Management of Depression in People Undergoing Long-Term Dialysis

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Presentation Outline

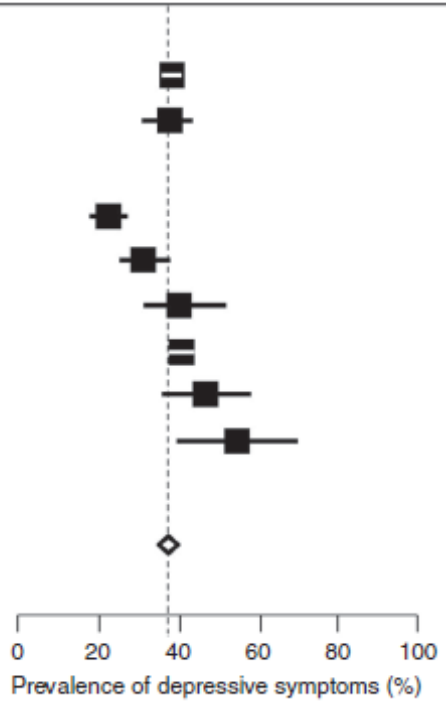
- Why should we screen for depression in patients undergoing long-term dialysis?
- How should we do we develop an effective plan to manage depression?
  - Approach to screening and diagnosis of depression
  - Developing a plan of care:
    - Overcoming Barriers
    - Selecting a treatment option
    - Operationalizing drug therapy
    - Operationalizing cognitive behavioral therapy

Case for Screening for Depression

The Clinical Case
Depression is Common

Study-level covariate	No. of cohorts	No. of participants	Prevalence of clinical depression Random effects (95% CI)	*P*-value for subgroup difference
Dialysis type				
Hemodialysis	134	36,369	38.5% (35.4–41.6)	0.73
Peritoneal dialysis	35	2796	37.3% (31.7–43.5)	
Diagnostic tool for depression				
Interview	28	2855	22.8% (18.6–27.6)	
HADS	23	3967	31.3% (25.5–37.6)	
CES-D	8	10,561	40.6% (30.5–51.6)	<0.001
BDI	87	9384	41.3% (37.9–44.7)	
Hamilton	9	592	46.9% (36.0–58.2)	
Zung	4	354	55.0% (39.1–70.0)	
All cohorts	198	46,505	36.8% (34.4–39.2)	

Heterogeneity Cochran Q=4236; I^2=95.3%, P<0.001



At any time point, one of out of every three person on dialysis has depressive affect

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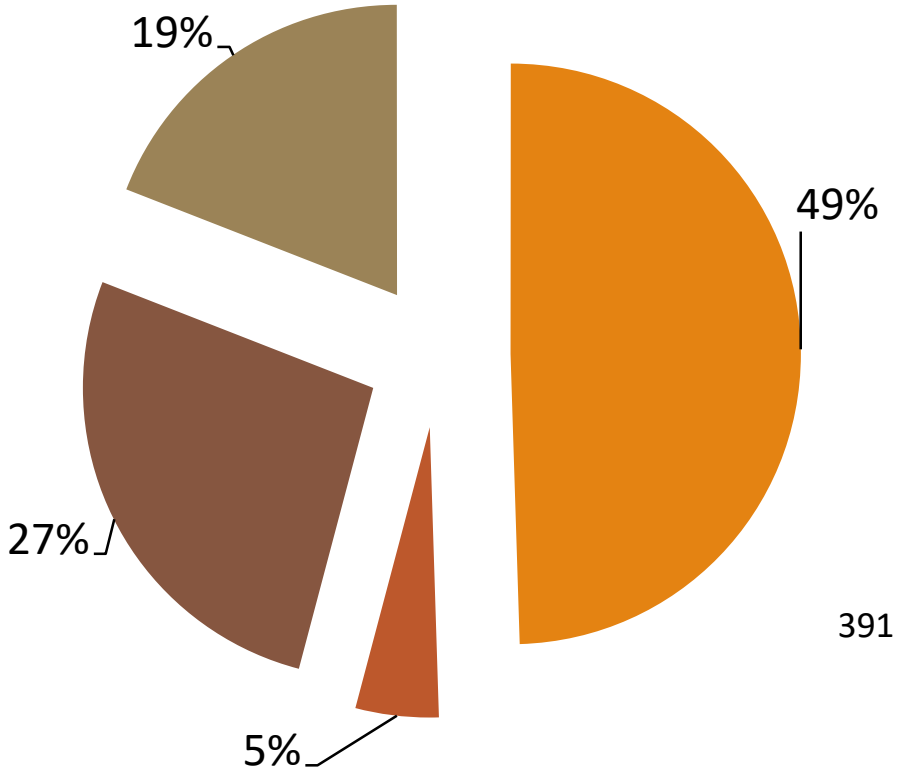
Palmer et al, Kidney Int 2013; 84: 179-91

