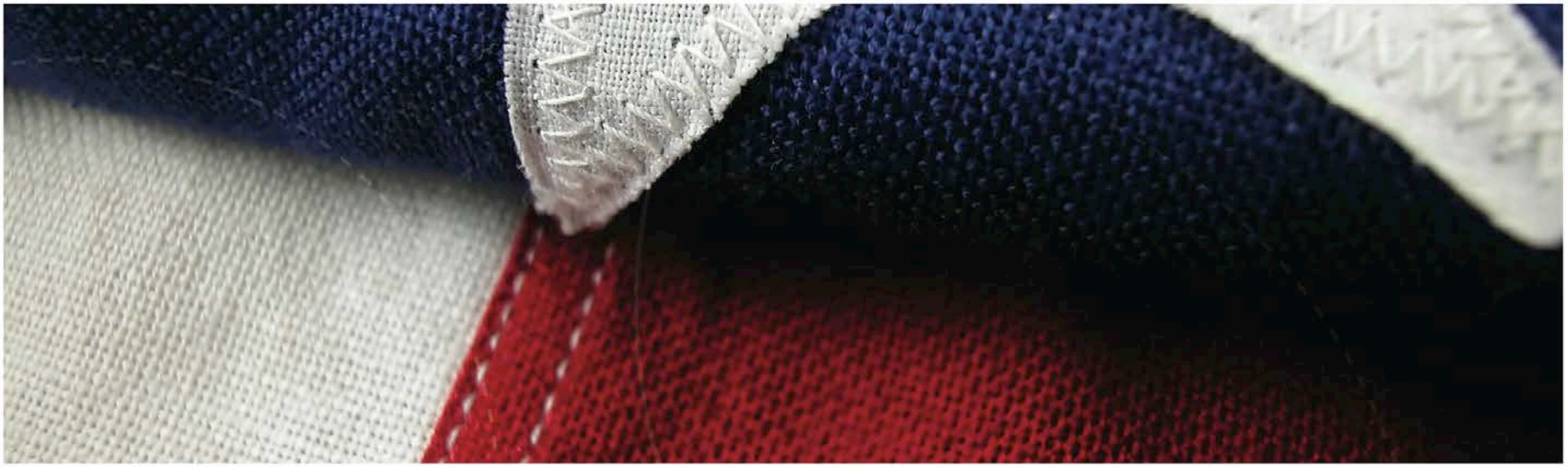

Expanding In-Home **C**are **O**ptions for **G**eriatric Patients (COG-Impact): The impact of a patient/nurse-directed flexible diuretic protocol

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VA HEALTH CARE Defining EXCELLENCE in the 21st Century

Funding Source

Funding support:

- T-21 Patient Centered Alternatives to Institutional Extended Care (NILTC) and GRECC
  - VA funding source FY 2013 and 2014

Gaps in HF Care

- Increased risk of 90 day morbidity and mortality when admission for acute decompensated HF is required
- Enhanced in-home services for heart failure symptoms identified as a need by the Cleveland VA Heart Failure Steering Committee and PACT T21 GRECC grant in 2012: IMPACTS Program
- COG program was a quality improvement project funded in FY 2013-14 to bridge this gap

Gaps in HF Care

- PRN diuretic regimens are often recommended by HF providers
  - If you gain 2 lbs overnight or 3 lbs in 3 days, take an extra water pill
  - Take an additional dose of diuretic as needed for weight gain
  - If you gain weight, call your provider
- What do patients really understand?
- Using concrete weights and target weight range

Concrete Diuretic Adjustment Instructions

- Enroll patients HBPC and/or telehealth to have them demonstrate daily weight monitoring
- Develop a patient-specific diuretic protocol "SLIDING SCALE DIURETIC" based on patient's daily weights
- Created by HF providers and given to the patient
- HBPC/telehealth act as a support to remind patient to implement dose changes when needed and re-educate on the protocol if needed

Program Background

- Joint program between cardiology, pharmacy, HBPC, and home telehealth.
- Provides enhanced heart failure education to HBPC and telehealth staff, and direct access to heart failure specialists
- Gives HBPC/telehealth staff and patients specific guidance on early identification and intervention of HF symptoms

Patient Centered – Goal Aligned

- Program is patient-centered and individualized to each patient's diuretic requirement
  - Provides "front-loaded" nursing support with goal of educating patient in self-management skills with his/her own data over time
- Aligns specialty care with home telehealth and HBPC services to provide additional options for in-home care

