



NP Awareness of Bi-Directional Depression-Cardiovascular Disease Risk in Older Adults



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Purpose / Objectives

The **primary aim** of this descriptive study was to (1) examine NPs' ability to identify depression as a risk factor for cardiovascular disease (CVD) and to (2) examine CVD as a risk factor for depression among older adults.

A **secondary aim** was to explore NP risk assessment patterns related to older age.

Background

A large body of evidence supports depression as a **significant** and **independent risk factor** for CVD as well as a comorbidity of CVD. Clinically diagnosed major depressive disorder (MDD) is the most important risk factor for developing CVD.

Effective depression treatment reduces disability, improves outcomes of comorbid health conditions, and improves quality of life. Yet, Older adults have but a 50% chance of being diagnosed with depression and are less likely to receive help for depressive symptoms compared to younger adults

Methodology

- A national sample of NPs recruited from the AANP membership completed an anonymous review of 4 patient vignettes. After review, participants developed a risk profile for each case using a standardized checklist
- Two vignette versions were administered to control for identification of age-related health risks. No differences were found between responses to versions A and B ($p > 0.05$)

Sample (N = 111)

- FNP (69%); ANP (22%), AGNP (4%); GNP (3%)
- 93% female; 71% between age 41-60; 98% white
- 64% in practice as NP for 5 or more years

Vignette #1

(Patient with established MDD diagnosis)

Mrs. Jones is a 68 year old female who presents to the clinic for follow-up of an uncomplicated UTI. She reports all symptoms have resolved. Her chronic conditions include osteoporosis (OP) and major depression disorder (MDD). OP was diagnosed 4 years ago and has been taking alendronate 70mg po q week for the past 4 years. Last bone density scan was 6 months ago with T-score of -3.0. She tolerates the alendronate well without complaint. Denies any falls.

She follows with a psychiatrist for her MDD, last saw him one month ago at which time sertraline dose was increased from 75 mg to 100 mg QD. Mrs. Jones feels she is beginning to see improvement in her depression, reports a bit more energy and sleeping better. Most recent BDI-II (Beck Depression Inventory-II) score per psychiatrist's notes = 28 one month ago.

She maintains a diet high in fiber, calcium and vitamin D. She attempts water aerobics at the YMCA three times a week, but often goes only 1-2x/week. Last colonoscopy was done 3 months ago and was negative.

Her family history is significant for maternal breast cancer, diagnosed at age 83 and deceased at age 88. She had chickenpox as a child. She gets annual flu vaccines and had a pneumonia vaccine this fall. BP= 126/72, pulse=76, respirations=16, BMI=22.

Vignette #2

(Patient with symptoms suggesting undiagnosed MDD)

Mr. Scott is a 73 year old male with BPH, chronic mild hearing loss, and nocturia who presents for 3 week follow-up for tinea pedis. He also complains of continued poor sleep and irritability. He feels anxious at times and reports trouble concentrating. Says he's "tired all the time". Worries he's losing his memory. Total weight loss over the past 6 months now at 9 lbs. He denies thoughts of harming himself and continues to be reluctant to start antidepressants or anxiety medications.

Current medications include ciclopirox 0.77% cream bid, tamsulosin 0.4mg q hs, multivitamin qd, polyethylene glycol (PEG) 17g in 8oz water qd prn, and acetaminophen 500mg bid prn.

Past history includes inguinal hernia surgery 10 years ago and basal cell carcinoma lesion on his face 3 years ago. He follows with dermatology on annual basis. All immunizations are up to date. Had the shingles vaccine in 2010 and negative colonoscopy in 2009. BP= 120/82, pulse=76, respirations = 12, BMI = 23.

Vignette #3

(Patient with known CVD)

Mrs. Black is an 80-year-old female who presents for routine visit. She is 6 months post-MI with hypertension, hyperlipidemia, and hypothyroidism. Current daily medications include aspirin 81mg, metoprolol 25mg, quinipril 10mg, and levothyroxine sodium 25mcg.