Burden Greater with Natural Disasters
Hurricane Katrina



391 HD patients at 9 facilities in New Orleans; phone interview 9-15 months later

- **COVID-19**
- **9/11**
- **Snowstorms**
- **Hurricanes**

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Edmondson et al, Am J Pub Health, 2013; 103: e130-7

The Clinical Case
Depression Makes Life Harder

Study Population	Studies	Median *r*	Mean weighted *r*	Odds Ratio
ESRD	6	-0.34	-0.22 (-0.33, -0.11)	3.44 (1.26, 8.10)
Non-ESRD	6	-0.24	-0.21 (-0.30, -0.11)	2.77 (1.43, 5.44)

It makes it difficult to show up for dialysis, to complete the full treatment, take medicines as prescribe, or adhere to numerous dietary limitations

Associated with 50% higher risk for death in HD patients

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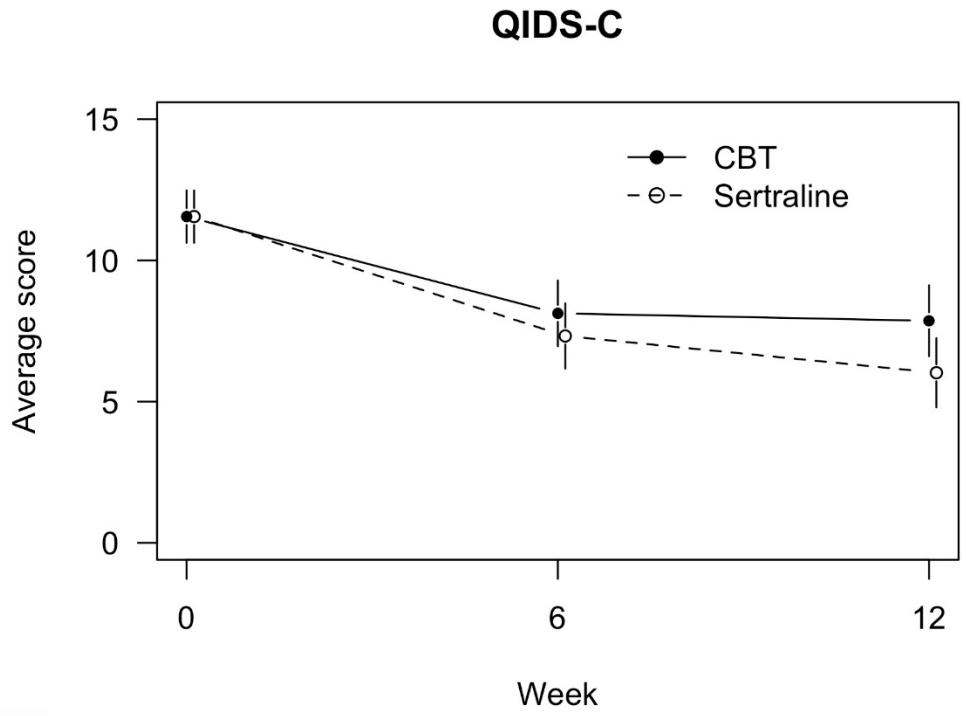
DiMatteo et al, Arch Intern Med 2000; 160: 2101-7

The Clinical Case
Effective Treatments Available



- Depression scores decreased with both treatments
- At least 50% decrease in scores (Response):
  - CBT, 36% (95% CI, 24%, 49%)
  - Sertraline, 43% (95%, CI, 30%, 56%)
- Remission:
  - CBT, 29% (95% CI, 17%, 41%)
  - Sertraline, 40% (27%, 52%)

Mehrotra et al, Ann Intern Med 2019; 170: 369-379

The Case
Developing an Approach for Managing Depression in Dialysis Patients

- **Clinical case:**
  - It is common,
  - It causes a lot of suffering,
  - Treatments work, albeit less effective than in general population - we can reduce suffering by providing treatment, and
  - It is the right thing to do

Why Screen? The Regulatory Case
Medicare QIP Program

Payment Year	2022	2023	2024
Performance Period	CY 2020	CY 2021	CY 2022
Patient and Family Engagement (n=1)	• ICH CAHPS		
Care Coordination (n=4)	• Standardized Readmission Ratio (SRR) • Standardized Hospitalization Ratio (SHR) • Percentage of Prevalent Patients Waitlisted (PPPW) • Clinical Depression Screening and Follow-up		
Clinical Measures (n=6)	• Kt/V Dialysis Adequacy (comprehensive) • Vascular Access Rate - (1) Standardized Fistula Rate; and (2) Long-term catheter rate • Standardized Transfusion Ratio (STrR) • Hypercalcemia • Ultrafiltration Rate		
Safety Measures (n=3)	• NHSN Bloodstream Infection • NHSN Dialysis Event Reporting • Medication Reconciliation		

