IMPLEMENTATION AND RESULTS OF AN EMERGENCY MEDICINE VIRTUAL TELEHEALTH PROGRAM

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Initial COVID-19 impact on ED visits

- Dramatic and sudden decline in ED visits
- From a mean of 2.1 million per week (March 31–April 27, 2019) to 1.2 million (March 29–April 25, 2020
- CDC recommendation: ***"To minimize SARS-CoV-2 transmission risk and address public concerns about visiting the ED during the pandemic, CDC recommends continued use of virtual visits and triage help lines and adherence to CDC infection control guidance."***

Early phase of pandemic

- Emergency Departments “quiet”
- Idle staff time
- Patients with unplanned illness and injury still need outreach but hesitant to come to the ED

Launch of Virtual First (VF)

- Wake Forest Baptist Emergency Department launches VF in order to care for patients with unplanned illness and injury virtually – Summer 2021
- Marketed as ”immediate virtual care” with Emergency Medicine specialists to assist
  - *Differentiated from traditional virtual visits*
  - *Wake Forest Baptist doesn’t have a 24/7 virtual visit option prior to this*

Unique staffing

- Patient service representative
- Physician and APP ED providers
  - *Traditionally telemedicine programs managed by primary care*

Physician space in the ER

- PSR and providers have physician space in the ER
- Ability to consult with EM provider on site
- Provide soft handoffs

Virtual PSR

- Mimicking office / ED setting virtually
- Manages registration and intake
- Ability to troubleshoot for patients
  - *Technology troubleshooting*
- Ability to collect specimens on site

Physician and APP ED providers

- Traditionally telemedicine programs managed by primary care
- ED providers with specific skillsets in triaging
  - *Imaging and testing ordered in the acute care setting*
    - Labs, CT, MRI
  - *Procedure necessity*
  - *Indications for hospital admission*
  - *Indications for emergency specialist consultation*
- ED providers shown to reduce ER visits when engaged for virtual visits by EMS

Services provided

- Ability for enhanced triage
  - *“Do I need to come to the ER, urgent care, or can I see my PCP?*
- Ability to manage entire illness
  - *Radiographic imaging*
  - *Specimen collection*
    - Urinalysis
    - Rapid Strep
    - SARS-CoV-2 testing

Post visit survey study

- There were 1848 patients seen via VF from July 2021 through December 2021
- A post-visit survey was sent via phone text message to all patients who used VF.
- Primary outcome measure was based on response to the question, “How would you have sought care if a VF visit was not available to you?”
- Secondary outcome measures describe valued aspects and criticisms from their visit.
- Results were analyzed using descriptive statistics

Post visit survey study

- 101 (5.5%) completed the survey.
- A majority of patients would have sought care at an UCC (42.6%) if VF had not been available.
- 16.8%, 12.9%, 3% would have sought care in the PCP, ED, or other location, respectively. 24.8% of patients would not have sought care if VF had not been available.

Post visit survey study

- The most valued aspects of VF were the ability to receive care in the comfort of home (78%), availability of appointment times (61%), not having to wait in a lobby (60%) decreased infectious exposure (49%).
- For suggested improvements to VF, patients free- texted “Nothing” (33.7%), suggested connectivity improvements (23.7%), desired having a doctor perform a physical exam (6.2%), wanted the ability to have lab work or imaging ordered as part of the visit (15.5%) and having to seek medical care after the VF visit (8.2%).

Conclusion of study

- Without the option of VF, 55.4% of patients would have sought care at an acute care facility(ED or UC).
- Future studies are needed to evaluate the efficacy of VF to divert unnecessary visits from acute care facilities.
- VF was valued by patients as a means of access to care for acute illness or injury. The convenience aspects were appreciated by patients more so than the ability to decrease exposure to infectious diseases like COVID-19

VF – “getting patients to the right place at the right time”

- ED boarding
- UC wait times

VF – “getting patients to the right place at the right time”

- Unique aspects of EDs
  - *Different EDs have different capabilities and wait times*

VF – solving the “mismatch problem”

- How do you send a patient to the UC or ED that has the capabilities the patient needs at that time?

