

## Depression and Anxiety in ESRD: A Practical Guide for Nephrologists

By Nicole Bates, Jane Schell, and Allison Jordan

Psychologic concerns are prominent in chronic illness, such as ESRD, in which patients face significant morbidity, mortality, and complex treatment decisions. However, these symptoms are often not recognized or effectively treated. Because rates of depression and anxiety increase in this population, there is a need for interdisciplinary team collaboration among nephrology, palliative care, and mental health. Here, we present a guide tailored to the kidney care team for identifying and managing depressive and anxious symptoms in ESRD patients.

### Clinical relevance

One in five patients with ESRD is diagnosed with depression, which is higher than in kidney transplant patients (1). Risk factors include female gender, lower

socioeconomic status, age >60 years old, and limited social support. Depression has been associated with worsening renal function, increased hospitalization, and all-cause mortality (2). Patients with depression are less likely to engage in treatment adherence, especially dialysis, which itself seems to drive decreased life satisfaction (3). Furthermore, cognitive and emotional aspects of depression may impair decision-making at particularly important points in care, such as when facing dialysis or transplant (4).

Anxiety disorders are common in ESRD, with rates reported in a range of 12% to 52%. Diagnoses include specific phobia, panic disorder, and generalized anxiety disorder (5). Symptoms vary by treatment modality: conservative care patients may suffer anxiety due to higher physical symptom burden (3),

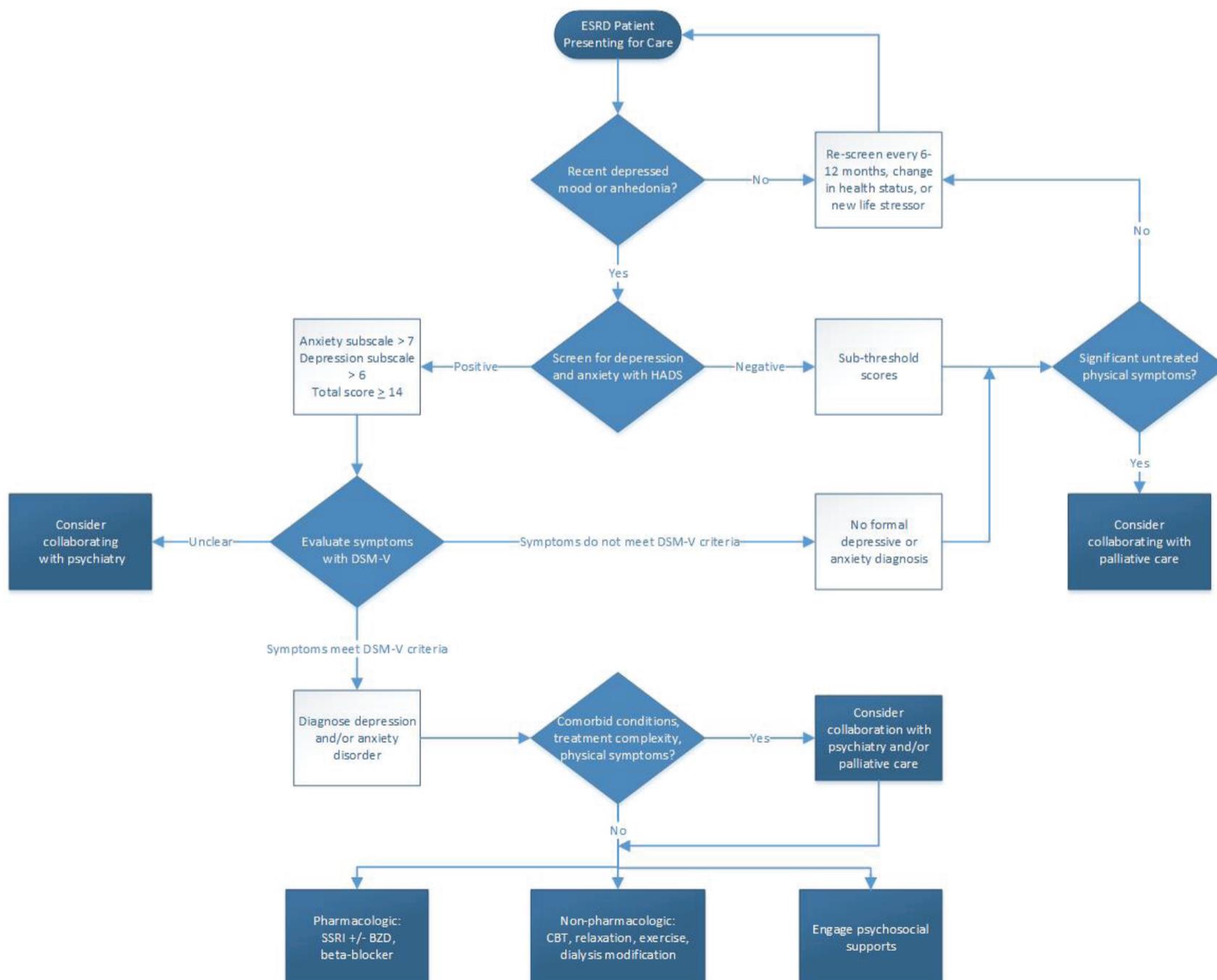
whereas dialysis patients face repeated traumas and a loss of control in the treatment environment. Significant anxiety often manifests as decreased treatment adherence or disruptive behaviors in clinic or dialysis centers, leading to frustration among patients and care teams.

