

# COVID-19 Remote Monitoring Program in a Rural Community

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COVID-19 challenged us to look for creative ways to stretch our healthcare resources. Dignity Health, Yavapai Regional Medical Center (YRMC) was faced with overcrowding hospitals and emergency rooms. Hospitals were in crisis related to the influx of very sick COVID patients, being short staffed and the limited resources. One of our most innovative solutions was remote monitoring. From the start, we were confident that this would work for carefully selected COVID-19 patients.

With remote monitoring, patients with milder cases of COVID-19 could recover safely at home. It would give them peace of mind knowing that a medical professional was only a phone call away. Remote monitoring would also allow for providers to focus on caring for hospitalized patients who were severely ill with COVID-19.

## OBJECTIVES:

1. Establish process to safely monitor and support COVID patients for improved or equal outcomes.
2. Improve patient values and quality of life.
3. Apply shift in care delivery to alternate venues.
4. Encourage patient empowerment and engagement.

## BACKGROUND

- 218 beds, two campuses, 50% of ED visits by those  $\geq 65$  yrs.
- Large geographic service area with many outlying rural communities, relatively, remote from metropolitan area.
- History: Remote patient monitoring program pilot for chronic care management for CHF patients targeting reduced readmissions using Vivify as the RPM platform.
- COVID-19 surge preparation planning, COVID RPM developed as a strategy, implemented Vivify's emergency release of COVID RPM platform.

## PREPARATION

- Core team: ED Physician and Hospitalist program, medical directors, Care Management and ED leadership, nursing directors, respiratory therapy leadership.
- Policy and Procedure development: patient referral criteria and program discharge criteria, medical therapies, nurse monitoring response protocols.
- Community DME Home O2 vendors coordination and communication.
- Superuser selection and training: primarily the core team members with expansion to ED charge nurses, inpatient nurse managers, house supervisors and care management team.

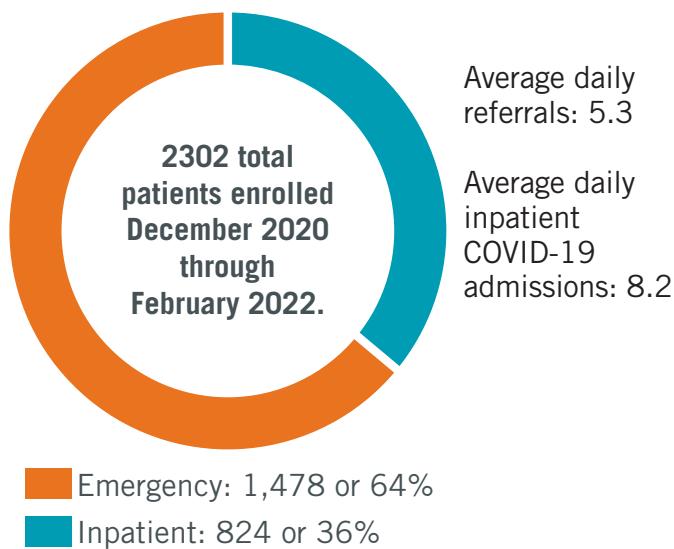
## PROGRAM CRITERIA

- Two primary patient populations: ED visits and inpatients at end of hospital stay.
- Specific criteria for candidates for remote patient monitoring MAY include:
  1. Stable vital signs without oxygen requirement or evidence of moderate-severe COVID-19 illness But have one or more risk factors for severe disease course.
  2. Mild-moderate COVID-19 illness with an oxygen requirement not greater than 4lpm nasal cannula and otherwise stable including normotensive, adequate hydration status and no indication of deterioration in status after a period of observation in the ER or hospital.
- Specific criteria for candidates for remote patient monitoring MUST include:
  1. Access to a smart phone or tablet\*
  2. Ability of patient to use mobile application and pulse oximetry or presence of a caregiver capable of using these tools.
  3. Patient deemed reliable for both availability of housing and also return to care .
- For patients with an O2 requirement, the ability to arrange for home O2 setup.
- Subsequently added kit option voice response phone only option.\*

