



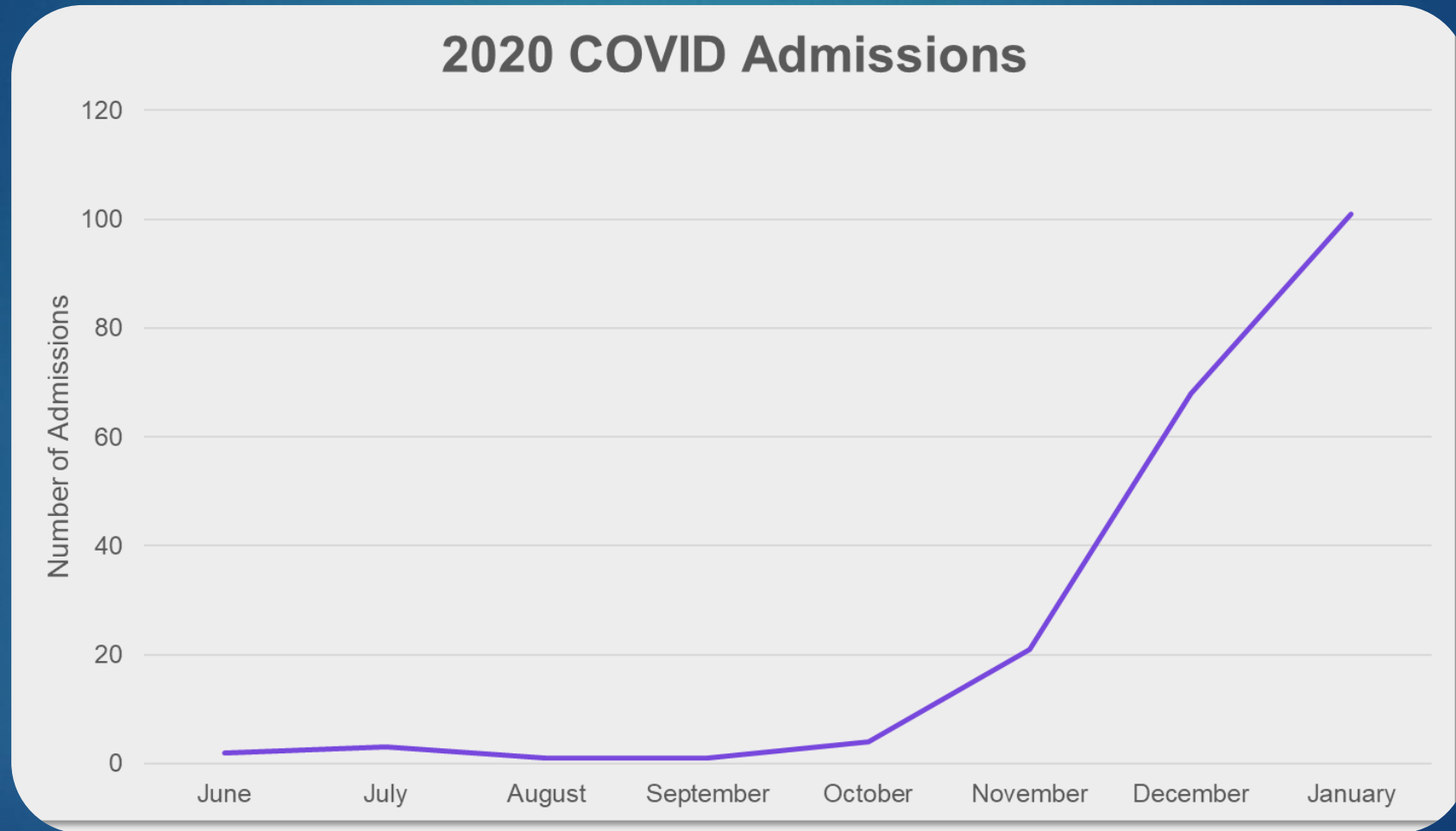
The Value of Home Health Services and Remote Patient Monitoring in Reducing COPD and CHF Readmissions







COVID Admissions on the rise



COVID Outpatient Management Program

Initially from the Emergency Department

Referral to Samaritan Home Health

Referral to SFHN with a telemedicine appointment in 48 hours

Provided pulse oximeter and trained on its use

Detailed discharge instructions

Expanded to discharges from COVID unit

COVID Outpatient Management Program



PATIENT STICKER

1. I certify that I, or a nurse practitioner or physician's assistant working with me, had a face-to-face encounter today that meets the physician face-to-face encounter requirements with this patient.
2. The encounter with the patient was in whole, or in part, for the following medical condition, which is the primary reason for home health care (List medical condition):
COVID-19
3. I certify that, based on my findings from today's face to face visit, the following services are being ordered and medically necessary home health services.
X **Nursing** (with assessment for Physical Therapy and Occupational Therapy)
4. My clinical findings support the need for the above services because this patient has risk factors that could precipitate an acute decompensation of symptoms with hypoxia and acute respiratory failure.
5. Further, I certify that my clinical findings support that this patient is homebound (i.e. absences from home require considerable and taxing effort) and the patient should be quarantined according to New York State Public Health requirements.

Home Orders

- ☒ Incentive Spirometer to be used 10 times per hour while awake
- ☐ Awake Pronation 1 hour on 2 hours off while awake 8-10 times per day
- ☒ Oxygen Saturation to be checked 2 times per day or with new onset of SOB
- ☒ Report oxygen saturation <92% at rest or a 3% drop from baseline (if >2L of oxygen is being used, please contact the ED).
- ☒ If oxygen saturation is less than 92% on room air, may administer 1L via mask / nasal cannula, may titrate to maintain oxygen saturation at 92% (Maximum of 2L). If unable to maintain at 92% please contact the ED.
- ☐ Other: _____

Oxygen Order

____ LPM (Via ☐ Nasal Cannula ☐ Other: _____)

Oxygen Test (to be completed in ED if home oxygen need is probable)

Saturation Levels – fill in only those that apply. At Rest: _____ Nocturnal: _____

Walk Test – Rest: _____ Walk: _____ Walk with Oxygen: _____

Physician Signature (Must Be MD/DO)

Date

Time

Physician Printed Name

PLEASE CALL (315) 782-0415 for Nurse to Nurse Report

SMC ER/SMART Clinic COVID Outpatient Program Continuity Document

Patient Sticker

Verified phone number or e-mail: _____

if the patient prefers a tele-health visit request e-mail, if they prefer a telephone visit request phone number.

Date of first symptoms: _____

Date of positive test: _____ ☐ Clinical diagnosis

Where was test performed?

What risk category was the patient assigned to?

- ☐ Mild, no risk factors (Scheduled for one virtual follow-up in 5 days to ensure no change)
- ☐ Mild, with risk factors (Please schedule with virtual follow-ups at 2, 4, 7, and 10 days)

What risk factors were assessed in determination of clinical risk category?