Patient case without VF

- Chief complaint: leg swelling and shortness of breath
- A 53 year old male has developed right calf pain after a right knee replacement one week ago. He also has some shortness of breath.
- He called the phone number he was given in case there were any issues patient was having post operatively. The triage line nursing team is worried about a deep vein thrombosis or even a pulmonary embolism, and based on their protocols, he is told to proceed to the closest emergency room.
- He had his surgery done at Baptist, so he returns to the Baptist ER. The wait time is > 5 hours. His vitals are reassuring and is not acutely ill, so continues to wait in the lobby until he gets tired of this and leaves.

Patient case with VF

- Chief complaint: leg swelling and shortness of breath
- A 53 year old male has developed right calf pain after a right knee replacement one week ago. He also has some shortness of breath. He is worried about a blood clot.
- Initiates a VF visit.
- The VF ED provider is worried about a deep vein thrombosis and a pulmonary embolism as well, and based on the patients symptoms, knows they require an ER evaluation.
- **VF ED provider has the ability to look at the wait times of entire ED system and understands capabilities of all of the EDs**
  - ***They see the Davie Emergency room's wait time is less than 10 minutes vs 5 hours at Baptist hospital. They send patient to the Davie ER. The patient is seen in less than 10 minutes and their entire visit completed within 3 hours.***

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- Chief complaint:
- A 53 year old male has developed right calf pain after a right knee replacement one week ago. He also has some shortness of breath. He is worried about a blood clot.
- Initiates a VF visit.
- The VF ED provider is worried about a deep vein thrombosis and a pulmonary embolism as well, and based on the patients symptoms, knows they require an ER evaluation.
- **VF ED provider has the ability to look at the wait times of entire ED system and understands capabilities of all of the EDs. Know potential capabilities needed are Ultrasound and CT imaging. The ED that has this capability with the shortest wait time: Davie**
  - ***They see the Davie Emergency room's wait time is less than 10 minutes vs 5 hours at Baptist hospital. Even though Davie is a further drive for the patient, they send patient to the Davie ER knowing the workup will be faster. The patient is seen in less than 10 minutes and their entire visit completed within 3 hours.***