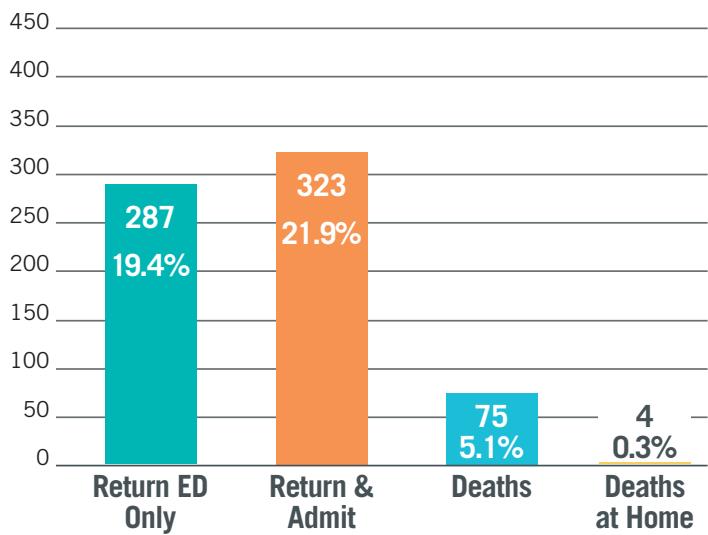
## HOW DOES IT WORK?

- Physician order.
- Enrollment in ED or prior to hospital discharge with education.
- Patients or caregivers smartphone or tablet- accept SMS invite/install app/enter pin.
- Patient given generic pulse ox.
- 3rd party nurse navigator web based dashboard monitoring team.
- At discharge, d/c home O2 order sent to DME, chart summary exported from Vivify and imported into DIGNITY HEALTH, YRMC EMR.

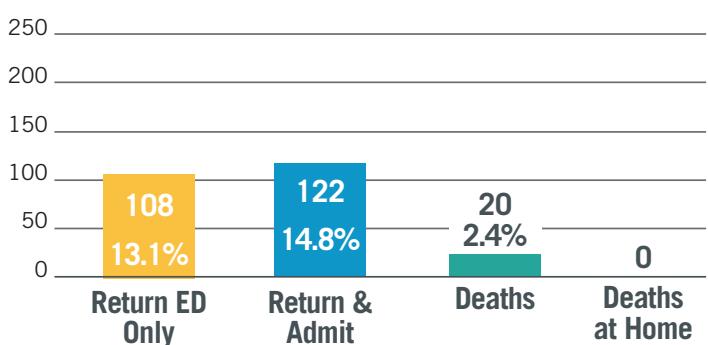
## Total COVID-19 Remote Monitoring Referrals



## 1,478 Emergency Department Referrals



## 824 Inpatient Referrals



Initial Inpatient Referrals: 258

## PAIN POINTS

- Talking points for physicians with patients: how to properly inform of the situation and present them with the option of admission voice remote monitoring program.
- Home O2 coordination.
- Enrolling staff training and consistency.
- Ensuring no patients fall through the cracks between referral order and successful active monitoring on the program.
- Help for patients struggling with the app or with home O2 equipment after they are home.
- Patients not responding to calls or check-in.

## CONCLUSION

Remote Monitoring has been vital in assisting with the issues faced by our organization during the pandemic, with staffing and overcrowding. Remote monitoring produced positive outcomes for our patients. Remote monitoring empowered patients with involvement in their recovery at home and gave them a sense of security with 24/7 support. As an organization, we are expanding our CHF remote monitoring program to include CHF, COVID-19, COPD and Pneumonia. With the limited resources and the long distance to higher levels of care, we believe this will have a direct effect on readmissions and produce better outcomes for our population.

## REFERENCES AND RESOURCES

Ronael Eckman MD, Initiative Director  
Dignity Health, Yavapai Regional Medical Center

Adrianna Donahue, LBSW ACM, Transition Specialist  
Dignity Health, Yavapai Regional Medical Center

\*VIVIFY (a part of Optum™, United Health Group)

“Telehealth and Remote Patient Monitoring.” [Telehealth.HHS.gov](https://telehealth.hhs.gov/providers/preparing-patients-for-telehealth/telehealth-and-remote-patient-monitoring)  
<https://telehealth.hhs.gov/providers/preparing-patients-for-telehealth/telehealth-and-remote-patient-monitoring>

*Remote patient monitoring during COVID-19: an unexpected patient safety benefit.* JAMA. Epub 2022 Feb 25. doi: 10.1001/jama.2022.2040. Peter J. Pronovost, MD, PhD; Melissa D. Cole, MSN, APRN; Robert M. Hughes, DO