Eddy Visiting Nurse and Rehab Association (EVNRA) Remote Patient Monitoring Program

Sharon A. Timpano, BS, RN NE-BC

Remote Patient Monitoring RN Supervisor

Eddy Visiting Nurse and Rehabilitation Association

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Sharon A. Timpano, BS, RN NE-BC

- Sharon Timpano is a registered nurse and the Remote Patient Monitoring Supervisor at Eddy Visiting Nurse and Rehab Association.

- Sharon earned a Bachelors of Science degree in Nursing from William Paterson University in Wayne, New Jersey and has several credits towards her Masters degree. Sharon is credentialed as a Board-Certified Nurse Executive.

- Sharon has been in her current position for the past four years. Prior to that, she worked as a RN Cardiac Case Manager, a Patient-Centered Medical Home Case Manager, and a RN Unit Manager at St. Peter's Health Partners for eight years. She has also held other clinical positions throughout her nursing career.

Objectives

- Define the Remote Patient Monitoring (RPM) Program
- Discuss how the program works
- Discuss the RPM Program goals

Eddy Visiting Nurse and Rehab Association (EVNRA) Remote Patient Monitoring Program

What is Remote Patient Monitoring (RPM)?

- RPM is a comprehensive monitoring system that enables a patient to take their vitals at home and transmit the information to the EVNRA Nursing Team in real-time.
- The electronic information helps us identify any risk factors that may emerge between doctor office visits. A nurse will call to evaluate the patient, reinforce chronic disease management education, and notify the provider if an intervention is needed.
- RPM is Bluetooth enabled; it does not require internet or a landline in the home. Transmissions are via satellite.

How Does It Work?

The RPM program focuses on patients who are at risk of a chronic disease exacerbation, like congestive heart failure or chronic obstructive pulmonary disease. These diseases may require emergency care if symptoms cannot be managed at home.

RPM Program Goals

- Provide supplemental clinical support for patients with COPD or CHF active with the EVNRA.
- Provide patient education on chronic disease management and strategies to avoid exacerbations.
- Provide guidance and assist patient to assume self-management of chronic disease.
- Decrease the number of ED visits and hospital admissions for COPD and CHF patients.

Trinity Health Alert

This is a 24/7 emergency two-way voice response system that is designed to enhance the safety of seniors or disabled individuals in the Capital Region who wish to live independently in their homes. The home-based system works by immediately sending a signal to the response center when a button is pushed. A trained operator will make a direct connection to the patient to assess the situation. A family member, neighbor, or loved one is first contacted, and emergency services are dispatched if needed.

RPM Provides Service to the Following Counties:

- Schenectady
- Saratoga
- Columbia
- Albany
- Greene
- Rensselaer

RPM Diagnosis Admission Criteria

- Newly diagnosed with COPD or one of the following pulmonary diseases with exacerbation requiring PRN rescue, ED visit, or hospital admit in last 6 months:
  - COPD
  - Chronic bronchitis
  - Emphysema
- Newly diagnosed with CHF or one of the following cardiac diseases with exacerbation requiring PRN rescue, ED visit, or hospital admit in last 6 months:
  - CHF
  - Cardiomyopathy
  - Uncontrolled high blood pressure
  - Heart valvular disease
  - Pulmonary hypertension
  - Uncontrolled cardiac arrhythmias

RPM Admission Criteria

- Patient or caregiver is able to perform vital signs
- Patient is able to stand independently on scale without support
- Patient or caregiver agrees to accept phone calls from RPM Team
- Patient or caregiver agrees to actively participate in RPM Program with knowledge of program discharge once discharge criteria is met
- Patient has physician willing to sign orders

EVNRA RPM (Remote Patient Monitoring) Renewal Orders

Patient Name _____ **DOB** _____

Provider _____ MRN **#:** _____

ORDERS: 6 Month orders from _____ to _____

Purpose for RPM ☐ CHF ☐ COPD ☐ CHF and COPD

Remote Patient Monitoring (RPM) 5 days per week (unless prescheduled absence) to include all of the following: Weight, blood pressure, heart rate and pulse oximetry