QIP Depression Requirements

- Process measure – essentially the unit has to certify that there is a process in place for looking out for depression
- You just have to report what you are doing:
  - Is the patient eligible?
  - Did you screen? (Yes/No)
  - If you screened, was the screen positive or negative?
  - If positive, did you develop a plan of care? (Yes/No)
- You can get full points for the measure even if:
  - You don't screen anyone and
  - If you screen, you do nothing with the results
- The expectation is that this "process" measure will become a "clinical measure" – that units will be judged on what they do

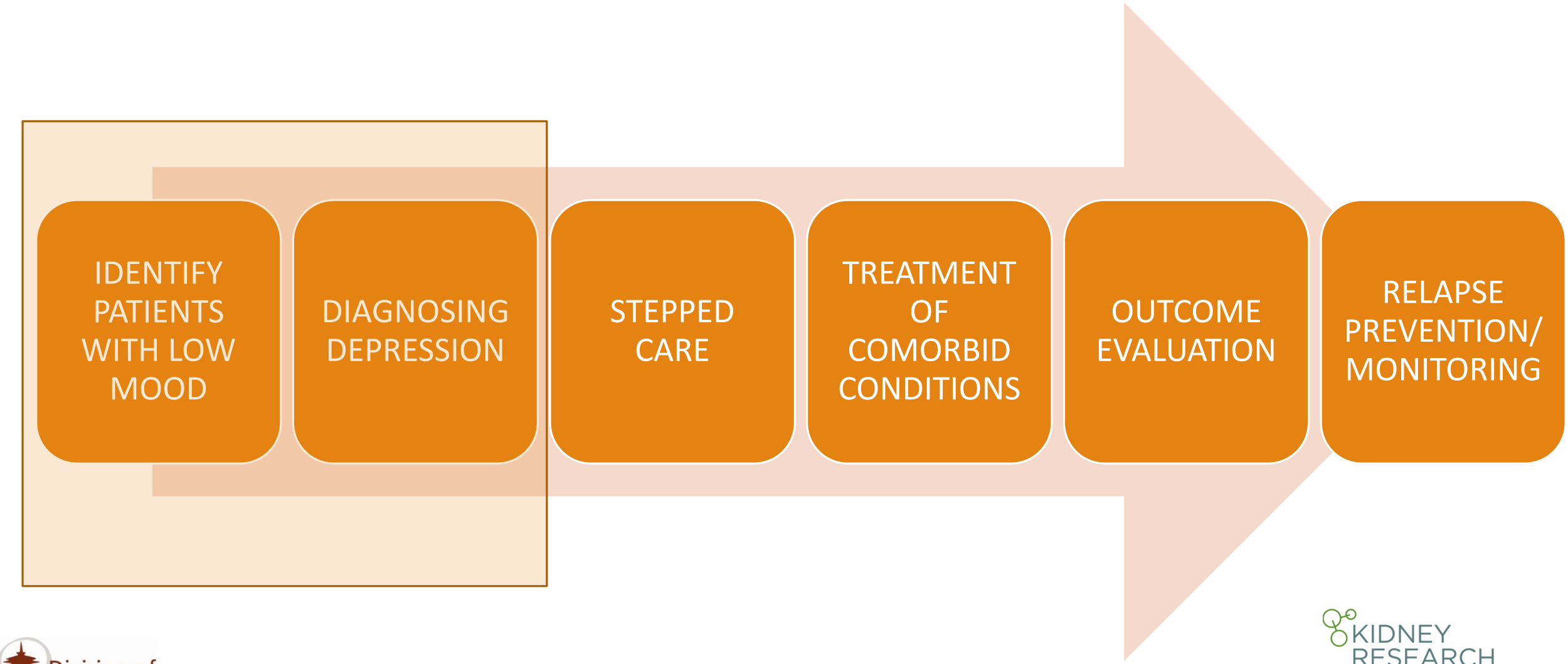
Voluntary Kidney Care Models
Quality Gateway

- Three quality metrics
  - Patient Activation
  - Remission of depression and
  - Control of blood pressure

The Case
Developing an Approach for Managing Depression in Dialysis Patients

- **Clinical case:**
  - It is common,
  - It causes a lot of suffering,
  - Treatments work, albeit less effective than in general population - we can reduce suffering by providing treatment, and
  - It is the right thing to do
- **Regulatory case:**
  - Medicare requires us to report if we are screening/developing a plan of care,
  - It is a part of a metric that Medicare decides if they will cut our payments by up to 2%, and
  - It is possible it will become a clinical measure for dialysis units
  - Remission of depression key quality metric for value-based care models for kidney care

Developing an Effective Plan



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Slide courtesy: Dr. Daniel Cukor

What Is Major Depressive Disorder?
DSM Manual

Five of the 9 symptoms, present nearly every day for ≥ 2 weeks:

1. **Depressed mood or irritable** most of the day, nearly every day, as indicated either by objective report or observation made by others
2. **Decreased interest or pleasure** in most activities, most of the day
3. **Significant weight change (5%) or change in appetite**
4. **Change in sleep:** insomnia or hypersomnia
5. **Change in activity:** psychomotor agitation or retardation
6. **Fatigue or loss of energy**
7. **Guilt/worthlessness**
8. **Concentration:** diminished ability to think or concentrate, or more indecisiveness
9. **Suicidality:** Thoughts of death or suicide, or has suicide plan

Diagnosis of Major Depressive Disorder

General Characteristics

- Depressed mood or loss of interest or pleasure in daily activities for **more than two weeks**;
- Mood represents a change from a person's baseline; and
- It results in impaired function: social, occupational, educational

It is challenging to diagnose MDD in patients undergoing dialysis – many symptoms overlap with symptoms with kidney failure

So, how should we do it?