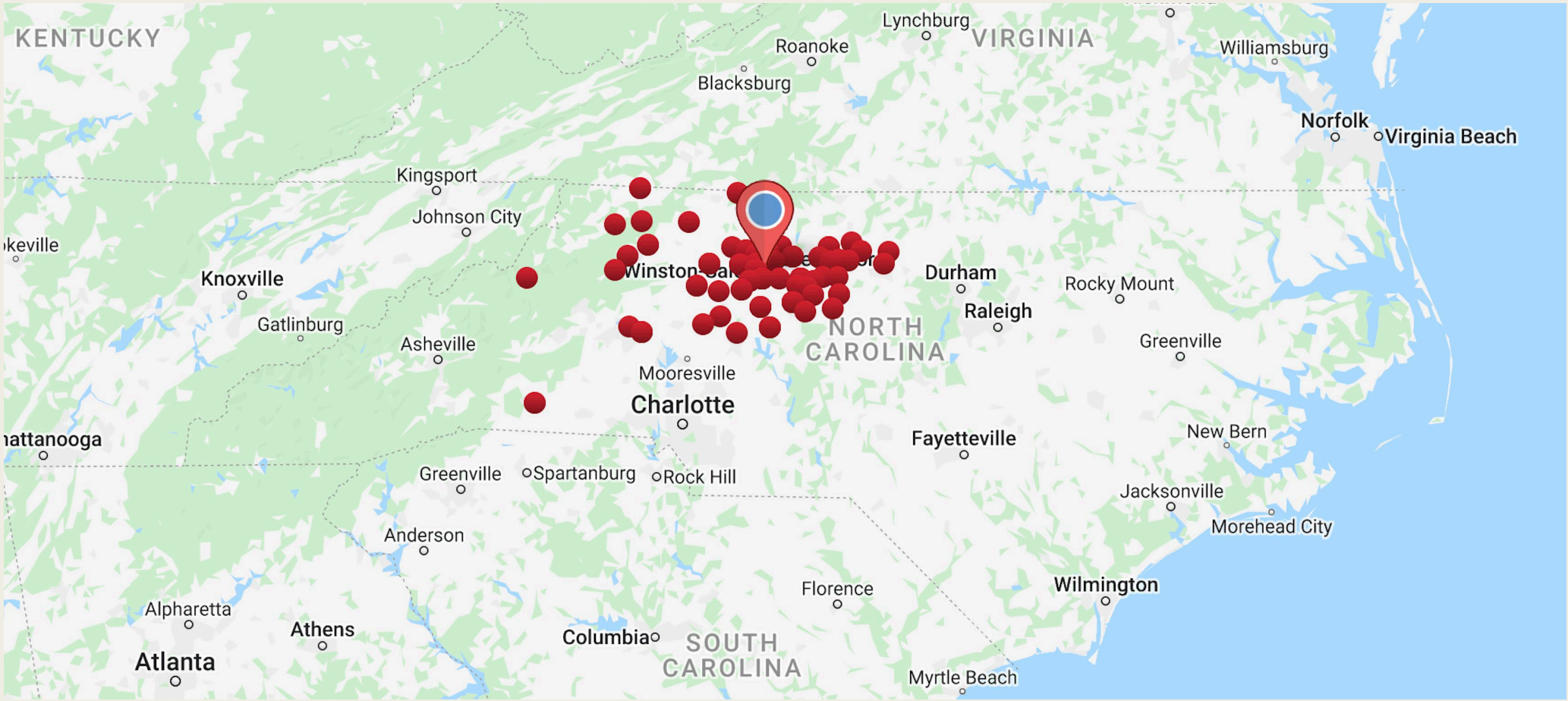
Patient case without VF

- Chief complaint: R eye vision loss > 2 days
- A 72 year old female has had sudden vision loss, painless, over 2 days.
- Primary care is not able to see her soon due to busy schedule, but recommend VF visit.
- VF ED provider is worried about retinal issue vs stroke, and understands patient likely requires ophthalmology workup. They know which Ers have ophthalmology on staff and the imaging capabilities of each ER based on the time. They recommend patient come to Baptist ER for imaging and ophthalmology evaluation. ED VF provider notifies the ED attending at Baptist ER that the patient is coming, writes a note explaining what the patient needs. This note is read by triage team at Baptist hospital, and initial set of labs / imaging placed as soon as patient arrives.

Patient case with VF

- Chief complaint: R eye vision loss > 2 days
- A 72 year old female has had sudden vision loss, painless, over 2 days.
- Primary care isn't able to see her soon due to busy schedule but recommends
- UC is worried about a stroke / TIA and tells patient to come to the Davie ER since it is the closest
- Davie ER doesn't have the capability to perform MRI imaging after 4pm, and does not have ophthalmologist on staff to perform consultation.
- Patient is then transferred to Baptist hospital to be seen by ophthalmology
- 3 health care visits for this patient in one day

Location graphic



Patient cost of VF

- Similar to Urgent care visit
- Patient is not billed for facility fees

Insurance reimbursement

- Highly variable
- Physician fees reimbursed 1 to 1

VF is not about generating direct revenue

- Getting patients to the right place at the right time
- Optimizing healthcare resources and availability for unplanned illness and injury
- Improving patient satisfaction
- Improving delivery and access to care
- “Win Win”
  - *Patients have improved care and lower costs*
  - *Insurance companies avoid ER visits*
  - *Hospital systems able to generate more income as their subset of patients with unplanned illness are optimized (Less LWBS, elopements)*