Remote Patient Monitoring staff will call signing provider for any measurements out of specified clinical ranges below or based on previously modified orders received. Please enter or modify for patient specific parameters in MD specified range field below:

Measure	Standard Clinical range for Alerts	MD specified range
Systolic Blood pressure	<90 - >170	
Diastolic Blood pressure	<50 - >100	
Heart Rate	<55 - >100	
Oxygen Saturation	< 90%	
Weight (CHF) 1 day change	2-3 #	
Weight (CHF) 1 week change	4-5 #	

Physician Signature: _____ **Date:** _____

Rescue Plans

Patients participating in the EVNRA Remote Patient Monitoring Program can have PRN orders or “Rescue Plans” for COPD and CHF management.

The “Rescue Plans” are pre-signed standing orders from the Specialty or Primary Care Providers that can be facilitated immediately by the RPM Team.

The patient's progress is monitored daily until the exacerbation is resolved. For example, heart failure orders can start with doubling the daily loop diuretic and progress to IV infusions depending on the patient’s response to treatment.

Heart Failure Rescue PRN Orders

Patient Name: _____ Date of Birth: _____
Primary cardiologist _____ AHDC _____
Patient Start Weight _____ lbs. Target Weight _____lbs.
Day of Hospital/Rehab Discharge _____
Allergies: _____

Provider: Orders Valid for 6 Months

1. Call provider if (choose one) ☐ weight ≥ 4 lbs below start **or** ☐ weight below _____lbs.
2. Activate HF PRN Rescue Orders if weight gain ≥ 3lbs in 24 hours **or** weight gain of ≥ 5lbs in 1 week
3. Additional criteria may be added to weight gain for HF PRN Rescue Orders activation if desired:
   ☐increased shortness of breath, ☐increased dyspnea on exertion, ☐increased swelling of face or extremities

Orders:

1. Install Remote Patient Monitor for daily weight, BP, Pulse and oximetry monitoring
2. 2gm Na+ diet or _____ diet.
3. Daily Fluid restriction: No Restriction _____ 1500 ml _____ 1800ml _____

RPM RN - notify provider of initiation of HF PRN Rescue Orders

Diuretic Protocol

Step A	1. Please administer_____ **OR** 1. Double daily oral loop diuretic dose or increase to maximum daily dose if doubled dose exceeds maximum. If already at maximum dose, call provider. (Max daily doses are: furosemide 320 mg; bumetanide 10 mg; torsemide 200 mg). 2. Give additional Potassium Chloride _____meq with additional diuretic. 3. If weight the next day is decreased by ≥ 2 lbs. continue increased diuretic dose until start weight is reached, then have patient resume usual dose of diuretic. Notify provider of outcome. 4. If weight the next day is decreased by < 2 lbs. continue increased diuretic dose, follow below orders and notify provider _____ Add metolazone 2.5mg for _____ days _____ Add metolazone 5mg po for _____days _____ CHHA referral for IV Diuretic administration
Step B	1. Recheck vital signs and weight 24 hours after diuretic administration and daily 2. RPM RN to notify provider of outcome of the HF PRN Rescue 3. Inquire if any blood work is needed after HF Rescue competition

Provider Signature: _____ **Provider Name:** _____ **Date:**_____

For questions call Remote Patient Monitoring Supervisor Sharon Timpano RN, BSN, phone # 518-270-1340 or call RPM Office 518-270-1183

Revised 3-9-22

COPD PRN Rescue Orders

Please check each order box that you want initiated. Orders not checked will not be Implemented.
Any Additions, Deletions, or Strike-Outs Require a Practitioner's Initials.

Patient Name: _____ DOB: _____

Allergies: _____

Primary Care Physician for Home Care Orders: _____

Titrate 02 to a target sat of _____%

COPD Rescue Orders:

☒ Referral to Remote Patient Monitoring. Following installation nurse to educate patient/caregiver on equipment.

