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Gail Stern MSN

Lehigh Valley Health Network, Gail.Stern@lvhn.org


Donna Petruccelli MSN, CRNP, NP-C

Lehigh Valley Health Network

Jeanne Manavizadeh BSN, RN, PCCN

Lehigh Valley Health Network, Jeanne.Manavizadeh@lvhn.org

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GAIL STERN, MSN, PMHCNS-BC

DONNA PETRUCCELLI, MSN, CRNP, NP-C, CFHN, CNS

JEANNE MANAVIZADEH, RN, BSN, PCCN

Lehigh Valley Health Network, Allentown, PA

Nursing Care of Cardiac Patients With Depression

Lehigh Valley Health Network is a 985 bed tertiary care hospital in Northeastern Pennsylvania with Heart Failure (HF) patient volumes 4 to 6 times the national average. In an effort to reduce 30 day all cause readmissions in this high risk population, a multidisciplinary team was convened.

To prioritize continuum of care issues leading to measurable improvements consistent with the fundamental priorities of People, Service, Quality, Cost and Growth, Psychiatric nurse leadership was invited to provide expertise in the management of our complex HF patients with depression. Subsequently, a plan was developed to educate our cardiac nurses.

A LVHN Heart Failure Readmission Reduction Project Team works on improved outcomes and the reduction in inpatient readmissions for our patients with Congested Heart Failure. In 2012, they invited a Psychiatric Nurse to join this group.

We made a plan to educate our cardiac nurses on depression and screen all patients admitted to our Regional Heart Center who carried the diagnosis of CHF. We screened for depression utilizing the PHQ2. This depression screen along with Suicide screening results were reported and discussed with the attending physician. In some cases immediate consults to Psychiatry were made to provide for patient safety and initiate treatment. Patients with positive scores, who were not in immediate need, were referred for follow up in outpatient settings.

PHQ2 and PHQ9 screening of patients in LVHN practices can be completed and monitored through our Electronic Medical Record, Centricity Physician Office. We have begun to standardize the monitoring process in multiple settings. It is through these nursing collaborations that Cardiac Nurses and Psychiatric Nurses educate and coordinate improved care for our patients. Integration occurs... two nurses at a time!

Serious Mental Illness and Heart Disease

"Patients with severe mental illnesses, such as schizophrenia, bipolar disorder and depression together affect 5%-10% of the U.S. population, lose 25 or more years of life expectancy, with the majority of the excess premature deaths due to CVD, not suicide." (*Newcomer and Hennekens*)

Heart Disease and Mental Illness

- 1 in 5 people will have an episode of major depression in their lifetime. That number climbs to about 1 in 2 for people with heart disease.
- The risk of heart disease is double for people with a history of depression.
- Major depression puts heart attack victims at greater risk and appears to add to the patient's disability from heart disease. (*World Federation of Mental Health*)
- Hospitalized patients over 70 years-of-age who suffer from a combination of HF and depression experience readmission rates of 67% versus 44% among the same age group with HF but without depression. (*Rozzini*)
- Patients with HF are twice as likely to die if they have depression compared with those who did not have depression. (*Silver*)
- A multicenter study demonstrated that even at three months following a hospitalization, 63% of HF patients reported symptoms of depression.
- Patients with stable CHD plus generalized anxiety disorder (GAD) have a higher risk of experiencing cardiovascular events such as stroke, myocardial infarction, and death than patients with CHD only.
- GAD was associated with a 74% increased risk for adverse cardiovascular outcomes. (*E. Martins, World Federation for Mental Health*)

Depression and NYHA Functional Class

Screening for endogenous or prolonged reactive depression in patients with HF is recommended by the 2012 HFSA guidelines following diagnosis. The AHA recommends screening and treatment for depressive symptoms in an attempt to improve self-care behaviors and physical functioning.

Patient Health Questionnaire (PHQ-2)

The Patient Health Questionnaire-2 (PHQ-2) - Overview

The PHQ-2 inquires about the frequency of depressed mood and anhedonia over the past two weeks. The PHQ-2 includes the first two items of the PHQ-9.

The purpose of the PHQ-2 is not to establish final diagnosis or to monitor depression severity, but rather to screen for depression in a "first step" approach.

Patients who screen positive should be further evaluated with the PHQ-9 to determine whether they meet criteria for a depressive disorder.

Clinical Utility

Reducing depression evaluation to two screening questions enhances routine inquiry about the most prevalent and treatable mental disorder in primary care.

Scoring

A PHQ-2 score ranges from 0-6. The authors identified a PHQ-2 cutoff score of 3 as the optimal cut point for screening purposes and stated that a cut point of 2 would enhance sensitivity, whereas a cut point of 4 would improve specificity.

