



From Doctor's Bags to Laptops and From
Elixirs to in Home Infusions. Bringing Back
an Old Style with a Futuristic Spin on
Treating Patients in Their Homes.

Jay Fraccola B.S. NRP, CP-C
Chelsea Lennon EMT-P, BSHA,
Robert Smith MHS, NRP, FP-C, CP-C CMTE
Amanda Williams RRT, BSRT, MBA, NRP, CP-C, CMTE

Faculty Disclosures

- **Jay Fraccola B.S. NRP CP-C** has no financial relationships to disclose relating to the subject matter of this presentation.
- **Robert Smith MHS, NRP, FP-C, CP-C, CMTE** has no financial relationships to disclose relating to the subject matter of this presentation.
- **Amanda Williams RT, BSRT, MBA, NRP, CP-C, CMTE** has no financial relationships to disclose relating to the subject matter of this presentation.
- **Chelsea Lennon EMT-P, BSHA** has no financial relationships to disclose relating to the subject matter of this presentation.

The Idea:
Provide Inpatient Hospital level care in the
patient's home utilizing our existing MIH
Program

“Challenging Situations Can Lead You To Transformational Experiences.”
— **Wesam Fawzi**

How it all started

- COVID hit the U.S. by storm, we all felt it.
- The issue was our healthcare system had an excessive number of patients but not enough beds to care for them.
- Although it was small, our MIH program was already developed and active.
 - Needed Staff / Needed Equipment
- The foundation for what we have today was constructed by our Medical Director, Dr. Stephanie Murphy DO., and MIH Director Amanda Williams.
 - Virtual Hospital



The COVID Expansion

COVID Expansion Virtual Hospital

PARAMEDIC

- Increase in call volume by 350%
- Increased fleet from 3 trucks to 10 trucks daily.
- Initial Expansion utilized an interdisciplinary staff from around the Healthcare system.
 - RN's
 - EMT's
 - Pharmacy
- Team increased size from 9 teammates to 30 in over a week.
- At peak seeing 120 Patients a day

New fleet of vehicles needed to meet
the demand





iPad for telemedicine
and ultrasound images



Butterfly Ultrasound for IV
access in the patient's home



Full time dispatch integration
on 800 MHz system

Dell Tough Laptops with constant connect to EMR.

Ability to utilize cameras and virtual stethoscopes



Zoll Monitors with 12 lead transmit capabilities.



Braun
IV
Pumps



COVID Education

- Expanded use of vascular access lines and ports, USGIV.
- Increase pharmacy knowledge
 - Remdesivir
 - Vaccines
 - Lovenox
- Move to the Atrium Health EMR for charting.

How do we build this for a substantiable future

- Pandemic seemed to be winding down; how do we continue this effort.
- We had to change our perspective from outpatient to inpatient at the patient's home.
- Gathered stakeholders to build the idea for Hospital at Home.
- We were able to perform and deliver inpatient level care through the CMS waiver.



Virtual Hospital 2020-2021

Single visits with MIH and Provider
Via Telemedicine

Patients would be prescribed
medications and pick up on the
way home.

MIH Team would deliver the home Kit
which Included:

- BP Monitor
- Pulse Ox
- Thermometer

Hospital at Home 2021 – Current

Patients that are admitted are visited same day for
an “Admission Visit” then twice a day until D/C.

Nursing rounds on patient via telephone twice a day
and joins telemedicine visit with provider and MIH.

Inpatient Pharmacy delivers medications to patient bedside
prior to transfer home.

Home Kit is also given to patient prior to leaving brick and
mortar.

Infusions are delivered to Bases each morning.

RT and Dietary Rounding on patient.

Cardio and Pulmonary consults.