WEIGHT MANAGEMENT TOOL FOR PATIENTS WITH HEART FAILURE

Patient name and Last 4: _____ _____ Date:_____

Nurse Name & Phone Number: _____ _____ Primary Care Provider & Phone Number:_____

HF Provider & Phone Number: **Julie Gee, Nurse Practitioner 216-791-3800 extension 4898**

After hours VA help nurse line: 1-888-838-6446

My Usual Diuretic (Water Pill): _____Furosemide_____

☆ Weigh Yourself Every Morning After Going to the Bathroom and Follow the Chart Below ☆

If your weight = _192___lbs or less → For today: Do not take your water pill and **call HF Provider**

**** RED ZONE****
BELOW TARGET

If your weight is between _193___lbs and _194____lbs → For today: **Change** your water pill dose to: _20mg once a day

BELOW TARGET

If your weight is between _195___lbs and _198____lbs → For today: You're in your **TARGET WEIGHT RANGE!** ☺

Continue your normal water pill dose of :_40mg once a day_

If your weight is between _199__lbs and _201___lbs → For today: **Change** your water pill dose to: _40mg twice a day

ABOVE TARGET

If your weight = _202__lbs or more → **Change** your water pill dose to 80mg twice a day and **Call HF Provider**

**** RED ZONE****
ABOVE TARGET

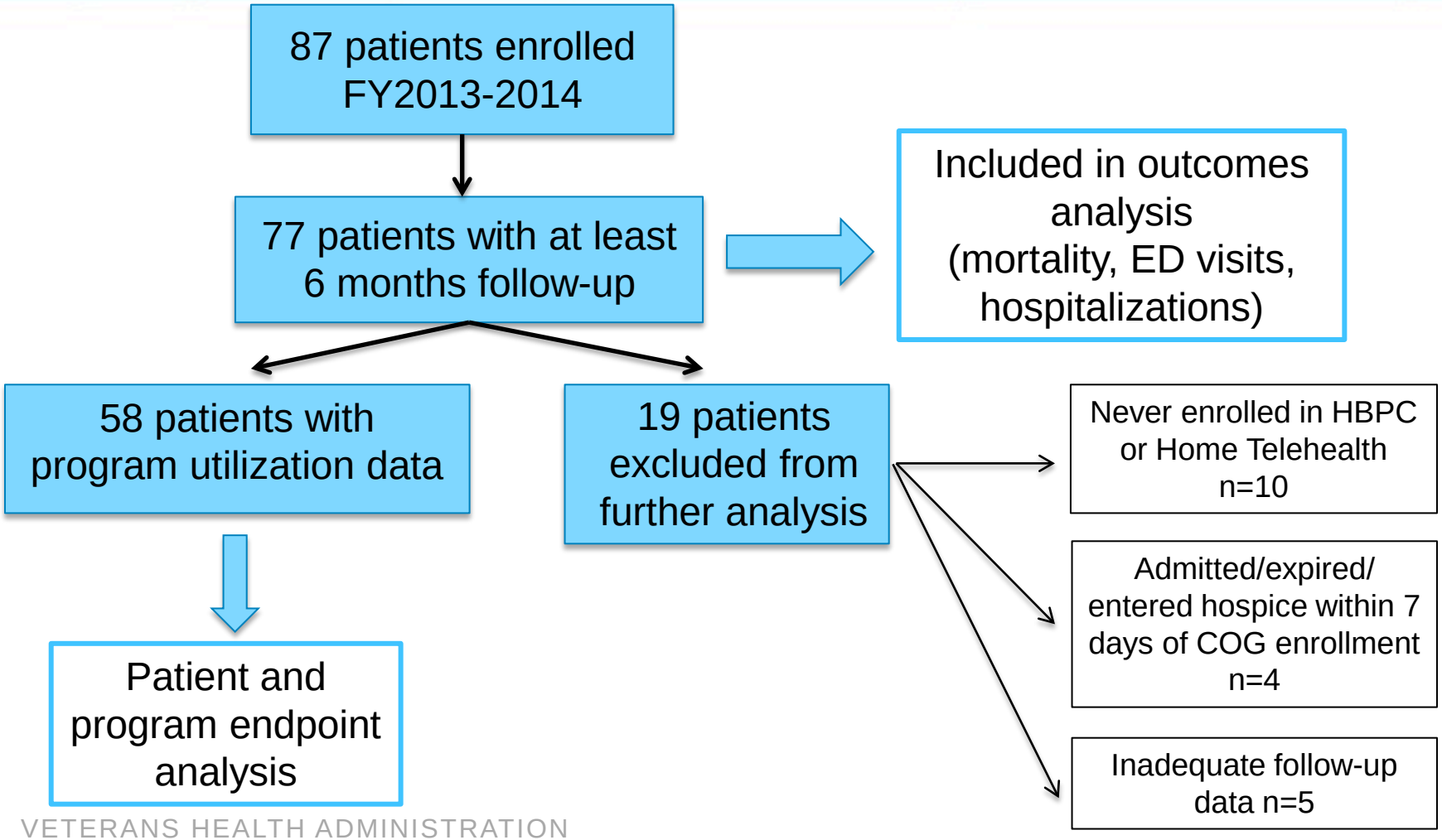
Key Program Aims

- Outcomes/Deliverables
  - Create patient and provider education tools and provider documentation templates
  - Assess impact on VA acute care utilization
    - Emergency department (ED) visits and hospitalizations 6 months prior to and following program enrollment
  - Communication between HF specialty service, patient, and HBPC/home telehealth

Documentation and Interservice Communication

- Templated note documenting patient-specific diuretic protocol
  - Provider to patient/other providers
- RX: Furosemide 40 mg tablets: Take one tablet daily or as directed based on HF IMPACT flexible diuretic protocol (30 days supply, 120 tablets)
  - Provider to pharmacy
- Home Telehealth and HBPC notes documenting weights, HF symptoms, interventions, education
  - Nursing to providers

