

Education as a Heart Failure Intervention: What Providers Taught Patients in One Hospital Setting

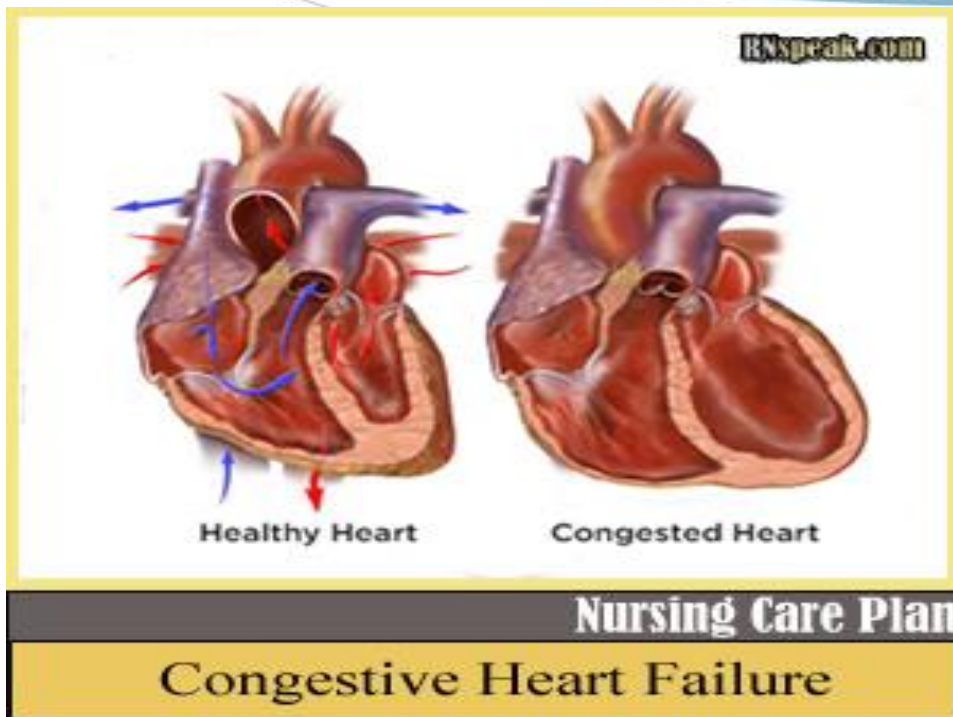
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Learning Objectives

- ◆ Describe heart failure research
- ◆ Present observations/findings
- ◆ Provide summary recommendations
- ◆ *I, Theresa Galakatos, attest that no relevant financial relationship exists between me and any commercial supporting entity which would present a conflict of interest or commercialize the presentation content.*

Heart Failure



- A healthy heart is a strong, hard working pump
- In HF, the heart does not pump as well as it should

Heart Failure As Epidemic

- ◆ Over 5 million people in U.S. have heart failure (HF)
- ◆ Projected health care costs of \$44.6 billion by 2015

Education as a HF Intervention

- 💧 Heart failure education
- 💧 Patient experience
- 💧 Coordination of care
- 💧 Heart failure guidelines



Study Aims

- ◆ To determine if the HF instructional content reflects use of evidence based AHA Guidelines
- ◆ To identify if any HF education is provided that differs from the Guidelines
- ◆ To identify HF content that experts determine to be most critical for patients during an acute hospital stay

Methodology

- *Naturalistic Inquiry* as an organizing framework
– takes place in the field to reflect multiple variables at play
- Purposive Sampling – HF patients between the ages of 50 – 80 and in Stage 3 or 4 of the disease
- Inductive analysis

Results

- ◆ Demographics – Descriptive
- ◆ AHA Guideline Results
- ◆ Discoveries beyond AHA Guidelines
- ◆ Support by expert providers in the application setting