- | | | | |
|-------------------------------------|--|--|--|
| <input type="checkbox"/> Male | <input type="checkbox"/> COPD | <input type="checkbox"/> Obesity (BMI>30) | <input type="checkbox"/> Hypertension |
| <input type="checkbox"/> Black race | <input type="checkbox"/> Diabetes Mellitus | <input type="checkbox"/> Malignancy | <input type="checkbox"/> Cardiovascular dz. |
| <input type="checkbox"/> Age>60 | <input type="checkbox"/> Renal Disease | <input type="checkbox"/> Congregate dwelling | <input type="checkbox"/> Cerebrovascular dz. |

Discharge vitals:

Heart Rate:

Blood Pressure:

Resting SpO2:

Respiratory Rate:

Exertional SpO2:

Temperature:

Were they given a monoclonal antibody infusion? ☐ No ☐ Yes

Were they given supplemental O2 at discharge? If so, how much was required?

☐ No

☐ Yes

Please verify that the patient knows not to exceed 2LPM without call us first.

COVID Outpatient Management Program

COVID-19: How to Monitor Your Oxygen Level

If you have tested positive for COVID-19 or are awaiting your test result, a fingertip oxygen meter is a fast and easy way to monitor the oxygen level in your blood.

What is a fingertip oxygen meter?

An easy-to-use device to help you monitor the oxygen level in your blood. It is non-invasive (no needle) and takes just a few seconds to work.

Why is it important to monitor my oxygen levels?

Many people have COVID-19 and do not know it because they do not have symptoms. COVID-19 can cause an infection in your lungs, which can lower the oxygen level in your blood. When your oxygen level is low, you may feel tired or have shortness of breath, but you may not feel different at all. This can be dangerous. You should keep track of your oxygen level using a fingertip oxygen meter until you are feeling better. If your oxygen level drops, you should get medical help right away.

How do I use my fingertip oxygen meter?

Measure your oxygen level twice per day, in the morning and at night (or more often if instructed by your health care provider).

- 1 Make sure there are batteries inside and turn the device on.
- 2 Put your index finger (the finger next to your thumb) into the oxygen meter with your fingernail facing up.



- 3 Wait for the screen to show a number.



- 4 If the screen does not show a number, try another finger (not your thumb). Oxygen meters may not work on cold or wet fingers, or if your finger has nail polish.
- 5 Record your oxygen levels in the log provided.

| Date | Time | SpO2 |
|---------|---------|------|
| 11/1/20 | AM 8:30 | 99 |
| | PM 6:00 | 99 |
| 11/2/20 | AM 9:00 | 99 |
| | PM 8:30 | 98 |
| | AM | |

- 6 Sign up for free daily text message support.

How do I read the numbers on the screen?

Your oxygen meter shows two numbers. The oxygen level is labeled SpO2. The other number is your heart rate. For most people, a normal oxygen level is 95% or higher and a normal heart rate is generally below 100. Your oxygen levels and heart rate can change based on your activity, body position and overall health. Check with your health care provider if you have questions.



How should I clean my oxygen meter?

Wipe off all surfaces of the oxygen meter using a cloth, paper towel or cotton ball dampened with rubbing alcohol that contains at least 60% isopropyl. Do this after each use and before being used by others.



Can I use the fingertip oxygen meter on a child?

Oxygen meters are not recommended for children younger than 14 years old. Monitor your child's symptoms closely and call their health care provider if they look sick or develop a cough that worsens or difficulty breathing.

Should I inform my health care provider of my measured oxygen levels?

It is important to keep your health care provider informed about your health and your oxygen levels. Call or email your provider as directed. If you do not have a health care provider, call 844-NYC-4NYC (844-692-4692) to find one and request an appointment.

When should I seek medical help?

This table provides guidance on what the oxygen level number means and when and how to seek medical help.

| Oxygen Level | Guidance |
|--------------|--|
| 90% or less | This oxygen level is very concerning and may indicate a severe medical problem. Call 911 or go to your nearest emergency room immediately. You may need an urgent x-ray or heart test. |
| 91% to 94% | This oxygen level is concerning and may indicate a medical problem. Call your health care provider immediately. If you do not have a health provider, you can get an urgent care evaluation by going to www.ExpressCare.nyc on your computer, smart phone, or tablet, or by calling 332-220-1337 if you do not have internet access. A doctor will evaluate you over the phone or by video. There will be no cost to you. You can also go to a nearby urgent care facility. |
| 95% to 100% | This oxygen level is normal. Walk around for two minutes and measure your oxygen level again. If your oxygen level falls below 95%, follow the instructions above. |



