

OPTIMIZING HEART FAILURE PATIENTS

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DISCLOSURE:

In the past 12 months, received speaker honorarium from Novartis and Baer

Heart Failure in 2019

United States

Hospitalization

> 1,100,000 per year

> 3,000,000 contributor

5 days average length of stay

25% all cause readmission within 30 days

50% in 6 mos

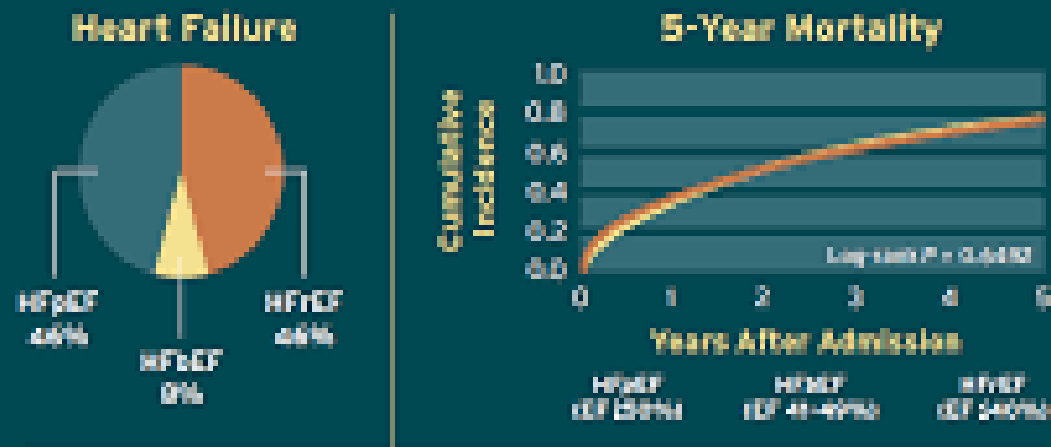
Expense

Total medical costs for HF are projected to increase to **\$70B** by 2030, a 2x increase from 2013

50% costs attributed to hospitalizations

\$244 for every tax payer (AHA paper)

5-Year Outcomes in Patients Hospitalized with HF with Preserved, Borderline and Reduced EF



Outcomes - 5-Year Event Rates (%)

	Mortality	Readmission	CV Readmission	HF Readmission	Mortality/ Readmission
HFpEF	75.3	82.2	63.9	48.5	96.4
HFbEF	75.7	85.7	63.3	45.2	97.2
HFrEF	75.7	84.0	58.9	40.5	97.3

Reduce mortality

Additive

- 35% 2 year mortality
- 8% with ACE/ARB Aldactone
 - Beta blocker, CRT, ICD
- 5-6% ARNI

Mortality Reduction

- 35%
- 27%
- 20%

However meds need to be titrated to highest dose closest to target doses (every 2 weeks) until you say uncle 😊

Every hospitalization increases mortality





The CardioMEMS™ HF System



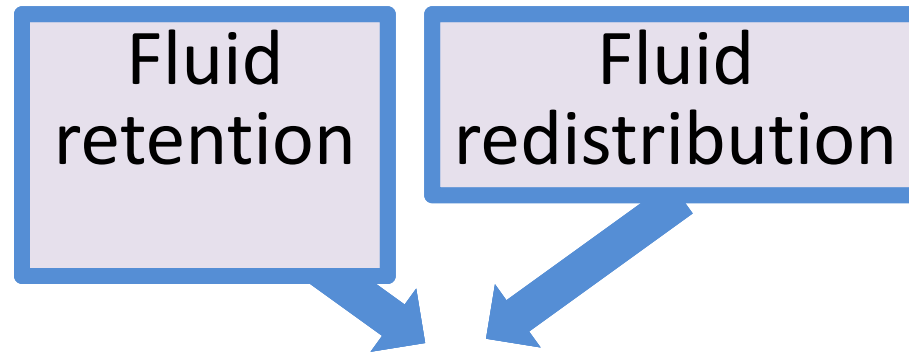
The only Wireless HF System approved by the FDA.