- Which screening instrument should we use?
- Who should administer the instrument?
- How should we interpret the results?
- What should next steps be?

Tools Used to Screen for Depression

Measure	Recommended	Comment
Patient Health Questionnaire (PHQ-2/9)	**	Used widely in primary care
Quick Inventory of Depressive Symptomatology (QIDS)	**	Validated in CKD, self-report and clinician versions
Beck Depression Inventory (BDI-II)	*	Costly, more questions
Center for Epidemiologic Studies Depression Scale (CES-D)	*	Not linked to DSM depression criteria
Hospital Anxiety and Depression Scale (HADS)	*	Better as a measure of general distress

PHQ-2

Patient Name: _____ Date of Visit: _____

Over the past 2 weeks, how often have you been bothered by any of the following problems?	Not at all	Several days	More than one-half of 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

Kroenke K, Spitzer RL, Williams JB. The Patient Health Questionnaire-2: validity of a two-item depression screener. *Med Care*. 2003;41:1284-1292.

Administration of Screening

- Dialysis unit social workers best positioned to administer the screening
- Many patients will need help – some are blind or have other visual problems, others have problems with dexterity:
  - It is OK for facility staff to read the questions and ask patients to respond
  - Should be read as is
- There will be some that require instrument in a language other than English
- No standardized frequency of administration:
  - At least once yearly

PHQ-2
Psychometric Properties (Gen Pop)

	Prevalence, 7%			Prevalence, 18%		
	Sens	Spec	PPV	Sens	Spec	PPV
1	97.6	59.2	15.4	90.6	65.4	36.9
2	92.7	73.7	21.1	82.1	80.4	48.3
3	82.9	90.0	38.4	62.3	95.4	75.0
4	73.2	93.3	45.5	50.9	97.9	81.2
5	53.7	96.8	56.4	31.1	98.7	84.6
6	26.8	99.4	78.6	12.3	99.8	92.9

No data for patients with ESRD
Score of 3 or higher significant

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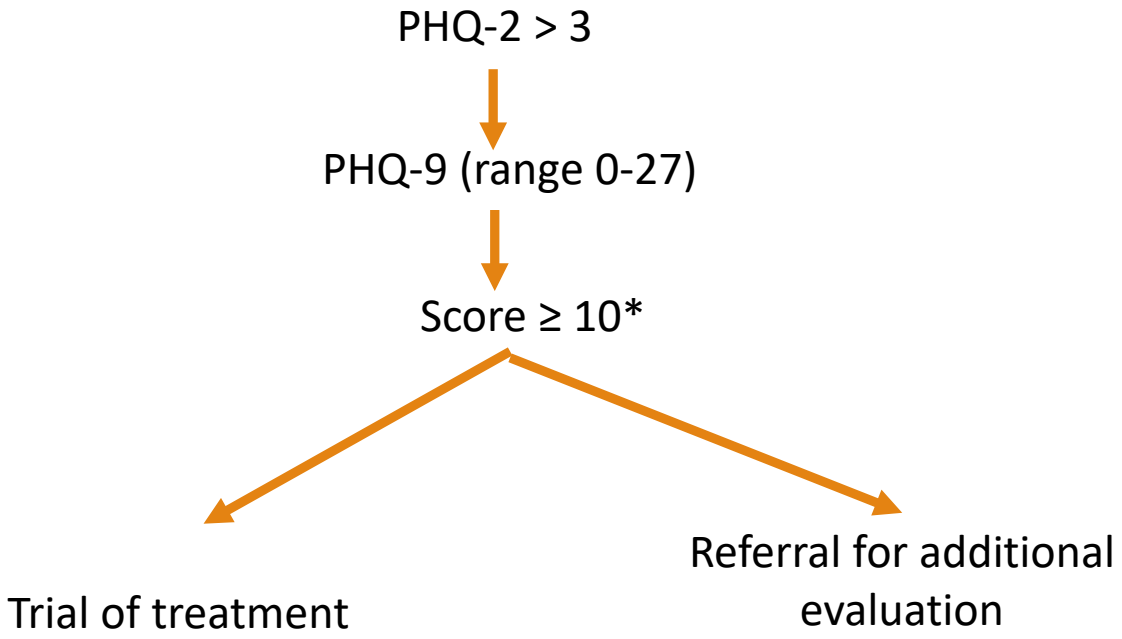
Kroenke et al, Med Care 2003