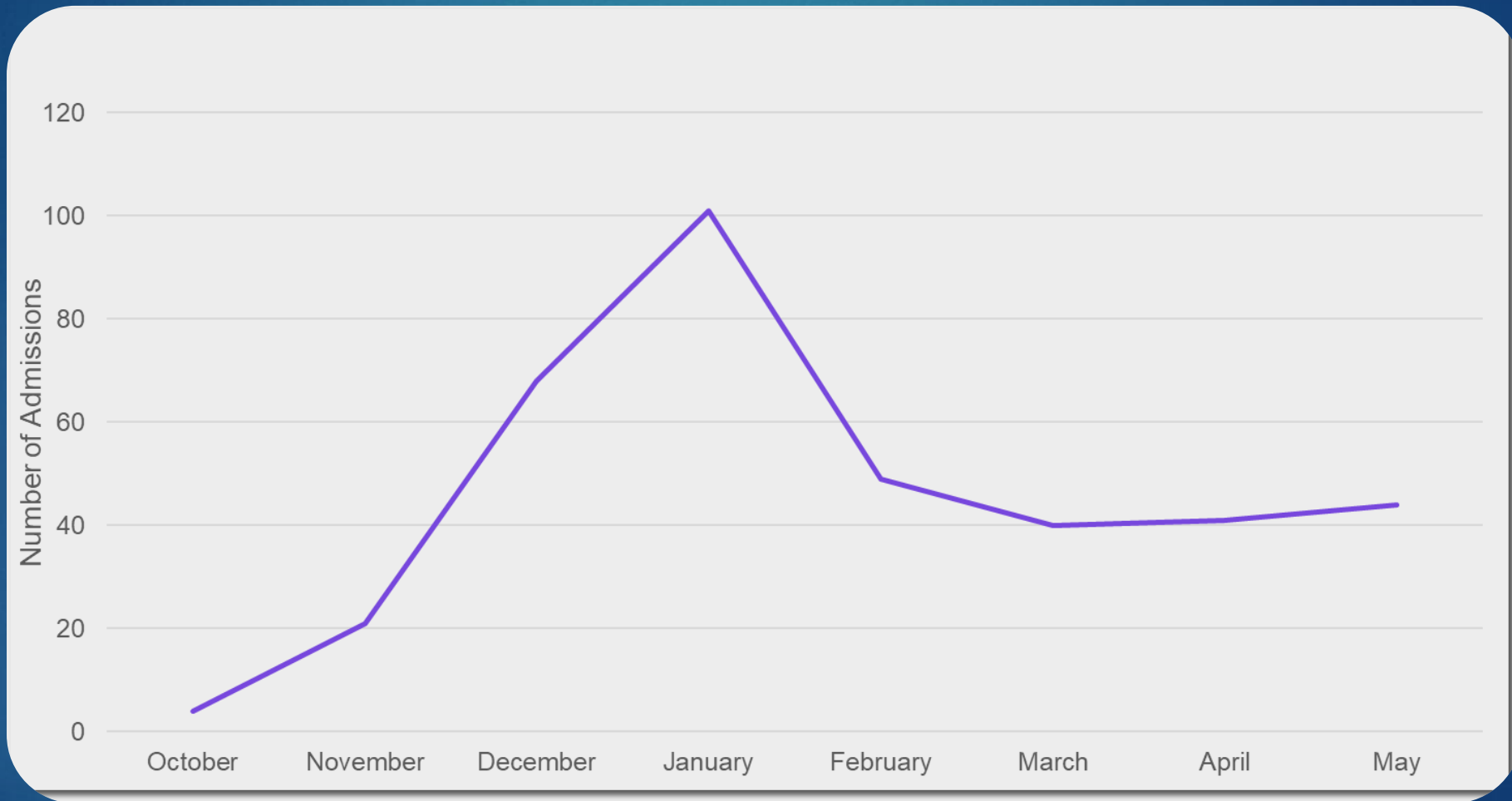
SIGN UP FOR FREE TEXT MESSAGE SUPPORT

You will be asked for your oxygen level readings and heart rate by text message, and receive tips and instructions based on your response. To sign up, text **"COVID"** to **89888**.