☒ Instruct patient/caregiver to recheck vital signs at 6 and 24 hours after protocol activation

☒ Activate COPD Rescue Orders for increased shortness of breath and productive cough

☒ COPD Protocol Medications:

Start Prednisone: _____mg Frequency/duration:_____ taper: Take ___mg for __days, then take ___mg for ___ days, then take ___mg for ___days, then take ___mg for___days.

_____

Start Antibiotic: (first round only, contact provider for abx order with each exacerbation)

☐Bactrim ____mg, Frequency/duration: _____, ☐ Levaquin _____mg Frequency/duration: ____
☐Doxycycline ____mg, Frequency/ duration: _____, ☐Floxin ____mg Frequency/duration: _____
☐ Amoxicillin _____mg, Frequency/duration: _____, ☐Cipro ____mg Frequency/duration: _____
☐Augmentin ____mg, Frequency/ duration: _____, ☐ Avelox ____mg Frequency/duration: _____
☐Clarithromycin ____mg, Frequency/duration: _____,☐Other: _____
☐Azithromycin ____mg, Frequency/ duration: _____

☐ Schedule a follow up appointment with the physician in _____.
☐ MDI with Spacer: _____
☐ ProAir Respiclick (NO SPACER): _____
☐ Nebulizer: _____
☐ Other: _____
_____

Notify provider when protocol activated. Discuss with MD the follow up plan for patient including SNV

Physician's Signature _____Date: _____ Time: _____

Physician's Name (Please PRINT CLEARLY): _____

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Medical Associates

Heart Failure Zones:

Warning Signs and Symptoms

Every Day

- Weigh yourself in the morning before breakfast and write your weight down
- Take your medicine the way it is prescribed by your physician(s)
- Check for swelling in your feet, ankles, legs and stomach
- Eat low salt foods
- Balance activity with rest periods

Which Heart Failure Zone are you today? Green, Yellow or Red

Green Zone

ALL CLEAR! This zone is your goal. Your symptoms are under control.

You have:

- No shortness of breath
- No weight gain more than 2 pounds (Your weight can change 1 or 2 pounds some days)
- No swelling in your feet, ankles, legs and stomach
- No chest pain
- Able to do usual activities

Yellow Zone

CAUTION!!! This zone is a warning!

Call your home care nurse at _____ or

Call your heart failure doctor at _____ (if you do not have home care).

- A weight gain of 2 to 3 pounds in 2 to 3 days or 4 to 5 pounds in a week.
- More shortness of breath
- More swelling in your feet, ankles, legs and stomach
- Feeling more tired or lack of energy
- Dry hacking cough
- Dizziness
- Feeling uneasy, you know something is not right
- It is harder for you to breathe when lying down or sleeping sitting up with more pillows
- Chest pain or heaviness
- Your symptoms indicate you may need an adjustment in your medications

Red Zone

EMERGENCY!!!

Go to the Emergency Room or Call 911 if you have any of the following:

You have:

- Struggling to breathe or unrelieved shortness of breath while sitting still
- Chest pain not relieved or re-occurs after taking 3 nitro tablets
- Have confusion or can't think clearly

St Peter's Health Partners
Medical Associates

COPD

Every Day	• Take daily medicines/inhalers • Use oxygen as prescribed • At all times avoid cigarette smoke, inhaled irritants • Continue regular exercise. Eat a healthy diet. Drink plenty of fluids. • Get plenty of rest. Reduce excess stress.
Green Zone	**ALL CLEAR! You are at goal when in this zone and are considered stable.** • Usual activity and exercise level • Usual amounts of coughing/phlegm/mucus • Sleep well at night • Appetite is good or normal for you • No need to use rescue inhalers
Yellow Zone	**CAUTION!!! Call your Doctor or Nurse if...** • More breathless than usual • More coughing than usual • Increased or thicker phlegm/mucus or a change in color of phlegm/mucus • Feel like you have a "chest cold" • Using your quick relief inhaler/nebulizer more often • Use oxygen if ordered by your doctor: _____ • Less energy for daily activities • Trouble walking or weakness • Not able to do any activity because of breathing • Rescue medicine is not helping your breathing • You have to increase the number of pillows needed to sleep or need to sleep in a chair • Temperature of 101 degrees or more
Red Zone	**EMERGENCY!!! Call 911 or have someone take you to the Emergency Room!!** • Severe shortness of breath/wheezing/chest tightness at rest or after taking medications/treatments • Fever or shaking chills • Feeling increasingly confused or very drowsy • Headaches with irritability • Chest pain • Coughing up blood • Your lips or fingernails are blue

