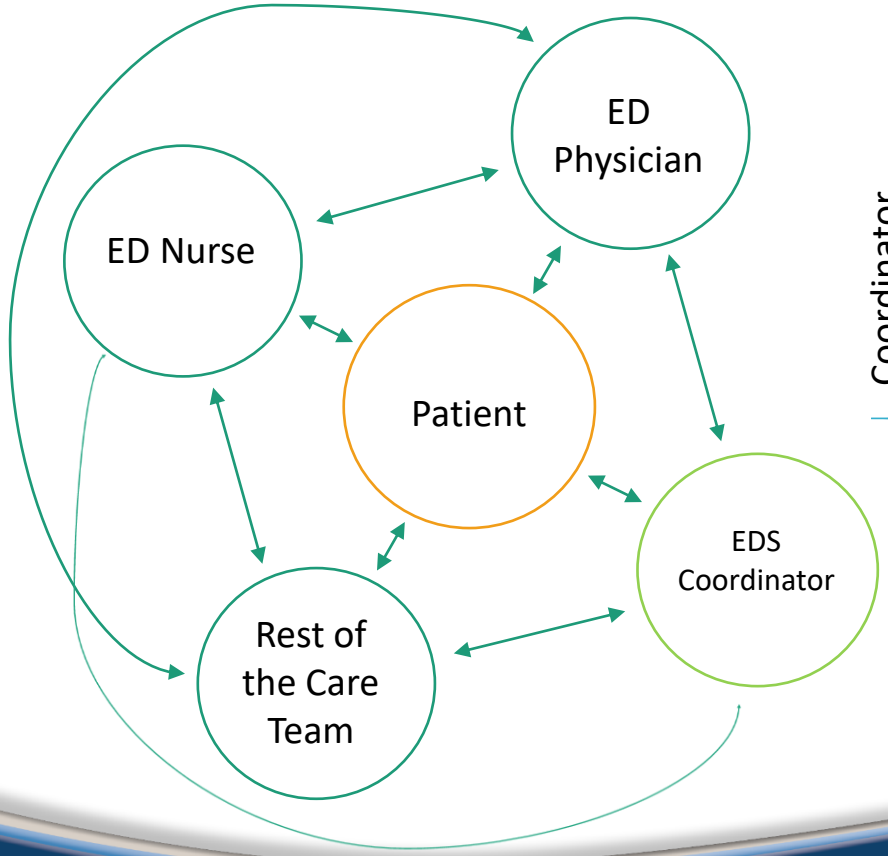
EDS Model & Coordinator Tool Belt



Coordinator Toolbelt

Schedule Appointments:
- Urgent Ambulatory Primary Care
- Specialty
- Diagnostic Test (Cardiac Stress test)
- Certified Diabetes Educator
- Dialysis treatment
- OncoSTAT Clinic for oncology pts
- IBD Clinic

Referrals:
- Ambulatory Case Management
- Mobile Integrated Health
- Home Health Care
- Infusion (Infectious Disease)
- Wound Clinic
- CCC's

Additional:
- SNF Direct Admit
- Transportation
- DME

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Population Health

- What keeps us up at night?

Unnecessary Admission$

- ***Unnecessary admissions can place financial burdens on patients, and introduce safety risks.*** Furthermore, as Henry Ford Health System takes on additional risk for the total costs of care of several patient populations, unnecessary admissions are costly to the System. Accordingly, the **Population Health Management department** has developed a goal of reducing inpatient admissions for patients in these populations.