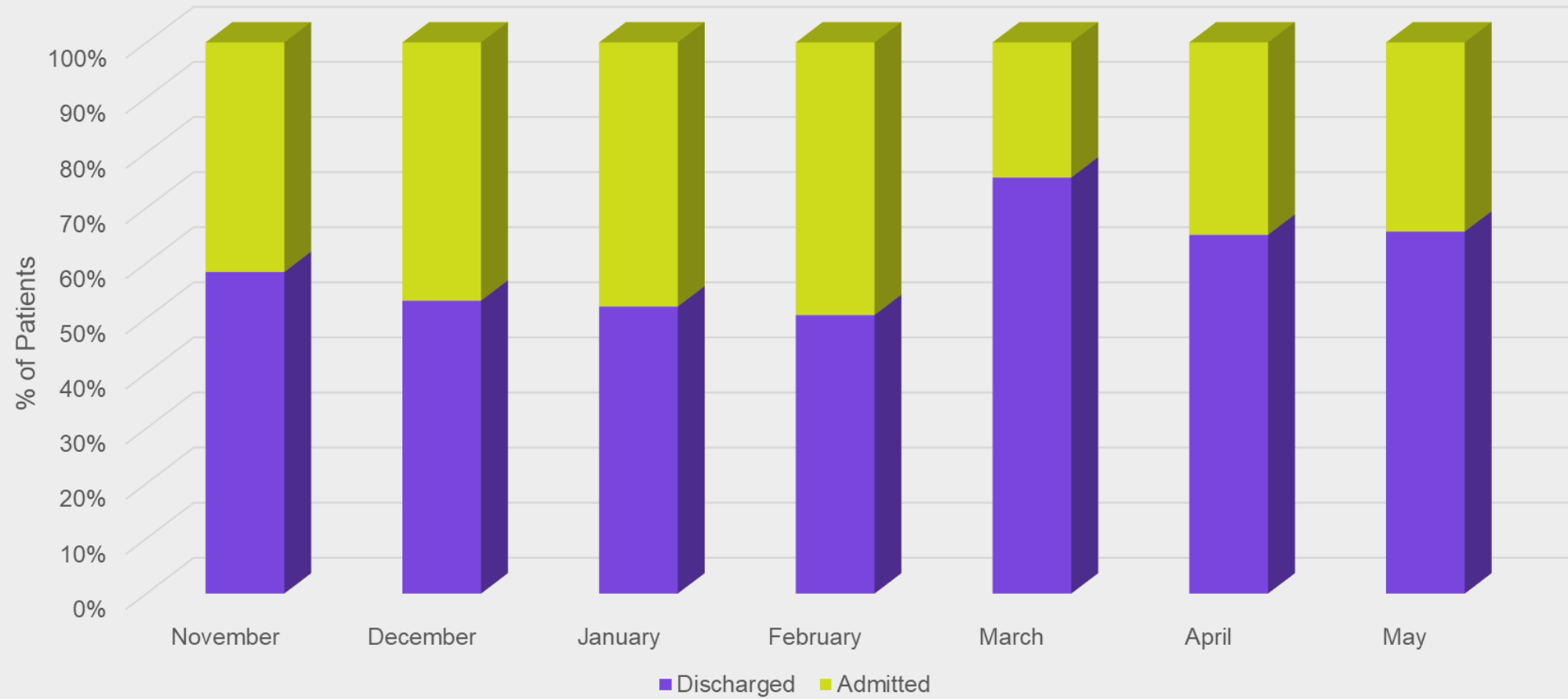
100

| DATE | TIME | OXYGEN LEVEL (SpO2) | OTHER SYMPTOMS |
|------|------|---------------------|----------------|
| | AM | | |
| | PM | | |
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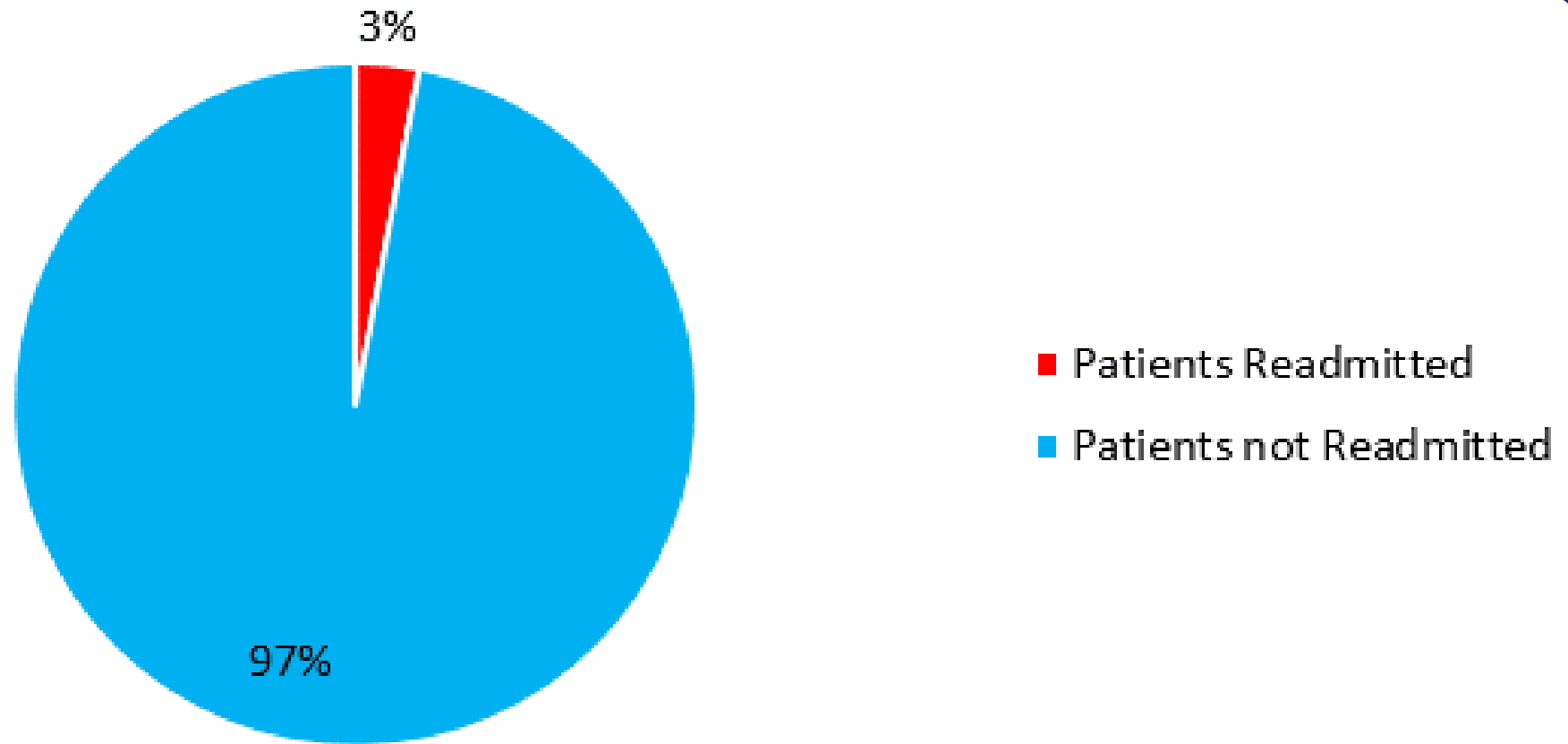
COVID Admissions



COVID in the ED



Post-ED Discharge

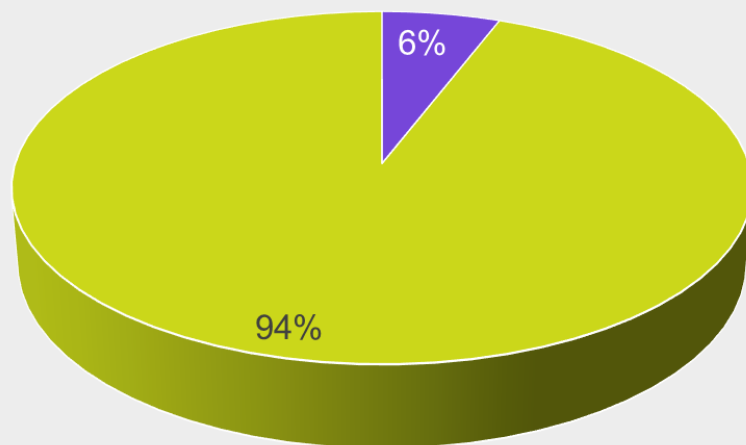


Outcomes for discharged inpatients

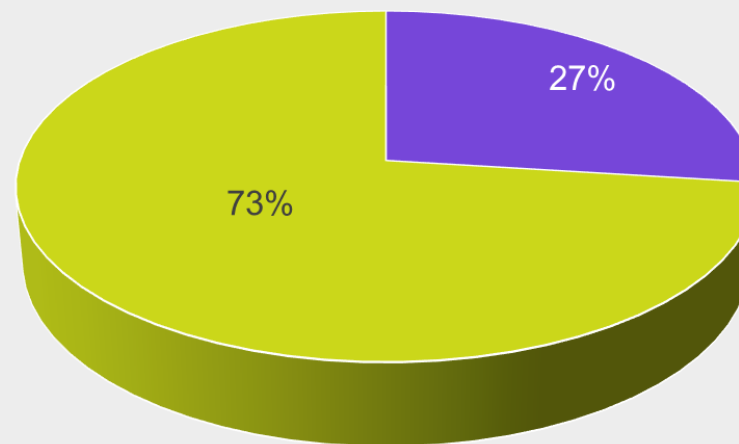
- ▶ 32 patients enrolled upon discharge from COVID unit
- ▶ Only 2 patients were readmitted (6%)
- ▶ Increased patient satisfaction

Readmissions OR death 60 days after discharge

Samaritan Medical Center



Journal of the American Medical Association



What did we learn?