Interpretation of Results
Low Scores

- Early experience with use of PHQ-2 suggests a lower prevalence of depressive symptoms
- Some possible reasons for these lower scores:
  - A true absence of anhedonia and low mood
  - The patient may not acknowledge their symptoms, or attribute them to their medical conditions
  - A lack of understanding of the questions' intent (low health literacy)
  - A lack of desire to discuss mental health issues (stigma)
  - A lack of faith that indicating distress will trigger a meaningful response
- If there is a clinical suspicion for depression and the PHQ-2 score is low, be ready to supplement assessment with other clinical questions

Interpretation of Results
High Scores



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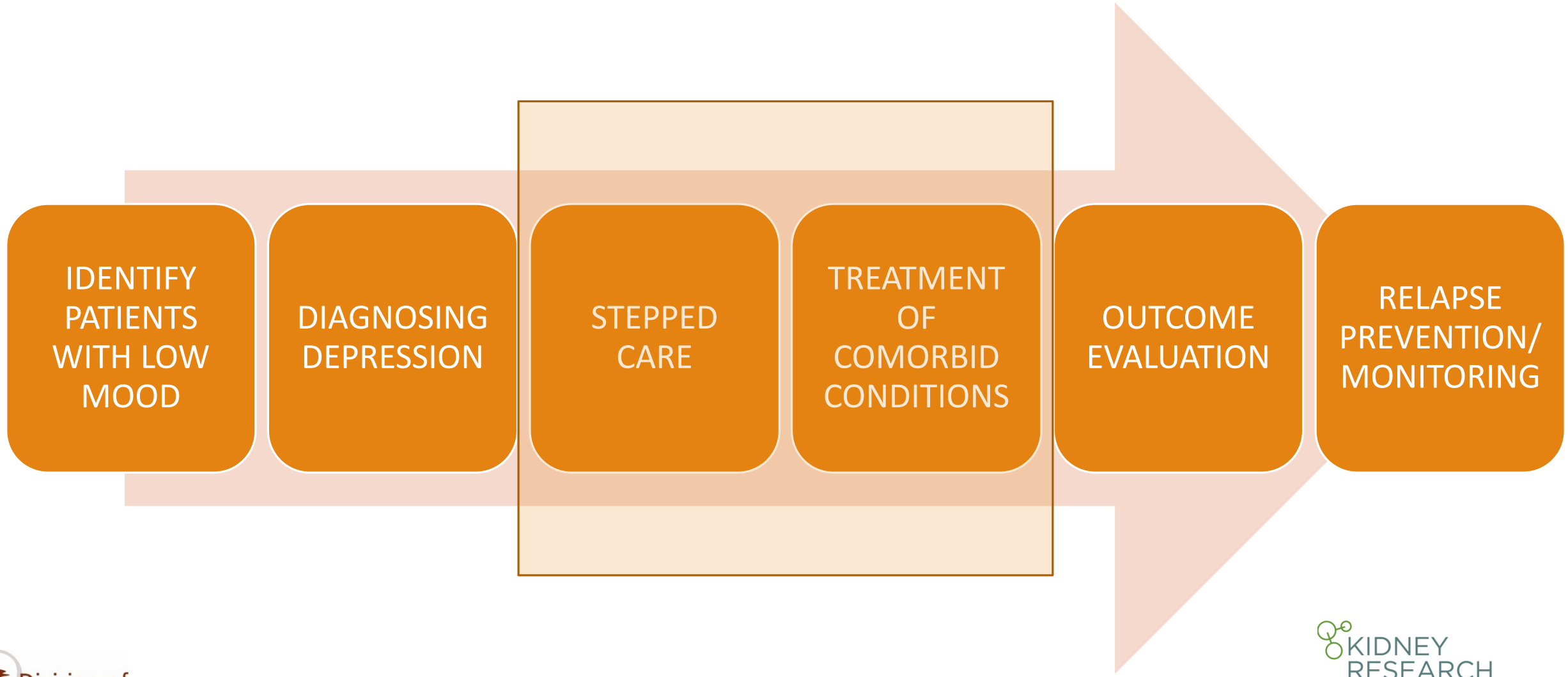
Diagnosis of Depression in Dialysis Units
Summary

- Which screening instrument should we use?
  - PHQ-2; some units are using PHQ-9
- Who should administer the instrument?
  - Social worker, administer at least once a year, be ready to help
- How should we interpret the results?
  - Beware of low results in patients who you have a clinical suspicion of depression; supplement with additional clinical assessment
  - If scores high, complete follow-up assessment with PHQ-9
- What should next steps be?
  - Assess patients' willingness to engage in treatment



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Responding to High PHQ-9 Score

- Recognize barriers to treatment
- Understand treatment options for depression
- Engage in shared decision-making to determine patients':
  - Willingness to receive treatment and
  - If so, which treatment and how

Barriers to Treatment to be Overcome

- **Stigma:** Most patients undergoing hemodialysis with major depressive disorder are not interested in initiating or modifying anti-depressant treatment (SMILE; *CJASN 2017*)
- **Availability of Trained professionals**
  - Prescribers – psychiatrist vs primary care vs nephrologist vs nurse practitioner
  - Therapists – in-house social workers, outside consultants, referrals, telehealth
- **Reimbursement models**
  - In the US, dialysis is very expensive and one of the main challenges to government insurance. They are looking for ways to reduce costs, not expand services.