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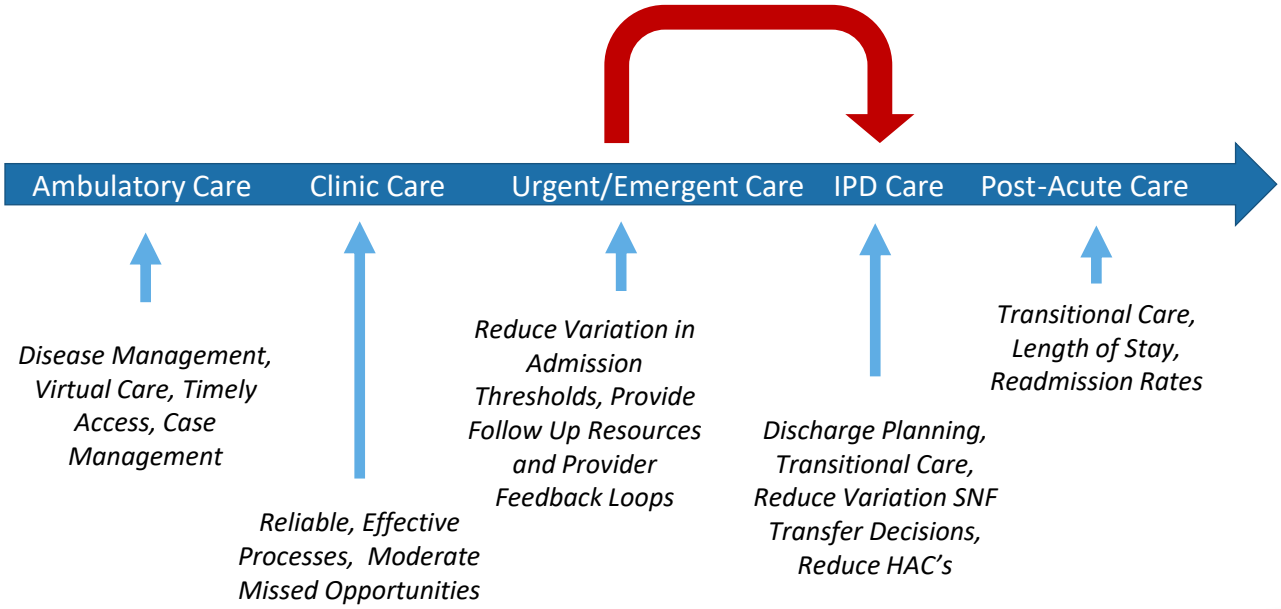
Identifying the Waste 2016

Where should we deploy resources to **quickly impact the largest area of waste?**

High-Cost Decision
High Provider Variation
Poor Hospital Revenue Stream



Need interventions with rapid deployment and maximal impact

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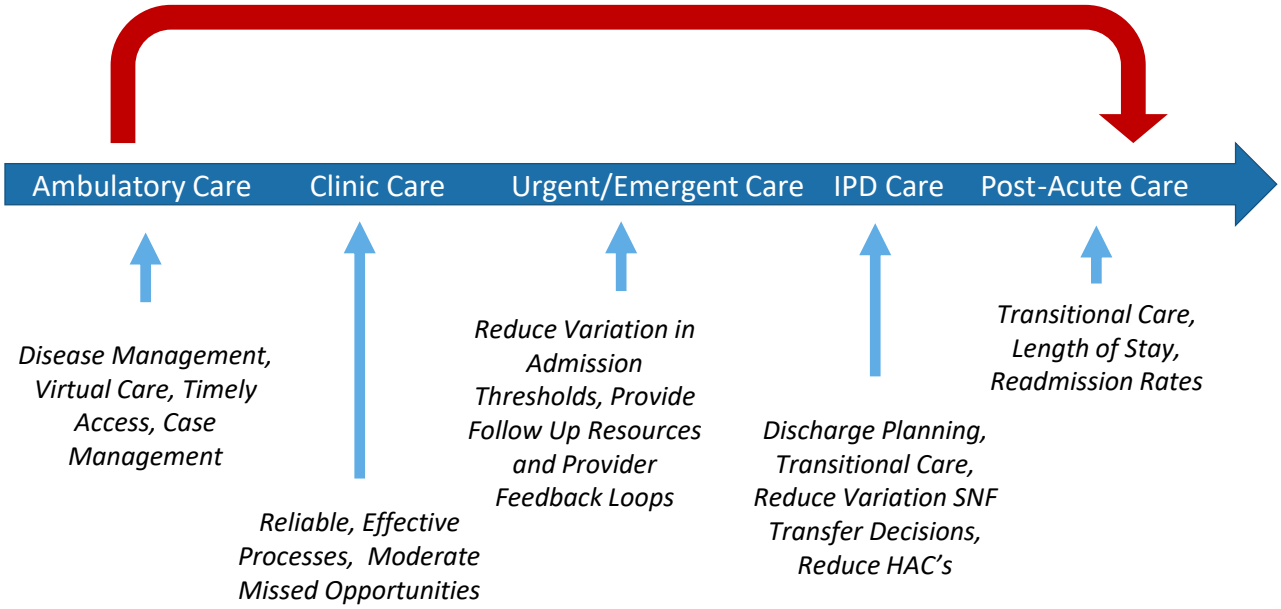