Value of Home
Health Agency

Role of remote
patient
monitoring

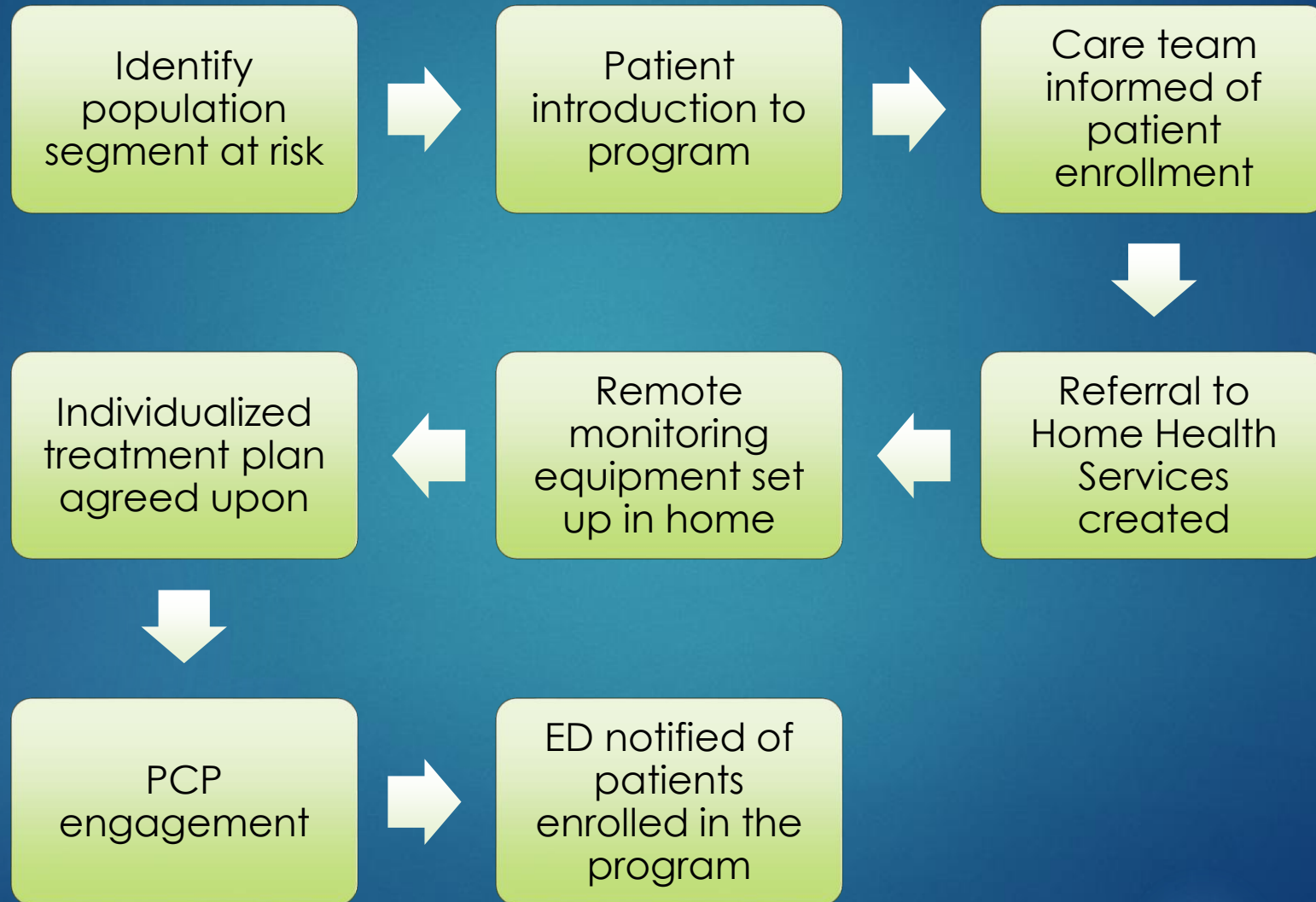
Role of
telemedicine

Importance of
PCP alignment

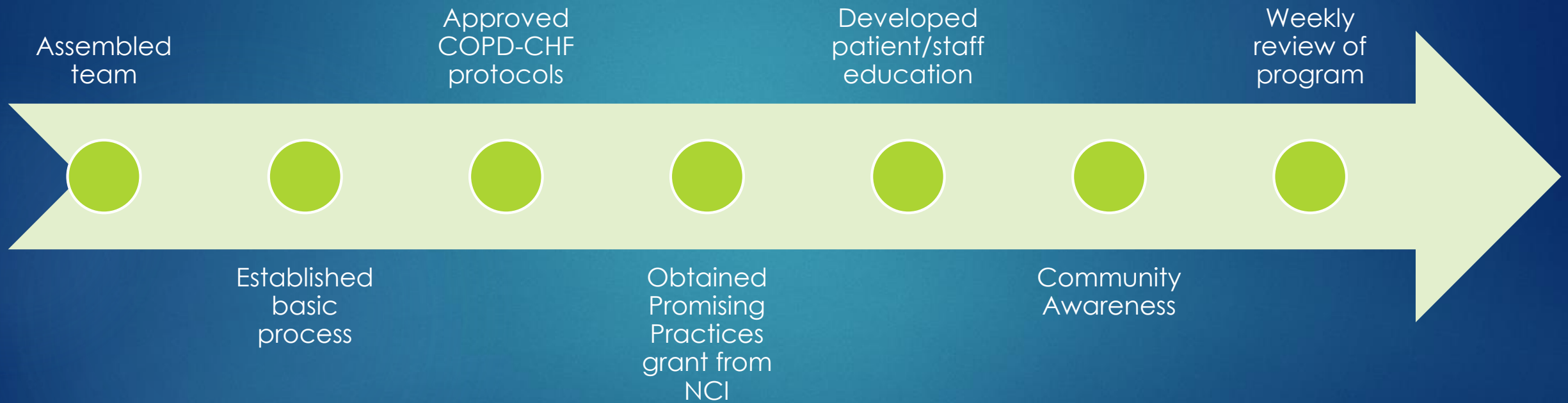
Role of patient
care
coordination

Apply
population
segmentation
analysis

COPD-CHF Readmission Reduction Project



Operational Steps



Remote Monitoring Patient Instructions

TAKING YOUR OXYGEN LEVEL

1. Place device on your finger
2. Warm your finger before each reading
3. Repeat on a different finger if reading below 90%
4. Make sure your battery strength is good-IF NOT REPLACE BATTERIES

TAKING YOUR WEIGHT

1. Place scale on a hard-flat surface
2. You must stand still
3. Take your weight after waking up and going to the bathroom
4. Wear same amount of clothing each time you weight
5. Make sure your battery strength is good-IF NOT REPLACE BATTERIES

100

My Goal for this week: _____

[illegible]

Patient Goals

EVERYDAY

- Take your medication as prescribed every day, including inhalers and nebulizers.
- Don't smoke; Avoid all things that irritate your lungs
- Avoid infections; Wash your hands often, and keep them away from your face
- Balance activity and rest periods
- **Call your home health nurse if you go to the doctor, ER, or are admitted to the hospital.**

Green Zone: ALL CLEAR

- No Shortness of breath
- No need to use rescue inhaler
- No decrease in your ability to maintain normal activity level or normal energy level.

Green Zone Actions

Your Symptoms Are Under Control

- Continue taking your medications as ordered
- Keep your SHH visits
- Keep all physician appointments

Yellow Zone: CAUTION

- Increased shortness of breath with activity, or when laying flat
- Using rescue inhaler more often
- Feeling of a "chest cold"
- Increased cough; change in Mucus color, Consistency, or amount
- Change in energy level, poor sleep, change in appetite or less hungry
- You have a temperature of 100.5° or higher

Yellow Zone Actions

Your symptoms may indicate that you need an adjustment of your medications

- Call your home health nurse

Case Manager: _____

Phone Number: _____

Red Zone: MEDICAL ALERT

- Severe shortness of breath, unrelieved with medications
- Unrelieved chest pain, wheezing or chest tightness at rest
- Extreme fatigue or no energy, loss of appetite
- Fever or shaking chills
- Coughing up blood
- Confusion, mental changes, drowsiness

Red Zone Actions

This indicates that you need to be evaluated by a physician right away!

CALL YOUR DOCTOR OR 911!

Primary MD: _____

Phone: _____

Community Awareness

Preventing Readmissions

Do you have a patient with **COPD** being discharged?

Are they a repeat customer and could use some help at home?

Please consider Samaritan Home Care's

"COPD EXACERBATION HOME MANAGEMENT".