Key Contacts- Fill in numbers for:
Primary Physician: _____
Specialist: _____
VNA: _____
Other: _____
_____

RPM Equipment

A hub console will be placed in the home with some, or all, of the relevant devices: blood pressure cuff, pulse-oximeter, and/or a weight scale.

The patient will use the equipment as instructed in their daily care plan. The information is then sent electronically to the RPM Nursing Team who monitors readings as they come in. If any of the readings warrant a concern, a clinical team member will contact the patient.

Eddy Visiting Nurse & Rehab Association

St Peter's Health Partners

Remote Patient Monitoring User Guide:

Cellular Base Unit

Pulse Oximeter

(Andes fit Health) ADF-806

Blood Pressure Cuff

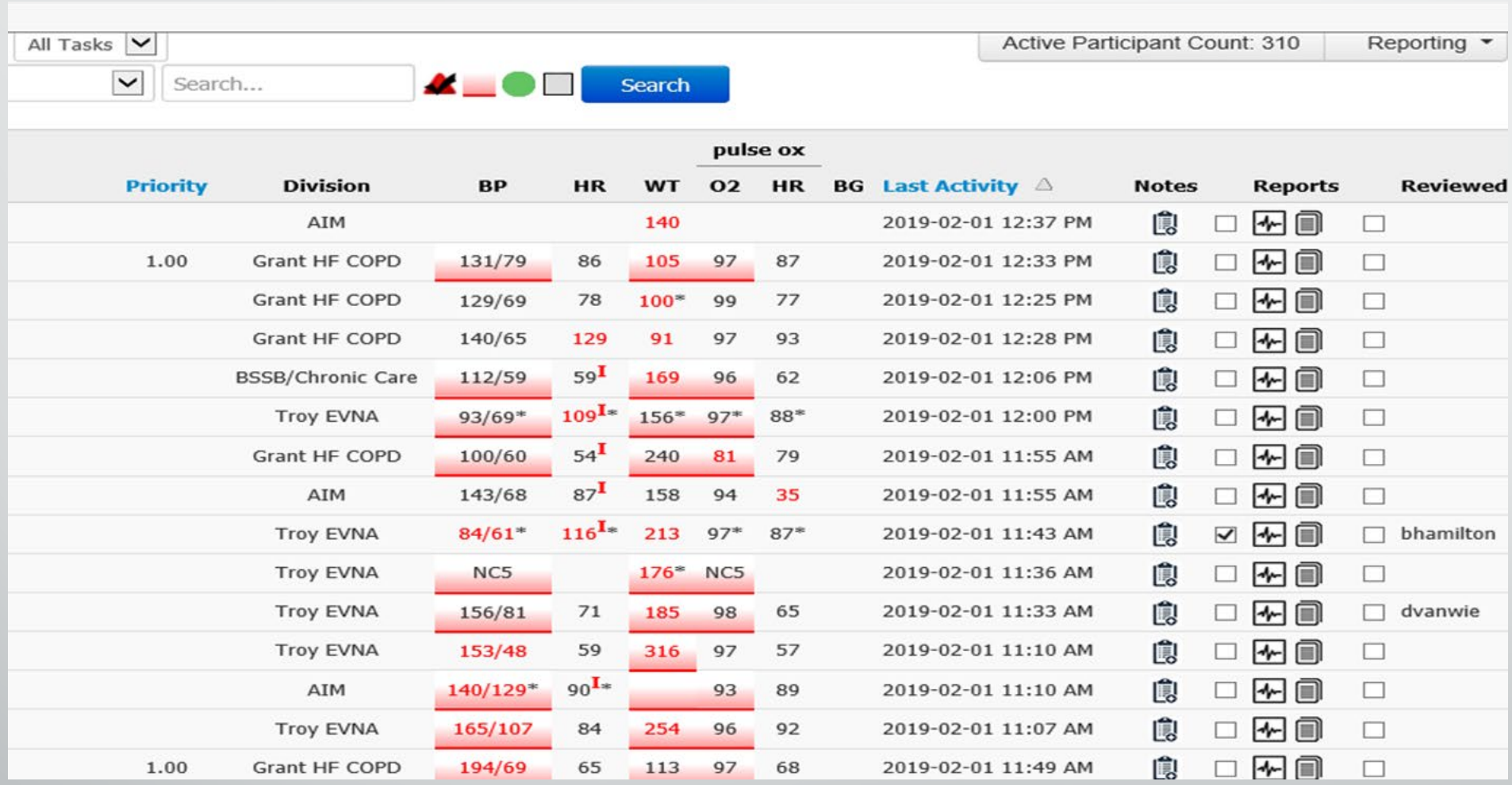
(Indie Health) 51-1490

Weight Scale

(Andes fit Health) ADF-8825

(AND) UC-352BLE

View of RPM Alert Board



Priority	Division	BP	HR	WT	pulse ox O2	pulse ox HR	BG	Last Activity	Notes	Reports	Reviewed
	AIM			140				2019-02-01 12:37 PM			
1.00	Grant HF COPD	131/79	86	105	97	87		2019-02-01 12:33 PM			
	Grant HF COPD	129/69	78	100*	99	77		2019-02-01 12:25 PM			
	Grant HF COPD	140/65	129	91	97	93		2019-02-01 12:28 PM			
	BSSB/Chronic Care	112/59	59I	169	96	62		2019-02-01 12:06 PM			
	Troy EVNA	93/69*	109I*	156*	97*	88*		2019-02-01 12:00 PM			
	Grant HF COPD	100/60	54I	240	81	79		2019-02-01 11:55 AM			
	AIM	143/68	87I	158	94	35		2019-02-01 11:55 AM			