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The Opportunity:
Optimal Care at the Right Time and Place

16% Medicare fee-for-service emergency ambulance transports to the ED that could have been treated in lower-acuity settings.

$560M In savings per year by transporting individuals to doctors' offices rather than a hospital ED

**An earlier White Paper by the U.S. Departments of Health and Human Services and Transportation found this savings potential; An important note is that by taking into account avoided inpatient hospitalizations and opportunities for treating in place, the savings potential and quality of care improvements may be even greater.*

Center for Medicare & Medicaid INNOVATION

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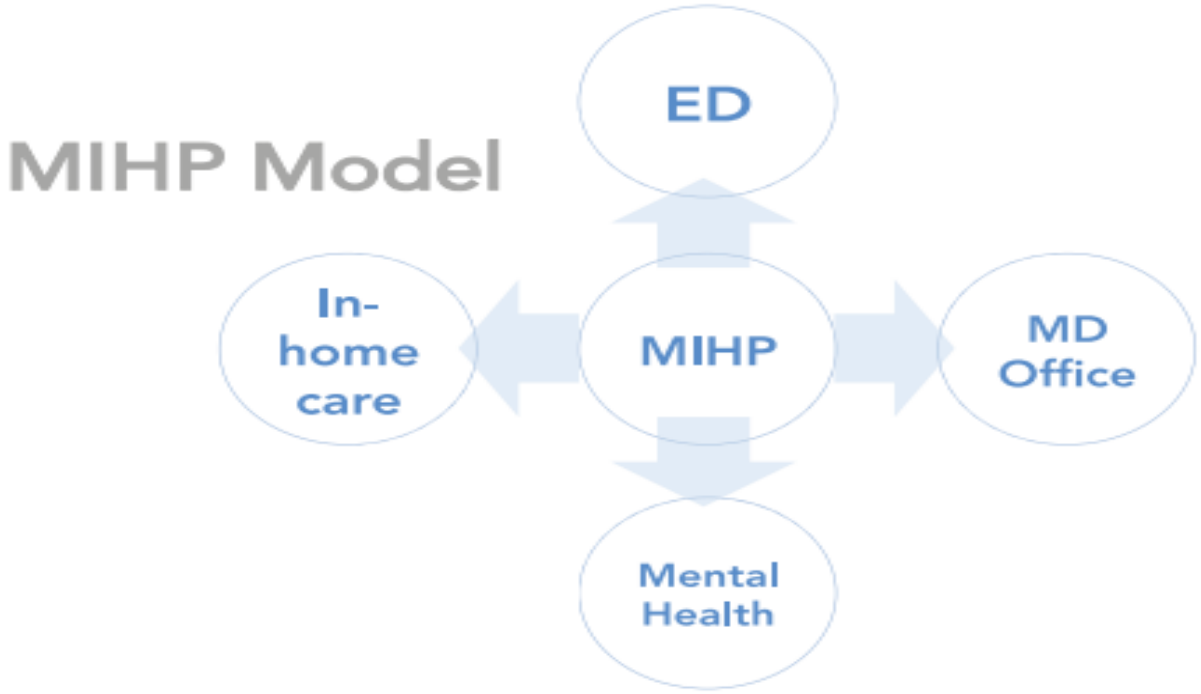
What is the Reach for MIHP??