Dialysis facility should determine who will administer treatment for depression – may vary by patient

Responding to High PHQ-9 Score

- **Recognize barriers to treatment**
  - We have to overcome patient-level and healthcare system-level barriers to provide treatment for depression for patients with kidney failure

Treatment Options for Depression

First Line Therapies for Major Depression

- Anti-Depressant Drug Therapy (selective reuptake inhibitors)

or

- Cognitive Behavioral Therapy (CBT)

American College of Physicians Clinical Practice Guidelines
Ann Intern Med 164 (5): 350-359

A Stepped Care Approach (in general psychiatry)

Severity	Rating Scale Range (PHQ-9)	Intervention
Mild	5-9	Monitor for worsening Consider lifestyle/behavioral changes Consider referral for psychotherapy
Moderate	10-14	Refer for psychotherapy, **OR** consider initiation of antidepressant medication
Moderate-Severe	15-19	Refer for psychotherapy, **AND** consider initiation of antidepressant medication
Severe	20-27	Initiate antidepressant medication, **AND** assess need for hospitalization, or if stable for outpatient treatment, refer for psychotherapy

Anti-Depressant Drugs

Selective Serotonin Reuptake Inhibitors	Serotonin Norepinephrine Reuptake Inhibitors	Others
Fluoxetine Sertraline Paroxetine Fluvoxamine Citalopram Escitalopram	Venlafaxine Desvenlafaxine Duloxetine	Levomilnacipran Bupropion Mirtazapine Vilazodone Vortioxetine Agomelatine*

Challenges with drug therapy

- Adds to already high pill burden, and
- Drug-related adverse effects adds to symptom burden

*Not FDA approved

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Adapted from Park and Zarate, NEJM 2019; 380: 559-568

Anti-Depressant Drugs

	Selective Serotonin Reuptake Inhibitors	Serotonin Norepinephrine Reuptake Inhibitors	Others
	Fluoxetine Sertraline Fluvoxamine Citalopram Escitalopram	Duloxetine	Bupropion Vilazodone Vortioxetine Agomelatine*
Dose reduction with kidney failure	Paroxetine	Venlafaxine Desvenlafaxine	Levomilnacipran ? Mirtazapine

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Anti-Depressant Drugs

	Selective Serotonin Reuptake Inhibitors	Serotonin Norepinephrine Reuptake Inhibitors	Others
Tested in clinical trials for people undergoing dialysis	Fluoxetine Sertraline Escitalopram		

I suggest you select one of these three drugs as default for your practice
For me, that drug is sertraline