	Troy EVNA	84/61*	116I*	213	97*	87*		2019-02-01 11:43 AM	☑		bhamilton
	Troy EVNA	NC5		176*	NC5			2019-02-01 11:36 AM			
	Troy EVNA	156/81	71	185	98	65		2019-02-01 11:33 AM			dvanwie
	Troy EVNA	153/48	59	316	97	57		2019-02-01 11:10 AM			
	AIM	140/129*	90I*		93	89		2019-02-01 11:10 AM			
	Troy EVNA	165/107	84	254	96	92		2019-02-01 11:07 AM			
1.00	Grant HF COPD	194/69	65	113	97	68		2019-02-01 11:49 AM			

RPM Patient Discharge Criteria

- Patient is independent in performing daily weight and vital signs and has acquired appropriate monitoring equipment for personal use after RPM Discharge
- Patient demonstrates competence using Zone sheet to manage chronic disease and can repeat reportable signs/symptoms and actions that will need to be taken
- Patient has not had any medication dose changes made due to vital signs or weight
- Patient has not had an exacerbation requiring rescue, ED visit, or hospital admit in last two months
- Patient noncompliant/uncooperative or the environment is no longer safe
- Patient requests services be discontinued
- Patient expired

Payers that cover RPM as of 6/13/23	
Medicare	Medicare
BC/BS	BC EMP MA
	BS ASCEND
	BS AUTH
	BSNENY
	BSSB-MC
CDPHP	CDPHP
	CDPHP MC
	CDPHP MA
MVP	MVP
	MVP MA
	MVP MC
	MVP ESSENTIAL
	CIGNA - CTGLIC
VNS	VNS HEALTH
NASCENTIA	NASCENTIA HEALTH OPTIONS
	NASCENTIA
Fidelis	FIDELIS MA
	FIDELIS MLTC
	FIDELIS MC
	FIDELIS DUAL