### Screening for depression and anxiety

#### When to screen?

Current guidelines recommend routinely screening ESRD patients at initiation of dialysis, every 6 months for the first year, and then annually (2, 5). Interval events, such as emerging major life stressors, change in health status or treatment plan, disruptive behaviors at dialysis, or a new mental health diagnosis, should prompt rescreening.

Figure 1. Clinical approach to depression and anxiety in ESRD



**Abbreviations:** BZD = benzodiazepine; CBT = cognitive behavior therapy; DSM-V = Diagnostic and Statistical Manual of Mental Disorders V; HADS = Hospital Anxiety and Depression Scale; SSRI = selective serotonin reuptake inhibitor.

### How to screen?

First, we recommend using a two-question approach modified from the Patient Health Questionnaire: 1) In the past 2 weeks, have you been bothered by having little interest or pleasure in doing things? 2) Have you felt down, depressed? A positive response to either question should prompt screening to identify more specific depressive or anxious symptoms. We recommend the Hospital Anxiety and Depression Scale (HADS), which screens for both conditions. The HADS is particularly useful in ESRD, because it minimizes confounding by physical symptoms, has been validated in the ESRD population, and can be completed and reviewed quickly by patients and staff (6, 7). Other options include the Beck Depression Inventory, Patient Health Questionnaire-9, and Generalized Anxiety Disorder-7 (2, 5). Of note, all screening tools show limited sensitivity and specificity, and validation of screening tools has produced mixed results (6–8). A positive screen should prompt formal evaluation for depression or anxiety disorders.

### Diagnosing depression and anxiety in ESRD

For consistency and accuracy, we recommend using Diagnostic and Statistical Manual of Mental Disorders V diagnostic criteria. Particularly relevant diagnoses in ESRD are major depressive disorder, panic disorder, specific phobia, and generalized anxiety disorder (8) (Figure 1). Diagnosis may be made by the nephrologist, trained kidney nurse, or social worker. However, accurately diagnosing depression and anxiety may prove challenging given symptom overlap with uremia, including pain, fatigue, sleep disorders, poor appetite, and reduced concentration (2, 4). Although not routinely recommended for diagnostic purposes, psychiatric consultation may be helpful in these more complex patients.

### Treatment of anxiety and depression

Despite high prevalence and clinical implications, treatment of depression and anxiety is poorly studied in the ESRD population, in part due to exclusion of medically complex patients from treatment trials (2, 9).

### Which medications to consider?

Selective serotonin reuptake inhibitors (SSRIs) are best studied; sertraline may be particularly advantageous, requiring no renal dose adjustments, and it is safe in patients with cardiovascular disease, who share many risk factors with ESRD patients (10). Limited data exist for fluoxetine, citalopram, escitalopram, and paroxetine, as well as for non-SSRI options, including mirtazapine, venlafaxine, and bupropion (2). For episodic anxiety, benzodiazepines and  $\beta$ -blockers may also be useful for short trials with caution for ad-

verse side effects (5). Special considerations include adjusting doses for renal function, timing medications with dialysis, and minimizing drug-drug interactions. Furthermore, recent evidence suggests that hemodialysis patients and kidney care teams are resistant to initiating depression medications (9), emphasizing the importance of exploring beliefs about depression and antidepressant medications.