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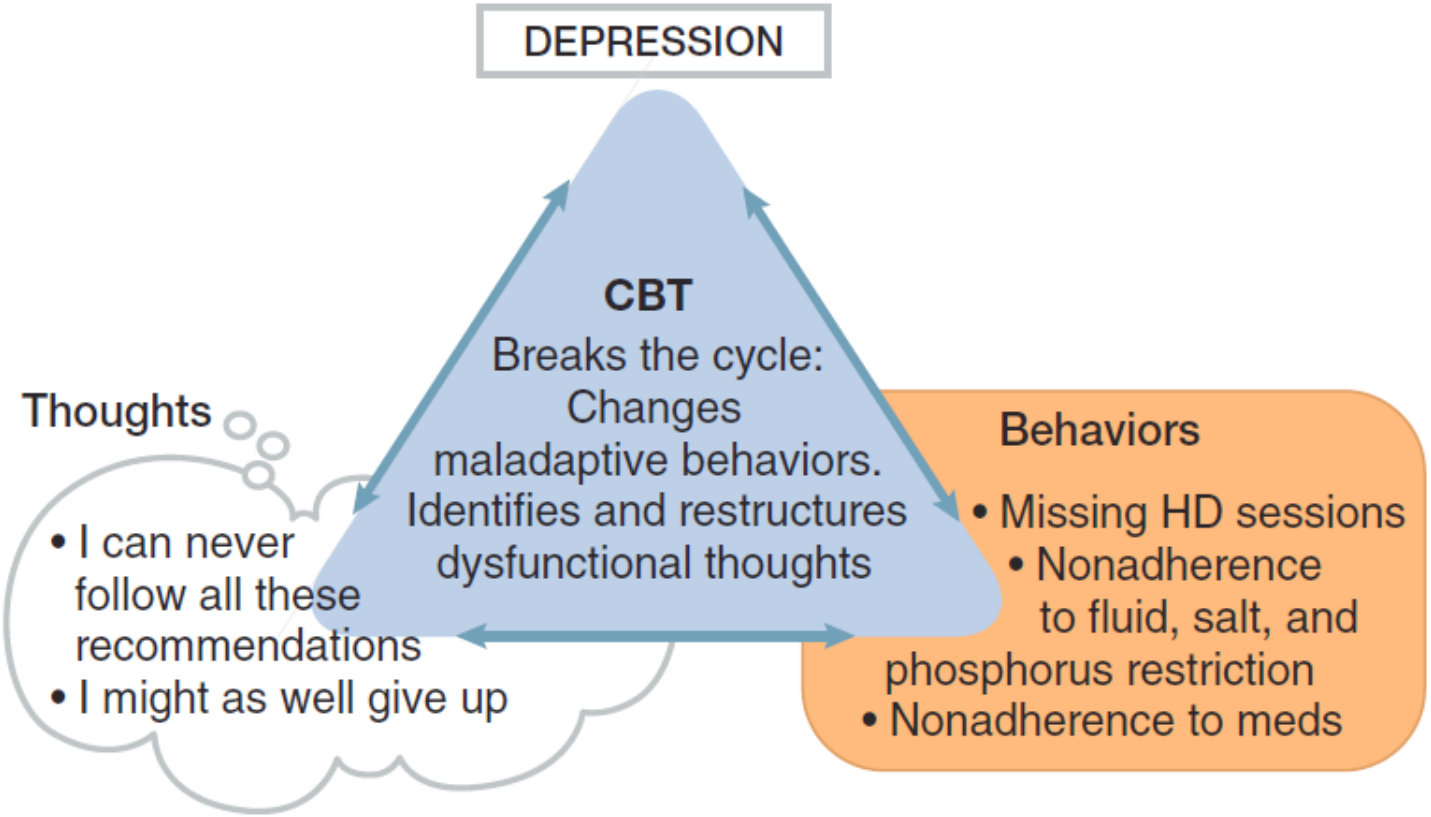
Psychotherapy
Cognitive Behavioral Therapy



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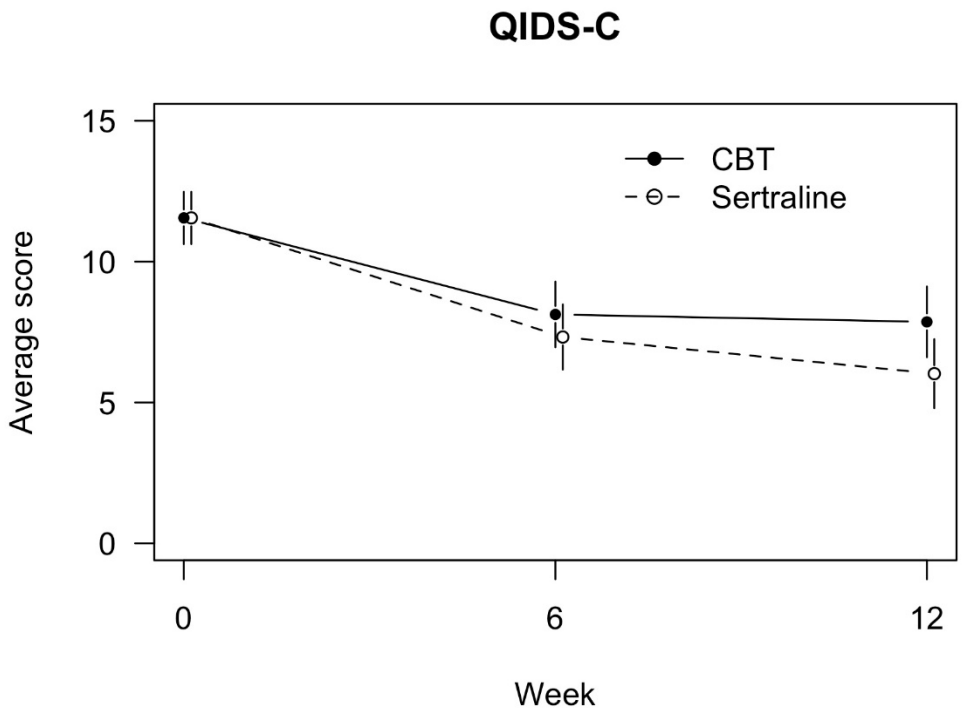
Shirazian S, Kidney Int 2019; 96 (6): 1264-1266

In People on Dialysis, both CBT and Drugs Work



- Depression scores improved similarly with the two therapies:
  - Patients may have preference for one form of treatment over another
- Treatment related side effects occurred only with sertraline – nausea, palpitations, tremors, etc.