Patient	Primary Diagnosis	Secondary Diagnosis	Age	Gender	Race	LOS (days)	ICU (days)	Unit(s)	Admit/DC dates
A	Heart Failure	Coronary Heart Disease	64	Male	Caucasian	10	1	B & D	4/30/14 - 5/9/14
B	Heart Failure	Pulmonary Hypertension	56	Female	African American	6		A	5/2/14 – 5/7/14
C	Heart Failure	Acute Renal Failure	78	Female	Caucasian	3		D	5/13/14 – 5/15/14
D	Heart Failure	Pneumonia	52	Male	Caucasian	11	2	A	5/13/14 – 2/23/14
E	Heart Failure	Acute Bronchitis	55	Female	African American	3		B	5/16/14 – 5/18/14
F	Heart Failure	Diabetes Mellitus Type II	75	Female	Caucasian	7		B	5/19/14 – 5/25/14
G	Heart Failure	Atrial Fibrillation	54	Male	Caucasian	4		A & D*	5/25/14 – 5/28/14
H	Heart Failure	Central Retinal Artery Occlusion w/ Resolution	52	Male	African American	7		B & C**	5/28/14 – 6/3/14
I	Heart Failure	Atrial Flutter	66	Male	Caucasian	7	2	A & D	5/29/14 – 6/4/14
J	Heart Failure	Cocaine Related Chest Pain w/o Myocardial Infarction	60	Male	African American	1		B	6/6/14 – 6/6/14

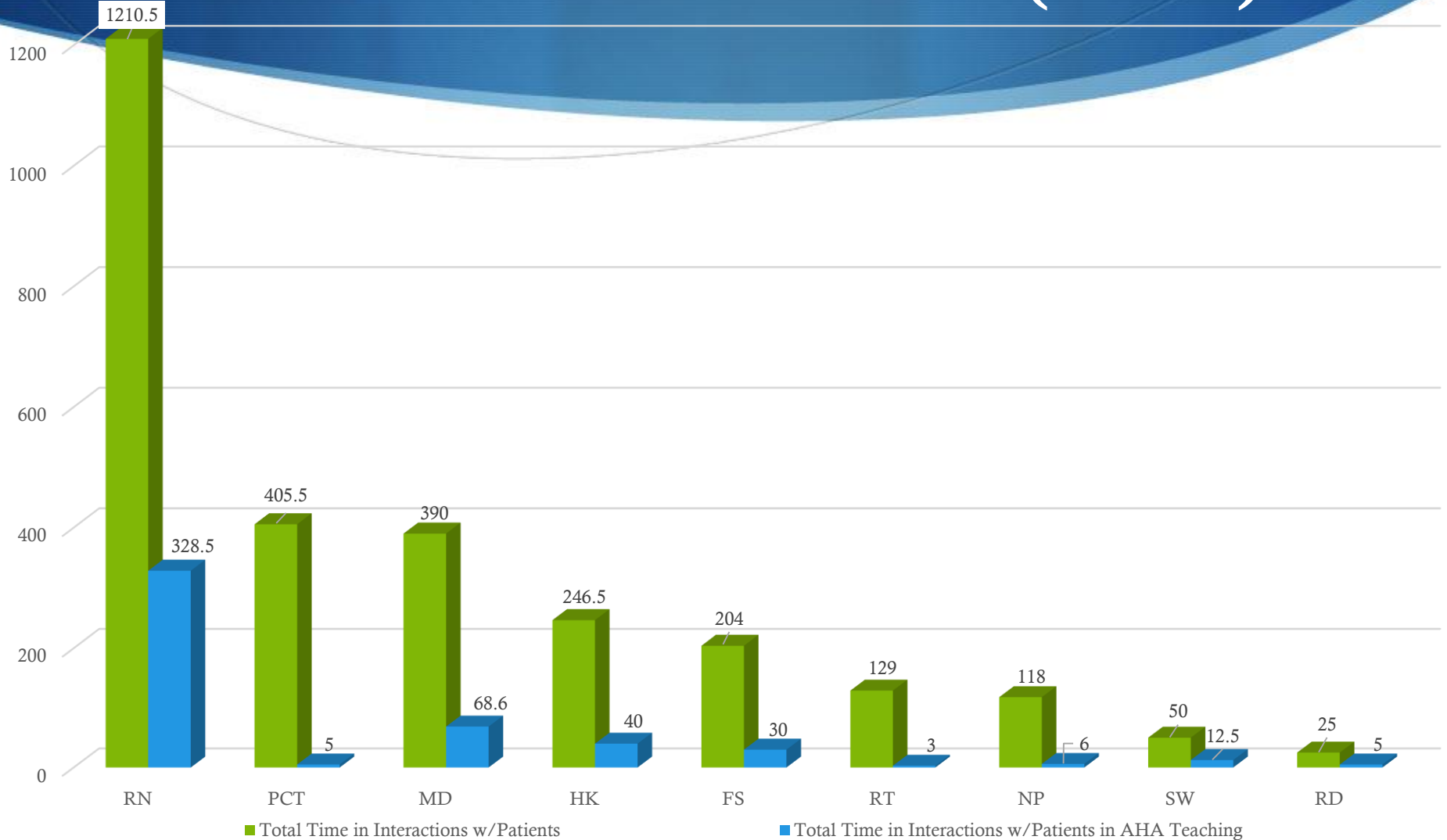
Health Care Provider	69 HCPs who provide d HFE	69 HCPs who provided HFE/ total HCP per discipline = % HCPs providing HFE per discipline	Average Age, Std Deviation, Age Range	Gender	Race
RNs	23	23/41=56%	42, 10.88, 24 - 63	Female = 23	African American = 5 Caucasian = 17 Asian = 1
MDs	23	23/25=92%	38, 20.73 26 - 74	Male = 19 Female = 4	Caucasian = 16 Asian = 7
NPs	7	7/7=100%	39, 7.16 30 - 53	Female = 7	Caucasian = 7
FS	6	6/12=50%	33, 15.53 20 - 60	Male = 3 Female = 3	African American = 6
RTs	3	3/11=27%	46, 12.98 24 - 61	Male = 1 Female = 2	Caucasian = 3
SWs	3	3/3=100%	46, 10.41 38 - 58	Male = 1 Female = 2	Caucasian = 3
RDs	2	2/2=100%	25, 2.12 23 - 26	Female = 2	Caucasian = 2
PCT	1	1/16=1%	31, 13.48 22 - 61	Female = 1	African American = 1
*HK	1	1/5=20%	45, 9.75 33 - 57	Female = 1	African American = 1