Wireless HR Monitoring: Choosing the RIGHT Patient

- NYHA Class III
 - Medical record survey
 - 6 minute walk distance
- Frequent “wet/dry” dance contestant
- Able to adjust medications as directed
- Optimized on medical/device therapy
- Able and willing to adhere to monitoring schedule



Pathogenesis of Worsening Heart Failure



Increased pulmonary artery pressures



Worsening dyspnea leading to hospitalization

Screening

INDICATIONS

- The Wireless HF Monitoring is indicated for patients with:
 - NYHA Class III
 - 1 heart failure hospitalization in the past 12 months

CONTRAINDICATIONS

- The Wireless HF Monitoring is contraindicated for patients with:
 - Patients with inability to take dual antiplatelet or anticoagulants for one month post implant

The following patients may not be appropriate for the implantation of Wireless HF Monitoring

- Patients with an active infection
- Patients with a history of recurrent deep vein thrombosis or pulmonary embolism
- Patients who are unable to tolerate right heart catheterization
- Patients with an estimated glomerular filtration rate $<25\text{ml/min}$ who are unresponsive to diuretic therapy or chronic renal dialysis
- Patients with congenital heart disease or mechanical right heart valve
- Patients with known coagulation disorders with a hypersensitivity or allergy to aspirin, and/or Clopidogrel
- Patients who have undergone implantation of CRT-D within the past 3 months
- Patients with a body mass index (BMI) $>35\text{ kg}$ and chest circumference $>165\text{ cm}$

Talking to Patients and Caregivers about Wireless HF Monitoring

- Use the first hospitalization visit to discuss in depth.....
 - The importance of staying euvolemic and out of the hospital
 - The benefits of pressure management
 - Explain exactly what the patient's responsibilities will be
 - Show and tell
 - Use of PA pressure monitoring along with guideline-directed medical therapy will
 - Help care providers to stay ahead of heart failure, often times before symptoms appear
 - Optimize quality of life
 - Help reduce hospitalization

Where to Find Candidates with NYHA Class III Population:

- During a hospitalization for acute decompensated heart failure
- During a clinic visit
- After diagnostic test that identifies the patient as a good candidate (i.e. fluid volume overload was previously undetected)
- By referral from community or partner hospitals

HFpEF: Despite its prevalence, significant clinical data directed at treatment is lacking

- Aggressive management of the underlying condition and the comorbidities that may worsen disease and cause disease progression
- Control of blood pressure and heart rate
- Normalization of PCWP
- Guided hemodynamic therapy
- Volume management is first line

62 year old female with ICM LVEF 25%

- Admitted August and October 2016 in ADHF
- Metoprolol succinate 50mg, lisinopril 5mg, spironolactone 12.5mg, lasix 80 BID, atorvastatin 20mg
- Weight 282 BP 90/50-HR 80s, BUN 60/Cr 2.0, Na 132
- On Lasix gtt 10/hr BP stable Na 126 BUN 80/cr 2.5
- RHC 11/8 RAP 18, PAP 63/36/45, PCWP 36, SVR 1700, CI 2.0
- Diuresed 20 pounds, discharged to home, labs essentially unchanged
- Outpatient CMEMS 11/18/16
- PAP 61/33/43, PWP 33 CI 1.8