Here is how to order:

Step 1. Place a **discharge order** for:

" COPD EXACERBATION HOME MANAGEMENT"

Step 2. Make sure you **sign** Home Care Protocol

Step 3. **Electronically send:**

- 30 Day supply of Albuterol MDI or nebulizer solution
- 5 Day supply of oral prednisone 40mg

Of Note:

- It is at the discretion of the PCP to order antibiotics

☒ COPD READMISSION REDUCTION

Medications

- ☐ Albuterol Sulfate (Albuterol Sulfate Hfa) 90 MCG - HFA,
2 PUFFS INH Q4HP PRN SOB... 30 Days # 1 INHALER <rf>
- ☐ Albuterol Sulf (Albuterol Sulfate) 2.5 MG/3 ML - VIAL
2.5 MG INH Q4HP PRN SOB... 30 Days # 120 SOL <rf>
- ☐ Ipratropium/Albuterol Sulfate (Iprat-Albut 0.5-3(2.5) m... 0.5 MG-3 MG -
1 NEB INH Q6HP PRN SOB... 30 Days # 120 NEB <rf>
- ☐ Prednisone 20 MG - TABL
40 MG PO DAILY <prn> <reason> 5 Days # 10 TAB <rf>

Remote patient monitoring

Your name: Today's date:

CAT
COPD Assessment Test™

How is your COPD? Take the COPD Assessment Test™ (CAT)

This questionnaire will help you and your healthcare professional measure the impact COPD (Chronic Obstructive Pulmonary Disease) is having on your wellbeing and daily life. Your answers, and test score, can be used by you and your healthcare professional to help improve the management of your COPD and get the greatest benefit from treatment.

For each item below, place a mark (X) in the box that best describes you currently. Be sure to only select one response for each question.

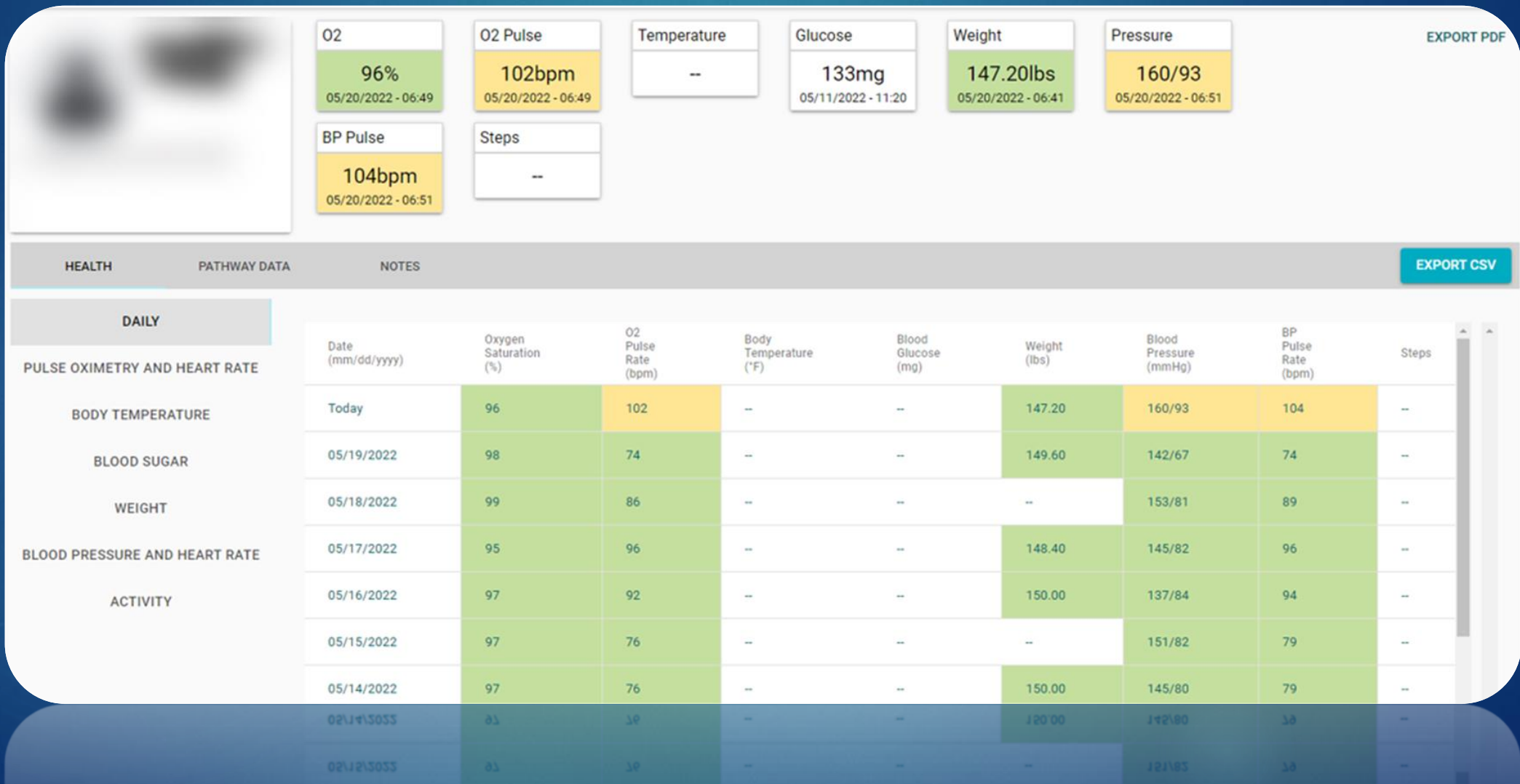
Example: I am very happy 0 ☒ 1 2 3 4 5 I am very sad

| | | | | | | | SCORE | |
|---|---|---|---|---|---|---|--|--|
| I never cough | 0 | 1 | 2 | 3 | 4 | 5 | I cough all the time | |
| I have no phlegm (mucus) in my chest at all | 0 | 1 | 2 | 3 | 4 | 5 | My chest is completely full of phlegm (mucus) | |
| My chest does not feel tight at all | 0 | 1 | 2 | 3 | 4 | 5 | My chest feels very tight | |
| When I walk up a hill or one flight of stairs I am not breathless | 0 | 1 | 2 | 3 | 4 | 5 | When I walk up a hill or one flight of stairs I am very breathless | |
| I am not limited doing any activities at home | 0 | 1 | 2 | 3 | 4 | 5 | I am very limited doing activities at home | |
| I am confident leaving my home despite my lung condition | 0 | 1 | 2 | 3 | 4 | 5 | I am not at all confident leaving my home because of my lung condition | |
| I sleep soundly | 0 | 1 | 2 | 3 | 4 | 5 | I don't sleep soundly because of my lung condition | |
| I have lots of energy | 0 | 1 | 2 | 3 | 4 | 5 | I have no energy at all | |
| TOTAL SCORE | | | | | | | | |

COPD Assessment Test and the CAT logo are trademarks of the GlaxoSmithKline group of companies.
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- ▶ Patient completes assessment
- ▶ Interventions based on score