Major Depressive Disorder (7% prevalence)	Any Depressive Disorder (18% prevalence)
1 97.6 59.2 15.4	1 90.6 65.4 36.9
2 93.7 73.7 21.1	2 82.1 80.4 48.3
3 82.9 90.0 38.4	3 62.3 95.4 75.0
4 73.2 93.3 45.5	4 50.9 97.9 81.2
5 53.7 96.8 56.5	5 31.1 98.7 84.6
6 26.8 99.4 78.6	6 12.3 99.8 92.9

Because the PHQ-2 scores with the prevalence of depression, the PHQ-2 will be higher in settings with a higher prevalence of depression and/or a higher prevalence of depression and/or a higher prevalence of depression.

1. Rozzini R, Sabatini T, Frisoni GB, et al. Depression and Major Outcomes in Older Patients with Heart Failure [letter]. Arch Intern Med 2002; 162:362-364.
 2. Silver M. Depression and Heart Failure: An overview of what we know and don't know. Cleveland Clinic Journal of Medicine 2010; vol. 77 (3):S7-S11.
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 8. Li C, Friedman B, Conwell Y, et al. Validity of the Patient Health Questionnaire 2 (PHQ-2) in identifying major depression in older people. Journal of the American Geriatric Society 2007; 55(4):596-602.
 9. Gallagher, R, McKinley, S, Dracup, K. Effects of a telephone counseling intervention on psychosocial adjustment in women following a cardiac event. Heart and Lung: The journal of critical care 2003, Volume 32, Issue 2, p 79-87.
 10. Newcomer, John W and Hennekens, Charles H. Severe Mental Illness and Risk of Cardiovascular Disease. JAMA.2007;298(15): 1794-1798.
 11. Mental Health and Chronic Physical Illnesses: The Need for Continued and Integrated Care Word Federation for Mental Health, October 10, 2010.
 12. Yancy, CW et al.2013 ACCF/AHA Heart Failure Guideline.

Patient Health Questionnaire (PHQ-9)

PATIENT HEALTH QUESTIONNAIRE (PHQ-9)

NAME: _____ DATE: _____

Over the last 2 weeks, how often have you been bothered by any of the following problems? (Use "0" to indicate "not at all")

	Not at all	Seldom	More than half the days	Nearly every day
1. Little interest or pleasure in doing things	0	1	2	3
2. Feeling down, depressed, or hopeless	0	1	2	3
3. Trouble falling or staying asleep, or sleeping too much	0	1	2	3
4. Feeling tired or having little energy	0	1	2	3
5. Poor appetite or overeating	0	1	2	3
6. Feeling bad about yourself - or that you are a failure or have let yourself or your family down	0	1	2	3
7. Thoughts of hurting yourself or thoughts of death (not suicidal ideation)	0	1	2	3
8. Thinking or worrying so much that other people could have noticed. Or, things you are doing or have been doing are not as good as they once were	0	1	2	3
9. Thoughts that you would be better off dead, or of hurting yourself	0	1	2	3

add column _____

Healthcare professional, for use only if you are a patient of this provider. PHQ-9 score: _____

PHQ-9 Patient Depression Questionnaire

PHQ-9 Quick Depression Assessment

At least 4 "+" in the shaded section (including Questions #1 and #2), consider a depressive disorder and a clinical evaluation.

At least 2 "+" in the shaded section (one of which corresponds to Question #1 or #2), consider a depressive disorder and a clinical evaluation.

At least 1 "+" in the shaded section (one of which corresponds to Question #1 or #2), consider a depressive disorder and a clinical evaluation.

At least 0 "+" in the shaded section (one of which corresponds to Question #1 or #2), consider a depressive disorder and a clinical evaluation.

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PHQ-9 Quick Depression Assessment