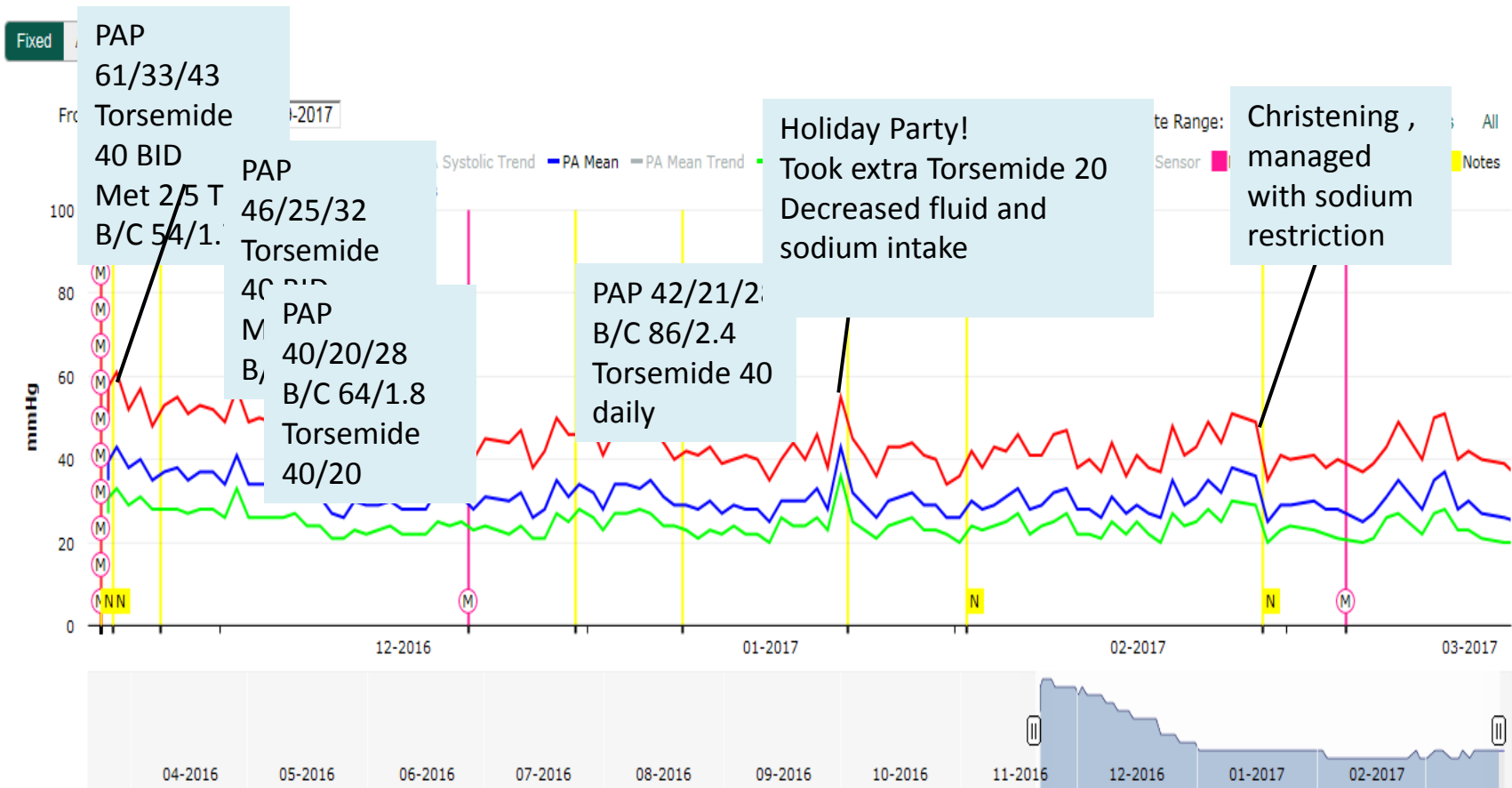
62 year old female with ICM LVEF 25%

62 yo , Female , Ischemic , EF 25% , Phone 1-973-6169651

PA Diastolic Pressure Threshold: Lower 8 mmHg, Upper 24 mmHg

Right Heart Cath Implant Values

Last Reviewed: 02-28-2017
Last Billed: ---



HEART FAILURE CLINIC



At the McLaren Bay Region Heart Failure Clinic, our team of highly experienced physicians and other medical professionals are dedicated to working with individual patients throughout their journey. Our healthcare professionals understand the associated anxieties patients experience when faced with the diagnosis of heart disease and will help them understand and manage the symptoms of their specific diagnosis. Our purpose is to educate patients and their families about this condition, the purpose of medications, the impact of certain diets and foods and the importance of monitored physical activity. Our primary goal is to improve the patient's condition and avoid repeated hospitalization.

SIGNS OF HEART FAILURE INCLUDE:

- Shortness of breath (especially if it gets worse when lying down)
- Persistent coughing or wheezing
- Tiredness, fatigue
- Lack of appetite, nausea
- Swelling of legs and abdomen
- Weight gain
- Decreased ability to perform daily tasks

COMMON CAUSES OF HEART FAILURE:

- Heart attack (myocardial infarction)
- High blood pressure (hypertension)
- Narrowing of heart's arteries (coronary artery disease)
- Heart valve disease, viral infections, alcohol/drug abuse, diabetes, and severe lung disease

TO MAKE A REFERRAL TO THE HEART FAILURE CLINIC, PLEASE CONTACT:

McLaren Bay Heart & Vascular
1900 Columbus Avenue
4th Floor South Tower
Bay City, MI 49706
Phone: (989) 694-3278
Hours: 8:30 a.m. - 4:00 p.m.

HOW TO REDUCE HOSPITALIZATIONS WITH CARDIOMEMS:

Many people with a heart failure diagnosis have symptoms that require monitoring day and night, which usually means hospitalization.

CardioMEMS Pulmonary Pressure Monitoring device allows our team to continually monitor a person's pressures without a hospital admission. The device is small and can be implanted in our cath lab in an outpatient procedure.

In a heart failure patient, pressure elevation in the lungs is an early indicator that heart failure symptoms will likely follow. Through CardioMEMS, an alert can be sent to our office indicating that a change in medication may help prevent heart failure symptoms and a hospital admission. Patients who have CardioMEMS monitoring have fewer hospitalizations, giving them a better quality of life.



KAMIL MASRI, DO
Cardiology



SUE HAFER, NP-C
Certified Nurse Practitioner
Cardiology



DOING WHAT'S BEST.®

Thank you!