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What is Mobile Integrated Health?

- A service that provides in-home care conducted by a licensed medic under the direction of a physician.
  - What Makes MIH Different than CP is the direct integration of other health system services. MIH can directly schedule, refer, and work in real-time with providers throughout the health system.
  - MIH is typically a part of a health system, hospital or physician provider group
  - CP is typically an EMS agency providing services to the community and may also contract with one of the above to operate as a part of an MIH program/service.
- Medics arrive at the patient's home in a fully equipped vehicle which enables the provision of extensive medical diagnostics and treatment.

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How We Arrive and What We Bring.....

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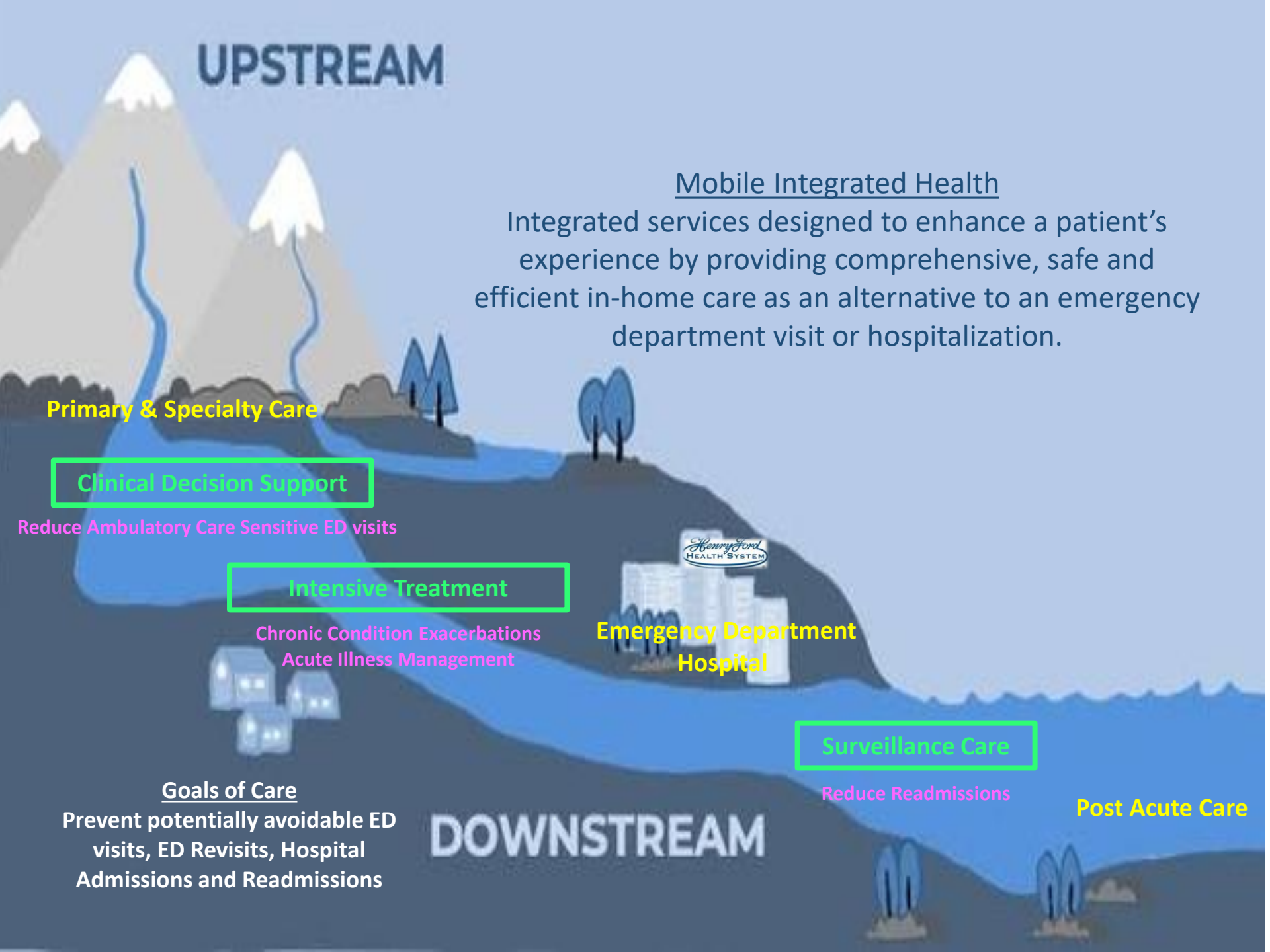
Our Structure