Mrs. Black has a past medical history of a left total knee replacement (2007), appendectomy, fibrocystic breasts, and is s/p left breast lumpectomy 2001 (benign). Last mammogram 2012 (negative). Last colonoscopy 2012 (negative). Family history of DM (both parents and one daughter). Mrs. Black has a remote history of occasional cigarette smoking with her friends in her 20's, no cigarette smoking since age 30.

She is happily married with a very supportive family, is socially active in community, and continues to drive without accidents. She is independent with all activities of daily living. Immunizations are up-to-date. BP= 142/86, pulse=70, respirations=16, BMI=31.

Vignette #4

(Patient with established CVD)

Mr. Thomas is a 65 year old male with cardiovascular disease. He is 2 years s/p single vessel CABG with aortic valve replacement (bovine). He has a 30 year history of hypertension and a 20 year history of hyperlipidemia. He takes the following medications: lisinopril 40 mg qd, simvastatin 40 mg qd, carvedilol 25mg bid, aspirin 81 mg qd and omeprazole 20mg qd.

Mr. Thomas's family history is significant for heart disease: his mother died of a stroke at age 70 and his father, who is still alive, is treated for hypertension, and hyperlipidemia. Mr. Thomas works as an accountant and continues in a long-term relationship with his live-in girlfriend.

Has chronic low back pain, generally relieved with acetaminophen but some days he also needs to take ibuprofen or naproxen to get comfortable. He admits to drinking two beers every night and more on the weekends. Continues to spend 2 months each summer at his cabin in New England where he enjoys numerous outdoor activities. All immunizations are up-to-date. He had a negative colonoscopy in 2012. BP= 115/70, pulse=68, respirations=16, BMI=33.

Results

Vignette #1

Did NP Recognize risk:

	YES n (%)	NO n (%)
For CVD 2° MDD?	73 (65.8)	38 (34.2)
For breast cancer 2° family history?	24 (21.6)	87 (78.4)
For falls 2° OP and sertraline?	12 (10.8)	99 (89.2)
For shingles 2° history chickenpox?	25 (22.5)	86 (77.5)
For suicide 2° MDD?	62 (55.9)	49 (44.1)

Vignette #2

Did NP Recognize risk:

	YES n (%)	NO n (%)
For CVD 2° depressive disorder?	67 (60.4)	44 (39.6)
For falls 2° nocturia?	29 (26.1)	82 (73.9)
For nutritional deficit?	30 (27.0)	81 (73.0)
For osteoporosis 2° age?	85 (76.6)	26 (23.4)
For suicide 2° depressive disorder?	43 (38.7)	68 (61.3)

Vignette #3

Did NP Recognize risk:

	YES n (%)	NO n (%)
For depression 2° known CVD?	69 (62.2)	42 (37.8)
For diabetes 2° BMI and fam hx?	15 (13.5)	96 (86.5)
For falls 2° age?	26 (23.4)	85 (76.6)
For osteoporosis 2° age?	52 (46.8)	59 (53.2)
For stroke 2° CVD and obesity?	33 (29.7)	78 (70.3)

Vignette #4

Did NP Recognize risk:

	YES n (%)	NO n (%)
For depression 2° known CVD?	62 (55.9)	49 (44.1)
For diabetes 2° obesity?	52 (46.8)	59 (53.2)
For falls 2° etoh, arthritis, age?	77 (69.4)	34 (30.6)
For osteoporosis 2° age and etoh?	87 (78.4)	24 (21.6)
For stroke 2° CVD and obesity?	17 (15.3)	94 (84.7)

Discussion

- Nearly 1/3 of sample failed to recognize depression as a risk for CVD and 2 out of 5 NPs did not recognize CVD as a risk for depression
- The data are concerning, particularly since a majority of respondents reported having 5 or more years of NP experience and NPs are often the de facto and sole mental health provider for many older adults
- While "who is responsible" for depression care among CVD patients continues to be discussed, primary care NPs are well-suited to integrate mental & physical health as comprehensive PCPs

Implications

- The data indicate there is continued need for professional development among practicing NPs and during NP graduate education surrounding CVD risk and CVD-depression relationship.
- Secondary findings suggest age bias in the care of older adults by practicing NPs and warrants further examination. This is particularly important given our rapidly growing, aging society and shortage of providers specializing in older adult care

References

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