Patient Population

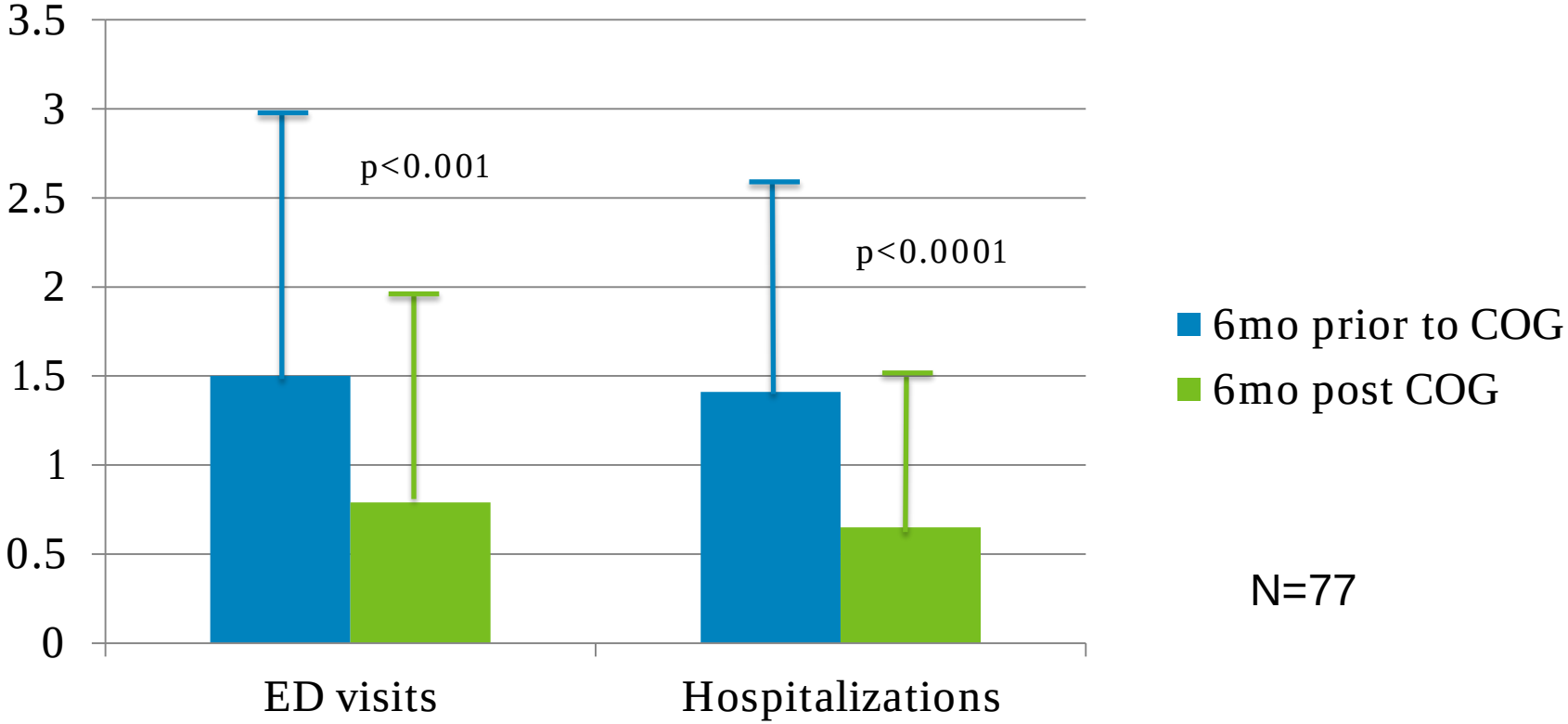


Program Demographics

- Target population: Diagnosis of HF (either preserved or reduced ejection fraction) with at least one admission in previous 12 months
- Mean age 74 $\pm$ 10 years
- 48% with EF $\leq$ 40%
- 7 patients expired (9%), including 3 patients (4%) who elected hospice services
- In-home services during enrollment
  - Both HBPC and telehealth: 55%
  - Telehealth only: 38%
  - HBPC only: 7%

Outcomes and Measures

Number of Acute Care Encounters Per Patient Prior To and Following COG Enrollment



N=77

Outcomes and Measures

	6 months prior to COG enrollment (mean±SD)	6 months post COG enrollment (mean±SD)	P value
Number of face-to-face cardiology clinic visits*	2.6±0.63	3.1±1.3	0.22
Number of telephone calls between cardiology provider and patient*	0.25±0.6	0.71±1.3	0.015
Number of home telehealth or HBPC notes where cardiology provider added as cosigner*	1.62±2.0	4.7±3.8	<0.0001

* per patient

N=58 with adequate data for program evaluation

Patient Self-Management

	6 months prior to COG enrollment	6 months post COG enrollment
Days with weights documented in telehealth* (mean±SD)	51 ± 43 N=38	55 ± 36 N=54
HBPC documentation of number of correct diuretic adjustments	n/a	6 (mean) 0-43 (range) N=36

- Median duration of COG enrollment 180 days
- Anecdotal reports of patients after COG protocol no longer active continuing to call with weight fluctuations and symptoms

Outcomes and Measures

- High patient satisfaction with program
  - Sample of 10 patients – 100% recommended program for other veterans with HF
- HBPC nurses reported increased comfort in identifying and managing HF symptoms in the home.