- HFHS designed, owned and operated with comprehensive medical oversight by HFMG physicians.
- Physicians provide real-time collaboration with the medics to ensure optimal patient care is provided.
- The interventions are strategically designed to provide alternative delivery options for supportive, urgent and acute care needs.
- The service is provided as a bridge of care to the patient.
  - Patients are directed back to their primary provider and assisted in arranging their continuing care.

Use Cases

- Readmission Reduction
  - A medic provides a series of in-home visits for patients discharged from the hospital who are at risk of a readmission.
- Reduction in Ambulatory Care Sensitive ED Visits
  - A medic responds to an urgent request from a clinician to conduct an in-home assessment of a patient experiencing a change in or new onset of symptoms requiring further evaluation.
- Treatment
  - A medic provides advanced in-home treatments under the direction and supervision of the MIH physician.


UPSTREAM
Mobile Integrated Health
Integrated services designed to enhance a patient's experience by providing comprehensive, safe and efficient in-home care as an alternative to an emergency department visit or hospitalization.
Primary & Specialty Care
Clinical Decision Support
Reduce Ambulatory Care Sensitive ED visits
Intensive Treatment
Chronic Condition Exacerbations
Acute Illness Management
Henry Ford Health System
Emergency Department
Hospital
Surveillance Care
Reduce Readmissions
Post Acute Care
Goals of Care
Prevent potentially avoidable ED visits, ED Revisits, Hospital Admissions and Readmissions
DOWNSTREAM

Our Clinical Experience

Diagnosis

- Acute Exacerbations of Chronic Conditions
  - Asthma
  - CHF
  - COPD
  - Diabetes (hyperglycemia)
  - HTN (urgent not emergent)
- Acute Medical Problems
  - Abnormal lab values
  - COVID 19 follow-up
  - GI/GU symptoms
  - Respiratory symptoms
  - Wound changes