Overall Results: Time Spent by Providers in Patient Instruction

- ◆ All HF patients received some provider instruction related to HF = 911.1 minutes
- ◆ AHA HF Guidelines total time = 498.6 minutes
- ◆ Beyond Guidelines total time = 412.5 minutes

AHA Guidelines Major Topics (Bold) and Sub-topics	Rank Order and % of HF Topics Addressed w/ Patients	Total Instructional Time per Topic (min.)	HCPs Providing HF Education	
Medicines/Type & Use	10(100%) A-J	259.7	MDs = 1 - 3 minutes RNs = 1 - 19 minutes	NP = 4 minutes RT = 3 minutes
Low Sodium Diet	8(80%) A-D, F-I	68.95	FSs = 1 – 10 minutes MDs = 1 – 1.7 minutes RNs = 1.5 – 5 minutes	RD = 2 minutes PCT = 1 minute SW = 10 minutes
Follow-up Appointments	8(80%) A, B, E-J	44.7	MDs = 1 – 1.7 minutes RNs = 1 – 5 minutes	NP = 2 minutes
Exercise	3(30%) B, G, H	43	RNs = 1 - 2 minutes	HK = 40 minutes
Discharge Instructions * 6 Topics	1 (10%) F	25	RN = 25 minutes	
Daily Weights	5(50%) B, E, G-J	16.25	MDs = 0.5 – 5 minutes	RNs = 1 – 2.75 minutes
Symptom Recognition: Fluid Buildup**	4(40%) B, E, H, I	15.5	MDs = 2 – 2.5 minutes minutes	RNs = 1 – 4
Shortness of Breath**	4(40%) A, B, F, I	14.75	MDs = 0.5 – 5 minutes minutes	RNs = 1 – 2.75
Actions to Take for Weight Increase (Fluid Overload)***	1 (10%) B	3.75	RN = 3.75 minutes	
Eat Healthy****	1 (10%) E	3	RN = 2 minutes	
Risk Modification: No Smoking****	1 (10%) D	2	RD = 3 minutes	
End of Life	1 (10%) F	1	MD = 1 minute	
Cough**	1 (10%) B	0.5	MD = 0.5 minutes	
Tired/Fatigue**	1 (10%) B	0.5	MD = 0.5 minutes	

Total Time Spent by Discipline in AHA Instruction (min.)