RPM as Community-Based Service Payers

- **CDPHP**: Coach referrals only for COPD patients for 30 days after hospital or facility discharge without CHHA; coach RN will place referral after patient visit
- **Blue Shield Senior Blue (BSSB), BSNENY, Highmark**: Stand alone RPM
- **Nascentia:** With authorization
- **Fidelis**: With authorization
- **Private pay:** $90 per month, including THA (THA alone is $31 per month)

RPM Data Discussion

- The RPM Program was created with support from the Eddy Foundation Grant in 2018.
- Working hypothesis: high risk patients who are proactively enrolled in the RPM program would experience less emergency department visits and be less likely to be admitted and readmitted to a hospital compared to when they are not enrolled in the program.
- RPM impact was assessed by examining IHANY ACO claims data of enrolled patients related to all-cause ED visit, hospital admission rates, and total cost of care.
    - The RPM team was not able to get consistent claims data to support this theory.
    - The decision was made to use the US National Library of Medicine National Institutes of Health (US NLM/NIH) hospital admission rates as a baseline to monitor program effectiveness.
- The US NLM/NIH reports the following 30-day readmission rates:
    - Hospitalized for COPD patients 22.6%.
    - Hospitalized for CHF patients 23%.
- The following data demonstrates that the hospital admission rate for heart failure patients consistently remained below the national average. The COPD patients proved to be more challenging. The RPM team has noted that this patient population experienced symptoms of a COPD exacerbation before changes in their VS were noted.

EVNRA Remote Patient Monitoring (RPM) Heart Failure/COPD Grant with Rescue Orders

	Qtr 1 2020	Qtr 2 2020	Qtr 3 2020	Qtr 4 2020	Qtr 1 2021	Qt2 2 2021	Qtr 3 2021
Albany Assoc in Cardiology							
Number of pts monitored	66	62	61	58	46*	41	36
Number of ACO pts	39	40	42	40	29	27	22
Number HF Rescue Orders	36	32	30	28	25	19	15
HF Rescue activations	9	21	15	5	8	3	4
Total hospital admits	6 (9%)	5 (8.1%)	8 (13.1%)	6 (10.3%)	5(10.9%)	5 (12.2%)	1 (2.8%)
Total disease related admits	3 (4.5%)	1 (1.6%)	6 (9.8%)	3 (5.8%)	4(8.7%)	3 (7.3%)	1 (2.8%)
Pulmonary Critical Care							
Number of pts monitored	43	35	24	25	10*	8	7
Number of ACO pts	19	16	13	12	5	4	3
Number COPD Rescue Orders	0	2	2	2	1	1	1
COPD Rescue activations	0	0	0	0	0	0	0
Total hospital admits	4 (9.3%)	9 (26%)	18 (75%)	7 (28%)	1(10%)	3 (37.5%) same p	2 (28.6%)
Total disease related admits	3 (7%)	9 (26%)	10 (41.7%)	4 (16%)	1(10%)	3 (37.5%)	2 (28.6%)
SPHPMA Primary Care							
Number of pts monitored	20	24	30	29	53*	48	42
Number of ACO pts	20	24	28	29	50	44	41
Number HF Rescue Orders	1	1	2	4	5	1	1
HF Rescue activations	1	2	3	0	0	0	2
Total hospital admits	0 (0%)	3 (12.5%)	6 (20%)	6 (20.7%)	4(7.5%)	5 (10.4%)	5 (11.9%)
Total disease related admits	0 (0%)	3 (12.5%)	2 (6.7%)	3 (10.3%)	4(7.5%)	3 (6.2%)	5 (11.9%)

* please note, changes in total pts monitored per practice has changed due to pts being transitioned to PCP as the signing MD. The Specialty practicies continue to care for COPD/CHF exacerbations and provide Rescue Orders.