Remote monitoring dashboard



🔙 Go back to user's profile

Weight

Today (lbs)

110.00

10:29

08-29

Manual entry

Read from device

Preceding Measures (lbs)

111.40

10:28
08-29

109.40

05:59
08-26

108.60

05:57
08-25

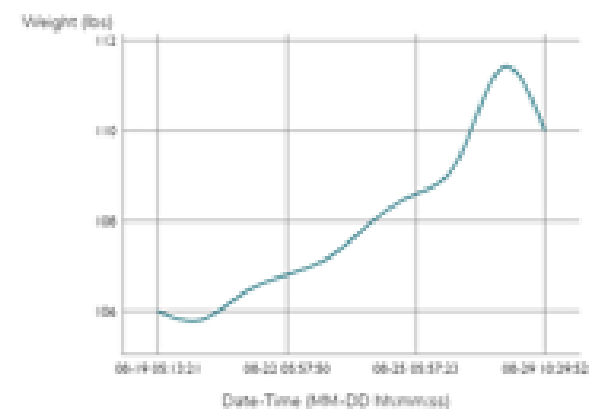
108.00

05:56
08-24

107.20

05:58
08-23

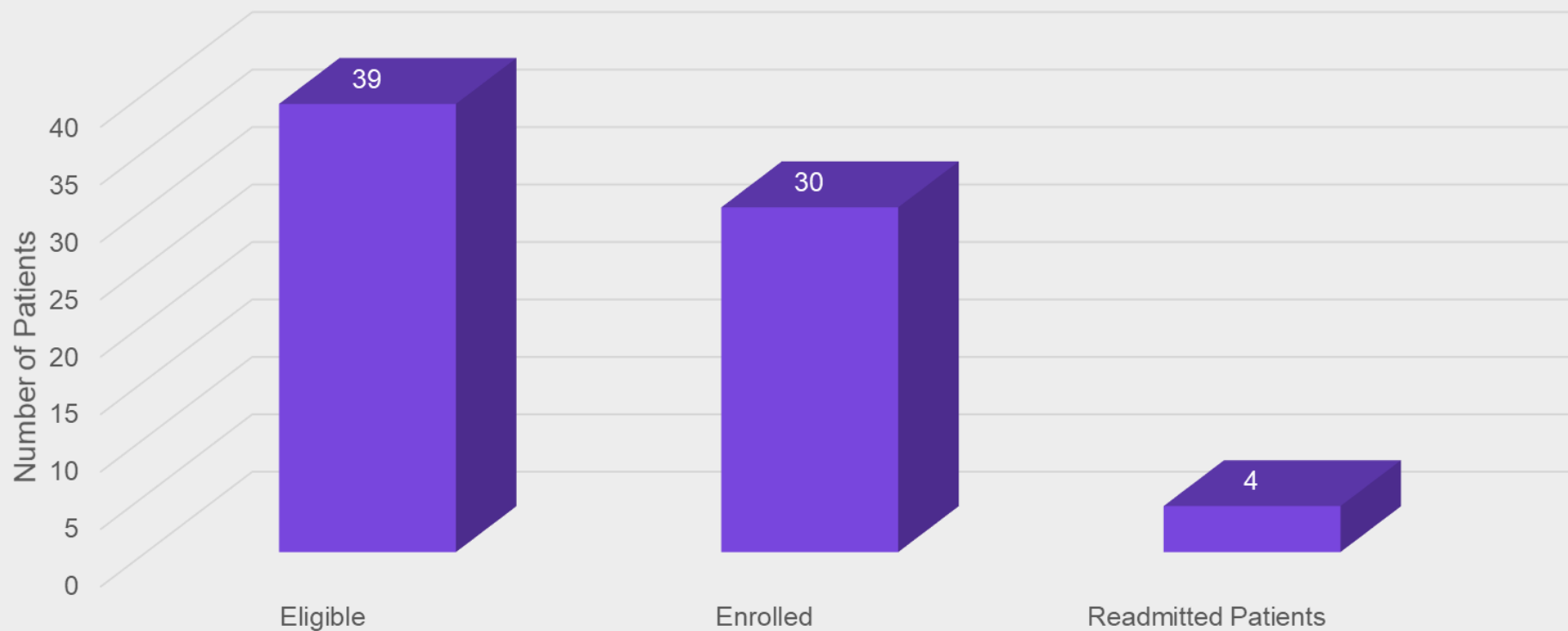
Weight vs. Date-Time



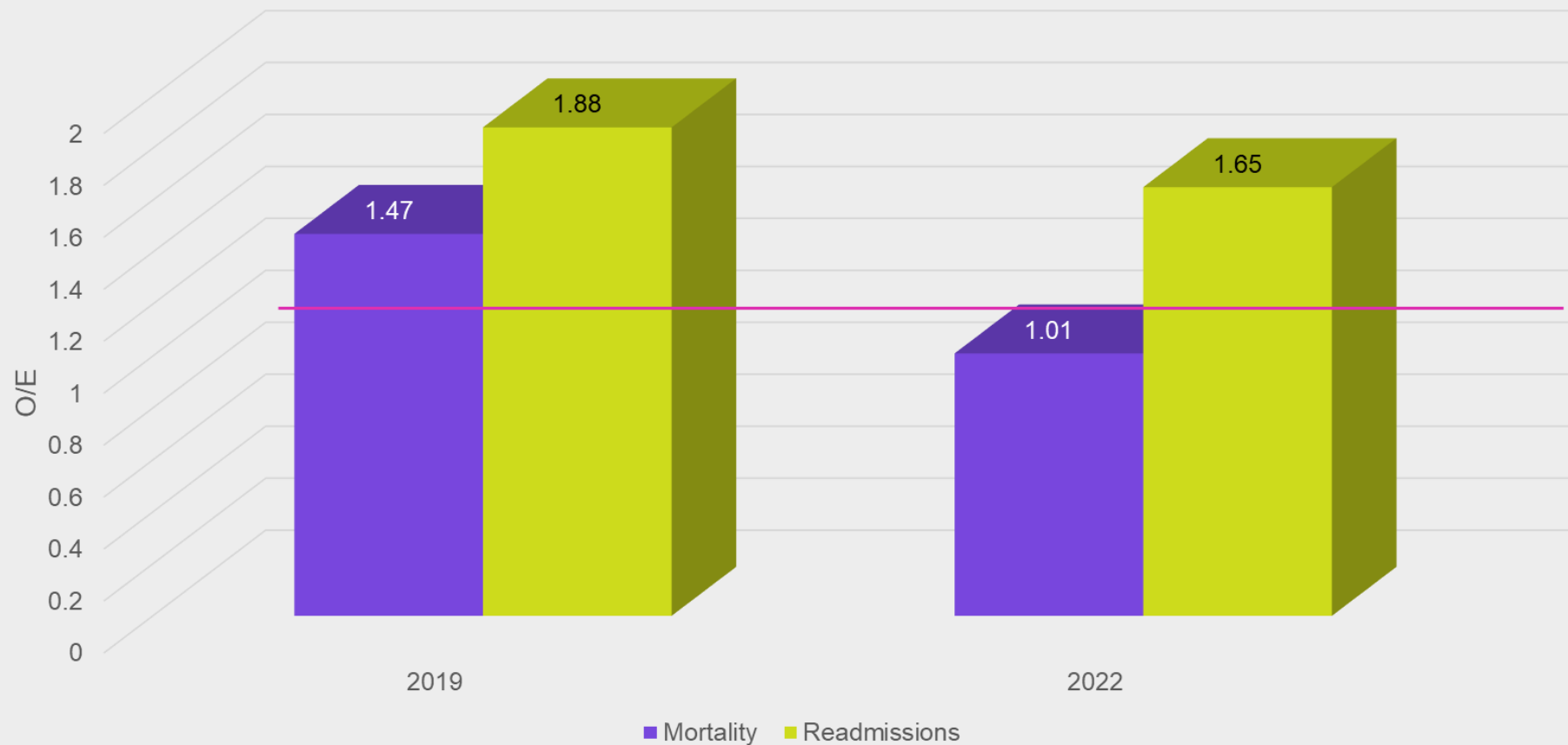
Dashboard Alerts

- ▶ Home monitoring
- ▶ “Red” = High alert
- ▶ Call to patient
- ▶ Probing questions:
 - ▶ Is the pulse oximetry device clean?
 - ▶ Do you have lotion or nail polish on your finger?
 - ▶ Can you take a deep breath in as if you are smelling a flower?
 - ▶ What is your reading now?
- ▶ Findings reported to RN to follow-up with MD if indicated

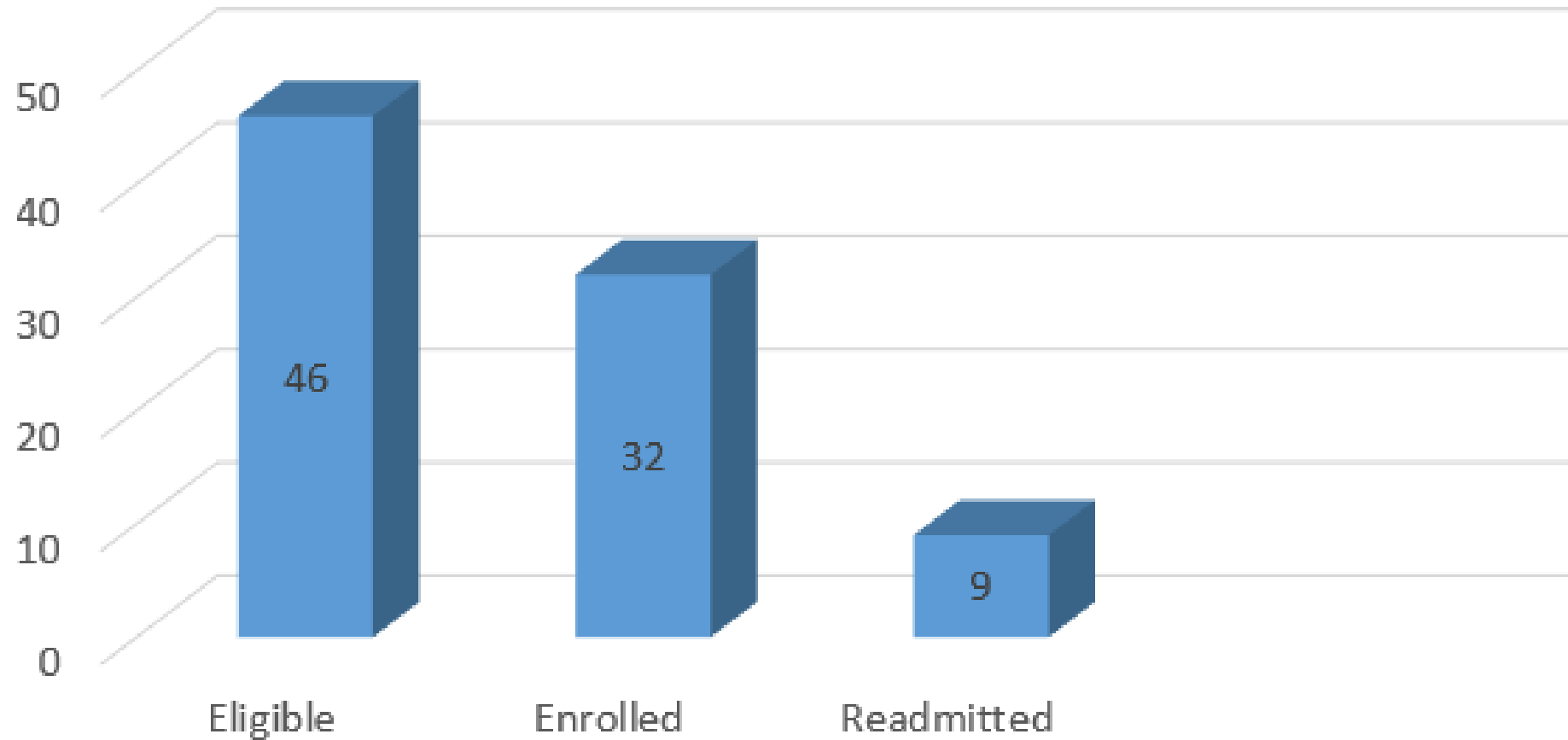
COPD Readmissions



COPD Mortality and readmissions O/E



CHF Readmissions



Executive Summary

COPD Outcomes

- ▶ 77% success rate in enrolling eligible patients
- ▶ 87% of enrolled patients are readmission free
- ▶ Modest decrease in mortality and readmission rates

Executive Summary

CHF Outcomes

- ▶ 70% success rate in enrolling eligible patients
- ▶ 72% of enrolled patients are readmission free
- ▶ 91% have not had a CHF related readmission

Executive Summary

Key Players

- ▶ Regional ACO
- ▶ Home Health Agency
- ▶ Patient Coordinator
- ▶ Hospitalists
- ▶ Senior Leadership
- ▶ ED Physicians
- ▶ SFHN
- ▶ PCP
- ▶ Director, Quality & Safety
- ▶ Nursing Leadership

Executive Summary

Challenges Addressed

- ▶ Health system financial distress
- ▶ Staffing shortages
- ▶ Lack of primary care resources
- ▶ Limited healthcare literacy
- ▶ Social determinants of health
- ▶ No prior experience with remote patient monitoring technology

Executive Summary

Lessons Learned

- ▶ The importance of making a financial case
- ▶ We can safely manage high acuity patients at home
- ▶ Managing chronic conditions is difficult
- ▶ It takes a village

THANK YOU

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