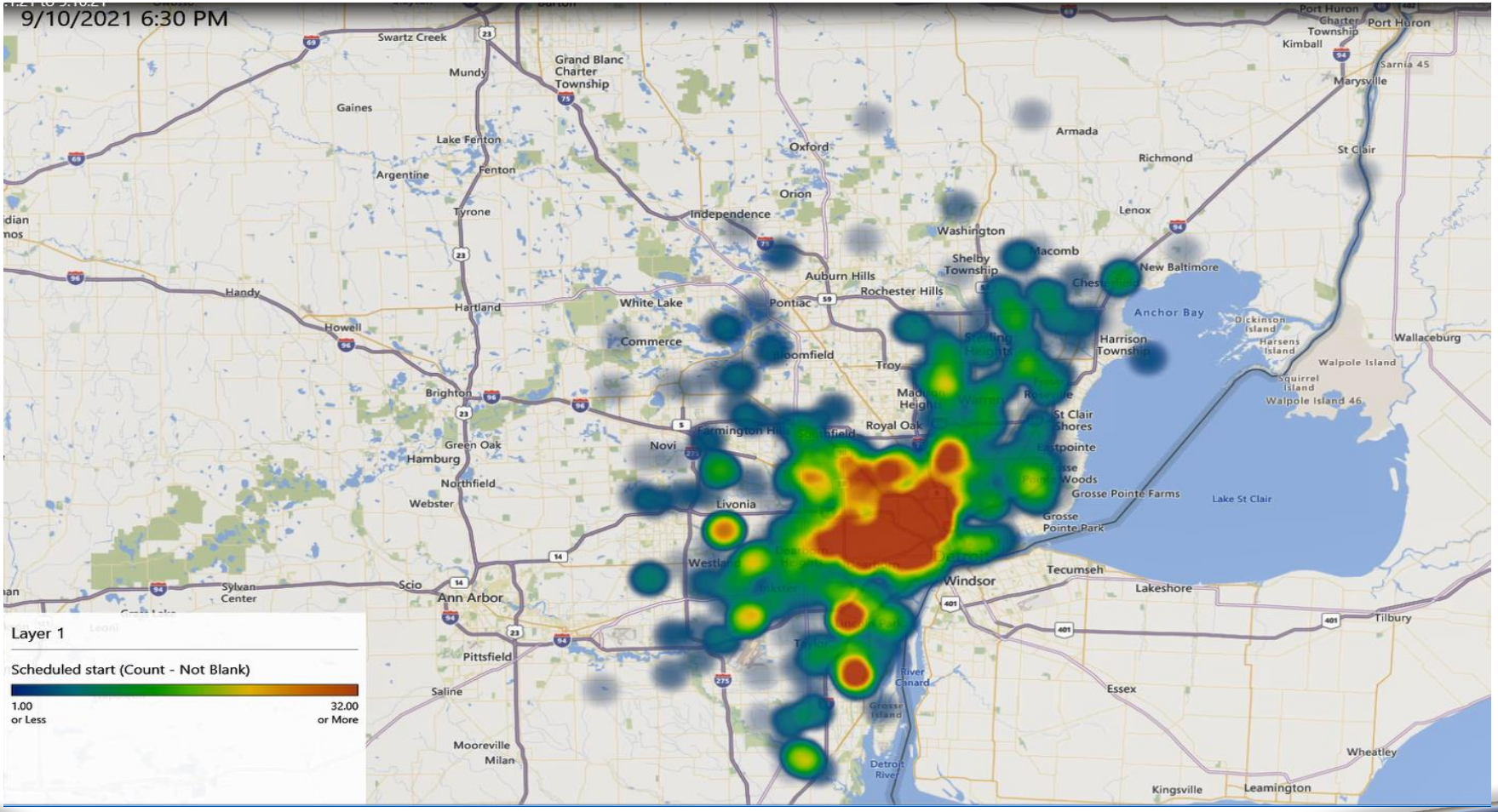
Treatments & Diagnostics

- Treatments
  - Breathing treatments
  - Diuresis
  - Hydration
  - IV medication admin.
  - O2 admin.
- Diagnostics
  - 3-12 lead ECG
  - Lab draws (Current)
    - POC testing soon
  - Ultrasound (soon)
  - Facilitate virtual physician exam

Our Operational Experience

- The service was launched April 20,2020.
- We have provided care to >2,400 unique patients and conducted > 4,200 visits.
- We have reduced ED visits and provided Clinical Decision Support that enhanced the patient's medical treatment plan in 55% of these visits.
- We have delivered > 350 emergency food boxes to food insecure patients.
- Since 08/28/2021 provided >300 mAB Infusions in the home.
- Our patient experience rating is 4.9 out of 5 stars

Expansion Over Time



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Additional Information

- We provide this service in the tri-county area (Wayne, Oakland & Macomb Residents).
- The service is *not* limited to specific Insurances.
- We do *not* charge patients for the Medic visit. If the physician provides a virtual visit there may be a co-pay or coinsurance for the physician component of the visit depending on the patient's insurance plan.
- We do not provide patient transportation.
- All documentation; by medics as well as physicians is done in Epic.
- The documentation of the encounter is forwarded to the referring provider after visit is completed, whether referring provider uses Epic or not.