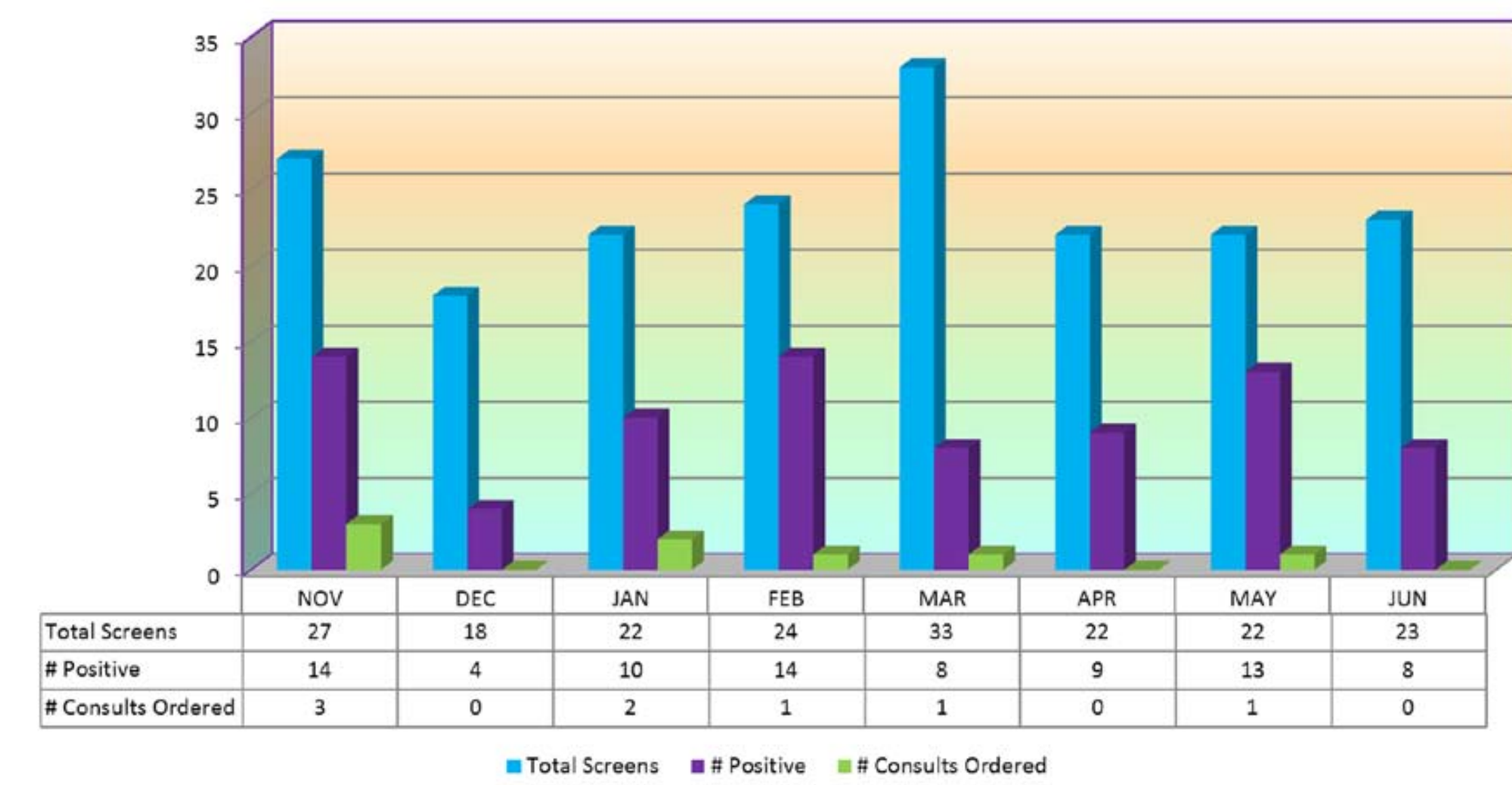
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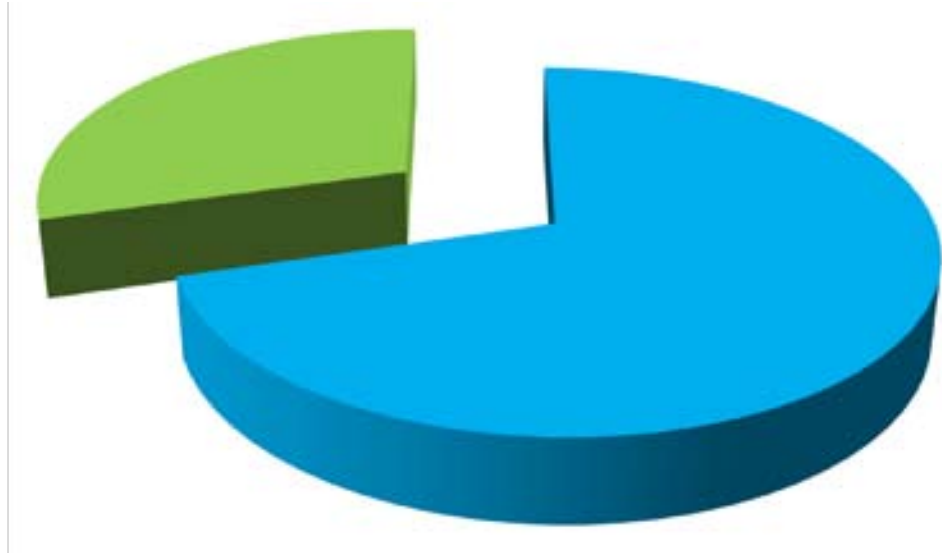
At least 1 "+" in the shaded section (one of which corresponds to Question #1 or #2), consider a depressive disorder and a clinical evaluation.

At least 0 "+" in the shaded section (one of which corresponds to Question #1 or #2), consider a depressive disorder and a clinical evaluation.

Depression Screening Results Positive Scores vs. Consultations Ordered



42% Positive Screenings



Consults Ordered on 10% of Positive Screenings



Primary vs. Secondary Diagnosis

- It is unclear if it is an independent primary diagnosis or if the depressive symptoms are secondary to the patients' chronic, complex illness.
- Both diagnoses share common pathophysiologic pathways and benefit from disease specific specialty care early in their diagnosis.

Depression and NYHA Functional Class

- A meta-analysis in 2006, performed by Rutledge, et. al., demonstrated a direct relationship between HF functional class and severity of depression.
- Patients with NYHA functional class I (mild) HF suffered an 11% occurrence of depression; 20% in class II, 38% in class III, and 42% in class IV.

References:

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CONTACT INFORMATION

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Gail.Stern@lvhn.org

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