- Consult structure allowed for referral of patients from inpatient or outpatient providers as well as HBPC and/or home telehealth nursing staff.

Lessons Learned

- Patients with cognitive impairment were less able to manage daily weights and diuretic adjustments.
- Home telehealth enrollment was essential for long-term monitoring.
- HBPC templated SBAR note was helpful for staff education but not consistently documented in CPRS.
- Future studies may examine the effects of patient-centered protocols on self-management skills, utilization, and patient satisfaction.

Key Personnel

- Program Co-Directors: Brook Watts, MD; Sherry LaForest, PharmD
- Program Medical Provider: Julie Gee, CNP
- HBPC and Telehealth Staff:
  - Judy Slivka, RN, MSN – Director of HBPC
  - HBPC Mid-level providers
  - HBPC Clinical Pharmacists
  - HBPC RN and LPN staff
  - Home Telehealth RN staff

Patient Self-Management

- HBPC COG Nursing Discharge Assessment
- HBPC nurses and mid-level providers
- Assess patient's likelihood to continue flexible diuretic protocol and self-management skills after discharge from HBPC
  - Identified patient barriers, communication to next level of care
- Documented on 46% of eligible patients
  - 86% were felt to be likely to continue protocol independently or with telehealth support

Financial Summary

- Program is FTE neutral using existing cardiology, HBPC, pharmacy, and home telehealth staff
- Fewer ED and all-cause hospitalizations per patient in 6 months following COG enrollment compared to 6 months prior to enrollment
- Cooperation and ongoing engagement from multi-disciplinary services as program and documentation tools developed and rolled out
- Positive feedback from HBPC and home telehealth staff and patients support continuation