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Responding to High PHQ-9 Score

- **Recognize barriers to treatment**
  - We have to overcome patient-level and healthcare system-level barriers to provide treatment for depression for patients with kidney failure
- **Understand treatment options for depression**
  - Selection of initial treatment depends upon severity of symptoms and patient preference
  - Choices include anti-depressant drugs and/or cognitive behavioral therapy

Approach to Drug Therapy

- Decide who will be the prescriber for the patient – within the nephrology care team or outside
- Start low and go slow, the eventual goal is to get to the maximum tolerable dose
- With sertraline as an example:
  - Dose range, 25-200 mg/d
  - Goal is to get to the maximum tolerable dose
  - Week 1, 25 mg; Week 2, 50 mg
  - Assess for tolerability (side effects) after first 2 weeks and increase dose by 50 mg if drug is tolerated
  - Usually titrate dose for the first 6 weeks and then maintain the maximum tolerated dose for another 6 weeks (for at least 12 weeks)

Options for Providing CBT - 1

Outside Referral

Outside resource qualified to diagnose and treat mental health conditions

In-Person Therapist

Telehealth

Online

Advantages: Easy to operationalize, least burdensome on patients
Disadvantages: Burdensome for patients, technology gap

Options for Providing CBT - 2

Consultant

Establish a formal relationship with a mental health provider employed at another division of the same institution, or outside, available locally or online

Advantages: good team integration, available for emergencies
Disadvantages: usually low capacity, and offers “low-touch” interventions

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Options for Providing CBT - 3

In-House

Someone employed at your institution whose job description includes provision of mental health services.

Dialysis Social Worker

Behavioral Health Service

Advantages: Great team integration, trusting relationship
Disadvantages: Work load, cost

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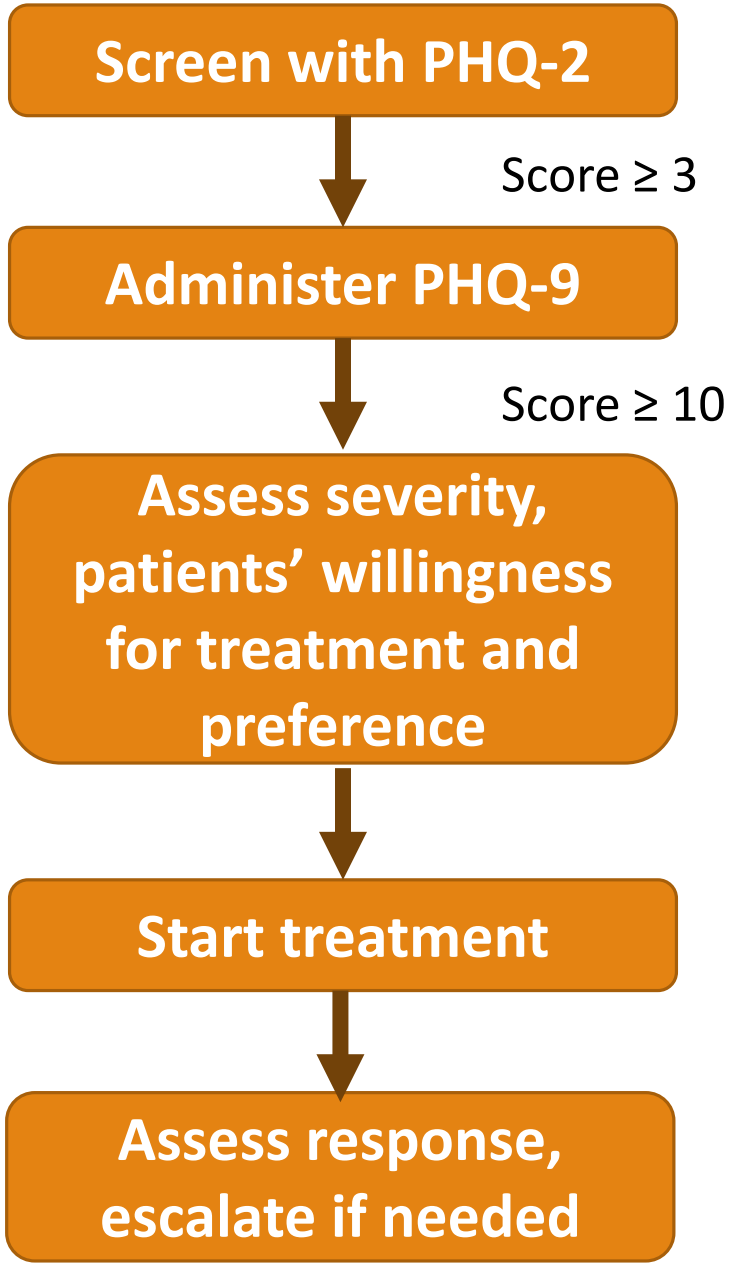
Screen with PHQ-2
Score ≥ 3
Administer PHQ-9
Score ≥ 10
Assess severity, patients' willingness for treatment and preference
Start treatment
Assess response, escalate if needed