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MIH-Medic Interventions

Medical

- Physical Exam
- Medication reconciliation
- Medication administration (IV, PO, SQ)
- ECG
- Lab draws
- Handheld Ultrasound Device (Butterfly) For Lung, Heart, and Vascular U/S
- (POC Labs) future

Social

- SDOH Barrier ID & resolution
- Environmental assessment

Care Transitions & Support

- Arrange follow-up appointments with PCP, Specialist, Behavioral Health
- Refer to ambulatory case management, Diabetes Care Connection
- Chronic disease self-management support & education
- Assistance with Health System navigation

MIH Vehicle Equipment

- Heart Monitor/Defibrillator with pacing and 12-lead ECG capability
- Pulse Oximeter
- Thermometer
- Glucometer
- Manual & Automatic Blood Pressure Cuffs
- Oxygen Delivery System
  - O2 tank
  - Delivery mechanisms: Nasal Cannula, High-Flow N.C., Non-Rebreather. CPAP
- Medication Box
  - Extensive Formulary available, constantly being added to.
- IV Start Kit
  - Angiocaths
  - IV Tubing (micro, macro, filtered)
  - Fluids (Normal saline, Dextrose 5% in water (D5W)
- Wound Care Equipment
- Lab Box
  - Lab Point of Care Testing Device
- Tyto Equipment (virtual physical exam device)
- Handheld Ultrasound Device (Butterfly) For Lung, Heart, and Vascular U/S

MIHP is designed to achieve the goals of the Institute for Healthcare Improvement's Triple Aim

- Improve the health of the population
- Enhance the patient experience of care, including quality, access and reliability
- Reduce or control the per-capita cost of care

More Topics To Discuss With Health Systems & Physician Groups

MIHP programs must retain a patient-centered focus with an emphasis on:

- Accessibility
- Development of non-traditional portals of entry
- Continuity of care and transparency

What's in a Successful MIHP Program?

- Program and healthcare outcome goals informed by a population health needs assessment
- Delivery of evidence-based interventions using multidisciplinary and interprofessional teams
  - Composed of providers operating at the top of their respective scopes of practice
- Improved access to healthcare and health equity through 24-hour availability
- Patient-centered healthcare navigation and population-specific healthcare services
- Full utilization of existing infrastructure and resources, including telemedicine technology
- Integrated electronic health records and access to health information exchanges

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What's in a Successful MIHP Program??

- Provider education and training based on assessments of program needs and provider competencies
- Physician medical oversight in program design, implementation and evaluation
- Strategic partnerships engaging a spectrum of healthcare providers and other key stakeholders
- Financial sustainability
- Quality outcomes performance measurement and program evaluation

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Considerations for an MIH Service OR Providing CP to a Health System

- Identify and Define the Gap
  - Each Health System/Physician Organization will have a variance of gaps
    - The one common gap will most likely be cost containment
    - Use resources to find out what the health system or physician group is looking to answer!
    - Sell your program!
      - Most Health Systems and Physician Groups Are Not Aware of a Medic's Ability to Adapt!

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Considerations for an MIH Service OR Providing CP to a Health System

- Use the Resources Available to You!
  - Most Every Health System Shares Their Strategic Plans on the Web!
  - Utilize the Contractual Relationships you Currently Have
  - Most Health Systems Will Share Their Dashboard Data With You
    - Utilize it to Develop a Strategy Plan for How You Can Help With Value Based Care
  - Many Commercial Payers Are Starting to Reimburse for MIH & CP
    - Use These Examples to Approach Payers and Sell Your Product

Questions?