*** HF related admits natrionally 23%, COPD related admits nationally 22.6%**

EVNRA Remote Patient Monitoring (RPM) Heart Failure/COPD Grant with Rescue Orders

	Qtr 3 2021	Qtr 4 2021		Qt2 1 2022	Qtr 2 2022
Albany Assoc in Cardiology			**All HF Patients**		
Number of pts monitored	36	36		63	46
Number of ACO pts	22	20		40	36
Number HF Rescue Orders	15	16		18	17
HF Rescue activations	4	5		11	0
Total patients reviewed and discharged from program				9	46
Total hospital admits	1 (2.8%)	2 (5.6%)		8 (12.7%)	4 (8.7%)
Total disease related admits	1 (2.8%)	1 (2.8%)		2 (3.8%)	2 (4.3%)
Pulmonary Critical Care			**All COPD Patients**		
Number of pts monitored	7	7		14	14
Number of ACO pts	3	3		9	9
Number COPD Rescue Orders	1	1		2	2
COPD Rescue activations	0	0		0	0
Total patients reviewed and discharged from program				0	14
Total hospital admits	2(28.6%)	4(57.1%)		3(21.4%)	3(21.4%)
Total disease related admits	2 (28.6%)	2 (28.6%)		1 (7.14%)	2 (14.3%)
SPHPMA Primary Care					
Number of pts monitored	42	39			
Number of ACO pts	41	37			
Number HF Rescue Orders	1	1			
HF Rescue activations	2	2			
Total hospital admits	5 (11.9%)	6 (15.4%)			
Total disease related admits	5 (11.9%)	3(7.7%)			

* please note, effective Jan 2022, pt data is being collected by diagnosis, not by physician group

*Effective Feb 2022- Grant pts are being reviewed and discharged from the Grant Program

*** HF related admits nationally 23%, COPD related admits nationally 22.6%**

- The EVNRA Foundation Grant ended July 1, 2022.

- IHANY supported the RPM Program for ACO patients with COPD and CHF beginning July 1, 2022 to June 30, 2023. Presentations were made to SPHPMA Physician Specialty groups, community healthcare workers, facility liaisons, and medical associate RN case management. Unfortunately, challenges were incurred in identifying a large enough cohort of ACO members. Given financial challenges faced by IHANY, they were unable to support continued funding of the RPM Program for 2024.

Barriers to Growing IHANY ACO RPM Program

- Covid-SPHPMA RNCM were primary referral source prior to Covid. This group underwent many changes to support patient care during the Covid Pandemic including re-deployment, furlough, and team structure changes.
- Physicians expressed a concern that program will create more phone calls from RPM team to already overburdened offices.
- Specialty physicians would not sign RPM orders for install, they preferred the primary provider to sign. The primary providers did not want to manage specialty treatment plans.
- Physician orders received didn't include completed rescue order forms.
- Lack of referrals from community sources and physician offices.
- Patients reluctant to commit to four-month daily monitoring program.

RPM Data 1st Quarter 2024

For financial reasons, the RPM team has been reduced by 1.5 FTE's this past 1st Quarter 2024. The RPM Census has decreased to 200 patients to accommodate this change. The RPM Vendor Connects America is creating a report to help identify the hospital re-admission rate for specific diagnosis. Below is a snapshot of the last quarter's RPM activity. It is our belief that an intervention by an RPM team member contributes to the organizational goal of facilitating excellent patient care and keeping patients out of the hospital.

	Number of Patient Alerts Reviewed	Critical alerts requiring MD call	Medication adjustments made due to alert	VS Log faxed to MD for review	RPM facilitated clinician visit or weekend f/u	Pt sent to Urgent Care, Same Day Clinic or MD Office	Pt sent to ED or Hospital for evaluation	Additional Outcomes/Comment
January 2024	7697	136	29	121	6	7	5	1- f/u BW 8- alert parameter changes 1- pt ran out of script
February 2024	4858	90	22	72	3	5	0	5- alert parameter changes 5- pt had medication issue
March 2024	3700	153	29	203	7	15	7	1- f/u BW 1- alert parameter changes 1- SN REF ADDEDD 2- pt not taking MEDS correctly

THANK YOU! ANY QUESTIONS?