BID infusions



Team arrives at
our warehouse
in Charlotte

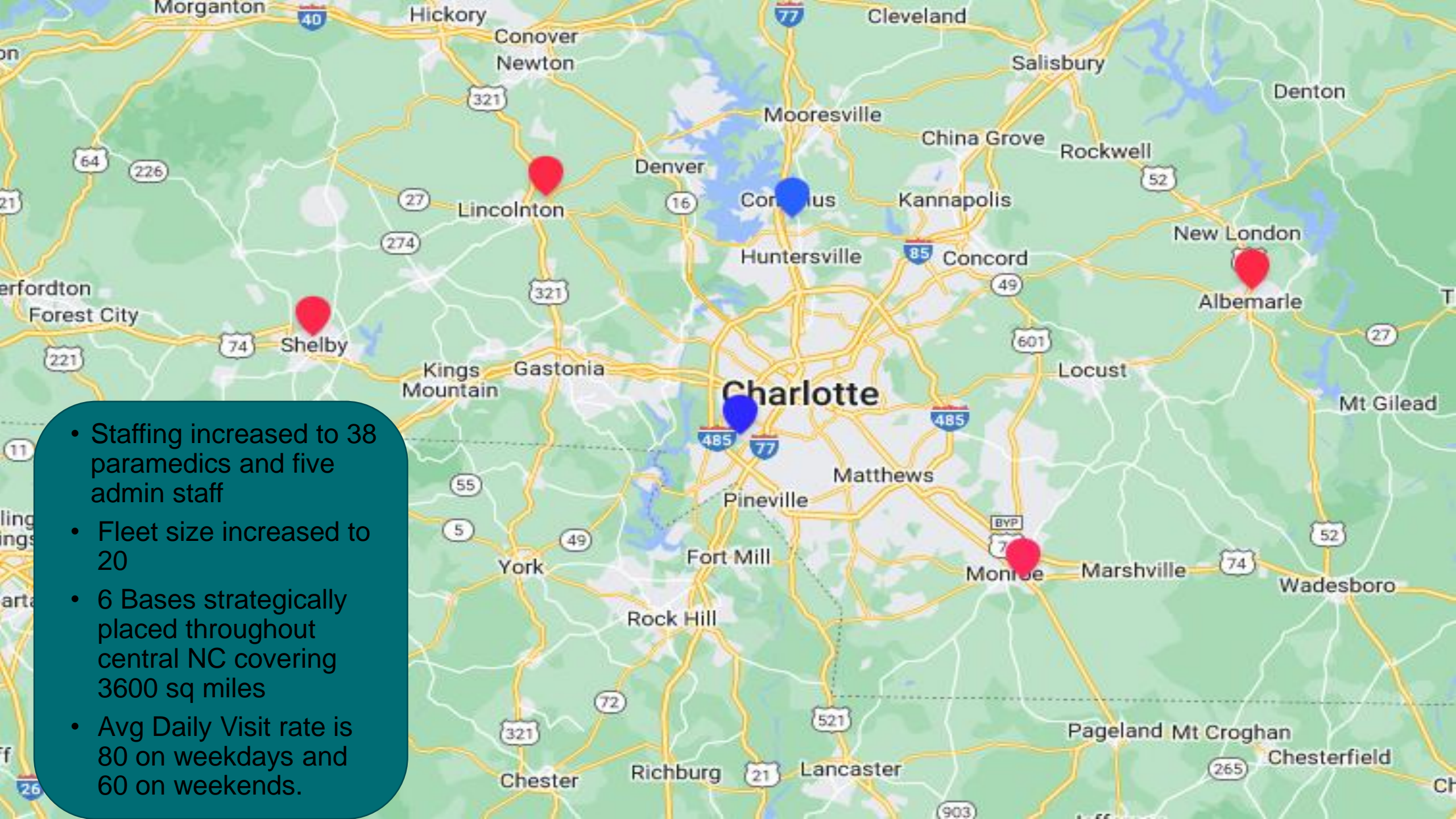
- Gathering supplies and researching patients for the day along with collecting any medications that have arrived from the pharmacy for the patient.

First visit (1hr -
1.5hr)

- The first visit starts with a medic performing an assessment, medication reconciliations, and ordered treatment. A virtual RN and Provider see the patient on video while with MIH. The MIH would complete any other orders needed such as labs, medications or fluids.

Second Visit (30mins –
45mins)

- MIH arrives later in the day to “ Round on their patient.” This visit includes a full assessment, along with any orders needed to be performed. Report is entered via the EMR for care team follow up.

- 
- A map of central North Carolina with several locations marked. Two blue pins are located near Charlotte, and four red pins are located in the surrounding areas: one near Lincolnton, one near Shelby, one near Albemarle, and one near Monroe. The map shows major highways and various towns.
- Staffing increased to 38 paramedics and five admin staff
 - Fleet size increased to 20
 - 6 Bases strategically placed throughout central NC covering 3600 sq miles
 - Avg Daily Visit rate is 80 on weekdays and 60 on weekends.

MIH Call Volume



What Did We Learn?

Increasing Service lines

- Cardiology
- Bariatric Surgery
- Pediatrics
- Pulmonology patients
- Primary Care Physicians

Ever changing best practice

- Multi Disciplinary team meetings Bi-Weekly.
- There is only so much your team can do.
- Added on-site navigators in the hospitals.
- Physician led educational updates on disease pathways that were being targeted by our program.
- Not every patient is cut out for Hospital at Home.

Learning From Our Mistakes

Problem	Solution	Outcome
We started with using the patient's home medications they received from an outpatient pharmacy, but we needed to find a better way.	Connected with Inpatient pharmacy and were able to create a process where patients left brick and mortar with a 72-hour supply of medication.	Patient had their medications when they arrived home and did not need to stop or spend their own money to acquire.
Admission times were getting later in the day we adjusted staffing to provide later coverage up to 23:00. There was a steep uptick of refusals starting around 21:30	Met with nursing staff to better the "Throughput" of patients transferring to our service including using <ul style="list-style-type: none">• Uber for transportation issues• Adding onsite Nurse Navigators• Streamlining a full circle of communication between all parties	Patients were leaving B&M by 16:00 which allowed for ample time for our team to do an admission visit with the patients the day of transfer at a decent time.

Into The Future

- Be an available resource for all patients that Atrium Health touches.
- Current census is 32 patients would like to expand to 100 patients.
- Centralize requests for service to HUB for triage and priority.

References

Shih-Hsiung Chou, Andrew McWilliams, Stephanie Murphy, et al; Factors Associated With Risk for Care Escalation Among Patients With COVID-19 Receiving Home-Based Hospital Care. Ann Intern Med.2021;174:1188-1191. [Epub 11 May 2021]. doi:[10.7326/M21-0409](https://doi.org/10.7326/M21-0409)

Shih-Hsiung Chou, Andrew McWilliams, Stephanie Murphy, et al; Factors Associated With Risk for Care Escalation Among Patients With COVID-19 Receiving Home-Based Hospital Care. Ann Intern Med.2021;174:1188-1191. [Epub 11 May 2021]. doi:[10.7326/M21-0409](https://doi.org/10.7326/M21-0409)

Contact Information:

Jay Fraccola B.S. NRP CP-C –
James.Fraccola@atriumhealth.org

Robert Smith MHS, NRP, FP-C, CP-C, CMTE –
Robert.Smith@atriumhealth.org

Amanda Williams RT, BSRT, MBA, NRP, CP-C, CMTE –
Amanda.M.Williams@atriumhealth.org

Chelsea Lennon EMT-P BSHA –
Chelsea.Lennon@atriumhealth.org