### What nonpharmacologic treatments exist?

Cognitive behavior therapy (CBT), exercise programs, and increased dialysis frequency may decrease depressive symptoms and improve physical and overall function (2, 4). Chairside CBT in ESRD patients was associated with improved depression scores, improved quality of life, and decreased intradialytic weight gain (11). For patients with anxiety disorders, psychodynamic therapy, relaxation and mindfulness exercises, sleep hygiene education, and limiting caffeine and tobacco use are also recommended (5). Relaxation and psychoeducation interventions adapt well to the dialysis setting, which may promote adherence and reduce the need for additional appointments. All interventions may be combined with medications.

### Team approach to managing psychologic issues

Members of the kidney care team caring for dialysis patients are well positioned to identify and screen patients at risk for depression and anxiety. We advocate a collaborative approach to explore mental, emotional, and physical symptoms, and to devise a management plan, which may extend beyond the renal setting.

Psychiatry and pharmacy teams can assist with evaluating complex psychiatric symptoms and providing medication advice given the adverse side effect profiles and complexity of drug dosing in dialysis (2). In addition to medications and therapy, psychiatry may help coordinate social work or case management support for both patients and their caregivers, who experience increased stress across the spectrum of ESRD care options (12).

Palliative care teams provide expertise in addressing physical symptoms contributing to mood or anxiety as well as strengthening communication and collaborative decision-making. For patients experiencing depressive symptoms as part of declining overall health, palliative care specialists can work alongside the kidney care team to help facilitate goals of care discussions that may include dialysis withdrawal and transition to hospice (4). ●

*Nicole Bates, MD, is a psychiatry resident at Western Psychiatric Institute and Clinic, University of Pittsburgh Medical Center. Jane Schell, MD, MHS, is an assistant professor within the Renal-Electrolyte Division and Sec-*

*tion of Palliative Care and Medical Ethics, University of Pittsburgh School of Medicine, University of Pittsburgh Medical Center. Allison Jordan, MD, HMDC, is medical director of palliative care services at Christian and Alton Memorial Hospitals and Associate Medical Director of BJC Hospice in St. Louis, Missouri.*

### References

1. Chen S-F, Wang I-J, Lang H-C. Risk of major depression in patients with chronic renal failure on different treatment modalities: a matched-cohort and population-based study in Taiwan. *Hemodial Int* 2016; 20:98–105.
2. Hedayati SS, Yalamanchili V, Finkelstein FO. A practical approach to the treatment of depression in patients with chronic kidney disease and end-stage renal disease. *Kidney Int* 2012; 81:247–255.
3. Da Silva-Gane M, et al. Quality of life and survival in patients with advanced kidney failure managed conservatively or by dialysis. *Clin J Am Soc Nephrol* 2012; 7:2002–2009.
4. Schell JO, Bova-Collis R, Eneanya ND. An interdisciplinary approach to dialysis decision-making in the CKD patient with depression. *Adv Chronic Kidney Dis* 2014; 21:385–391.
5. Cohen SD, Cukor D, Kimmel PL. Anxiety in patients treated with hemodialysis: symptom and diagnosis. *Clin J Am Soc Nephrol* 2016; 11:2250–2255.
6. Loosman WL, et al. Validity of the Hospital Anxiety and Depression Scale and the Beck Depression Inventory for use in end-stage renal disease patients. *Br J Clin Psychol* 2010; 49:507–516.
7. Preljevic VT, et al. Screening for anxiety and depression in dialysis patients: comparison of the Hospital Anxiety and Depression Scale and the Beck Depression Inventory. *J Psychosom Res* 2012; 73:139–144.
8. Cukor D, et al. Anxiety disorders in adults treated by hemodialysis: a single-center study. *Am J Kidney Dis* 2017; 52:128–136.
9. Pena-Polanco JE, et al. Acceptance of antidepressant treatment by patients on hemodialysis and their renal providers. *Clin J Am Soc Nephrol* 2017; 12:298–303.
10. Glassman AH, et al. Sertraline treatment of major depression in patients with acute MI or unstable angina. *JAMA* 2002; 288:701–709.
11. Cukor D, et al. Psychosocial intervention improves depression, quality of life, and fluid adherence in hemodialysis. *J Am Soc Nephrol* 2014; 25:196–206.
12. Ying Chan K, et al. Enhanced psychosocial support for caregiver burden for patients with chronic kidney failure choosing not to be treated by dialysis or transplantation: A pilot randomized controlled trial. *Am J Kidney Dis* 2016; 67:585–592.



**Have a tip or idea you'd like to share with your fellow peers and the broader kidney community?**

Send your idea to the *Kidney News* Fellows Corner column at [kidneynews@asn-online.org](mailto:kidneynews@asn-online.org)