Symptom Recognition

- ◆ A nurse asked one patient about fluid build up to verify symptom knowledge. The patient responded he had no swelling but did at one time. Core knowledge was confirmed and reinforced by the nurse
- ◆ A physician asked a patient a yes or no question about fluid build up. Yes or no questions fail to provide sufficient evidence of symptom knowledge

Activity and Exercise

- ◆ One patient mentioned to a housekeeper about “not being able to walk like in the past”
- ◆ The housekeeper talked with a patient about an exercise regimen that included how to pace oneself when walking around the block, how to consider weather elements as an exercise factor, and more

Chains of HF Instruction and Time Spent (min.)

Patient A	2	1	6	1	2	1	15	10
	1	1.5	5	8	1	2	1	1
	1	5	5					
Patient B	0.5	0.5	0.5	1	1	1	10	1
	10	1.5	1.5	2.5	2.5	40	5	10
	1.7	1.7	1.7	3.75	3.75	3.75	3.75	
Patient C	5	10	10					
Patient D	14	3	2					
Patient E	2.5	2.5	1	5	5	12	5	1
	3	8	2.5	5	2	2	2	1
Patient F	15	2.5	2.5	10	11	2	10	7
	25							
Patient G	4	4	5	5	1	1	1	3
	4	2.5	2	2	2	2	2	2
Patient H	3	3	1	2	6	3	4	4
	2	2	1	1	1	1	1	6
	1							
Patient I	3	3	19	2	2	2	2	2
Patient J	1	0.5	2.75	2.75	2.75	2.75		

Color Code:

1abcde
2abcde
3abc
4abcd
5abc

Recognition of Symptoms
 Activity and Exercise
 Medication, Type, Use
 Daily Weights
 Modify Risks Smoking Cessation

6ab
7
8
9

Diet Recommendations
 End of Life
 Follow up Appointment
 Discharge Instructions

Total Time (min.) of AHA HF Teaching by HF Patient

Patient	Total Time (min.)	Total Time for HF Education Recommended per AHA Guidelines (60 minutes)	LOS (Days)	ICU (days)	Met/Not Met
A	69.5	60	10	1	Met
B	108.6	60	6		Met
C	25	60	3		Not Met
D	19	60	11	2	Not Met
E	59.5	60	3		Not Met
F	85	60	7		Met
G	42.5	60	4		Not Met
H	42	60	7		Not Met
I	35	60	7	2	Not Met
J	12.5	60	1		Not Met

Instruction Beyond AHA Guidelines: Aim II

Current Plan of Care (CPOC)

- ◆ Patients received daily instruction on CPOC
- ◆ Total time = 412.5 minutes
- ◆ MDs spent the most time providing instruction on CPOC

Total Time (min.) Teaching CPOC per HF Patient

Patient	Time (min.) in Current Plan of Care	LOS (Days)	ICU (Days)
A	142.5	10	1
B	11	6	
C	28	3	
D	73	11	2
E	21	3	
F	6	7	
G	16	4	
H	73	7	
I	33	7	2
J	9	1	
TOTAL	412.5	59	5

Expert HCPs Survey: Aim III

- Responses to the most important patient education instruction:

Medication (n=7, 58%)

Diet compliance (n=8, 67%)

- *Benefits of HF instruction*
- *Issues and trends in managing HF*
- *Therapeutic alliance and new technologies*

What Did I Learn?

- ◆ Not all AHA Guidelines were covered
- ◆ Overall time spent was less than one hour
- ◆ Guideline content did not include current plan of care
- ◆ Handouts and brochures were rarely utilized
- ◆ Two instructional priorities were reinforced by an expert panel
- ◆ Physicians and nurses most frequently delivered HF instruction

Implications and Recommendations

- ◆ AHA Guidelines should be used to develop educational approaches
- ◆ Education needs to be tailored to reflect the presence of other conditions - HF with secondary diagnosis
- ◆ Instruction must be a normalized part of every patient-provider interaction
- ◆ All patients should have a health literacy assessment
- ◆ Identify a preferred sequence of teaching

Thank You

💧 **Questions?**