

**The Effectiveness of Depression Treatment for Patients with End-Stage Kidney Disease: A  
Systematic Review  
Supplemental Material**

**Contents:**

Item S1. Search Strategies (Parent VA Review) .....	2
Item S2. Study Selection Criteria (Parent VA Review).....	8
Table S1. PICOTS by Key Question .....	10
Table S2. Strength of Evidence Domains and Grading .....	11
References.....	12

## Item S1. Search Strategies (Parent VA Review)

### Ovid MEDLINE(R) and Epub Ahead of Print, In-Process & Other Non-Indexed Citations and Daily 1946 to June 24, 2020

Date searched: June 24, 2020

#	Searches
1	Kidney Failure, Chronic/
2	((chronic or endstage or end-stage or endstate or end-state or failure or long-term or maintenance) adj2 (kidney or renal)) or ESKD or ESKF or ESRD or ESRF).ti,ab,kf.
3	Renal Dialysis/ or Hemofiltration/ or Hemodiafiltration/ or Hemodialysis, Home/ or Peritoneal Dialysis/ or Peritoneal Dialysis, Continuous Ambulatory/
4	(dialysis or haemodiafiltration or hemodiafiltration or haemo-diafiltration or hemo-diafiltration or haemofiltration or hemofiltration or haemo-filtration or hemo-filtration or haemodialysis or hemodialysis or haemo-dialysis or hemo-dialysis).ti,ab,kf.
5	or/1-4
6	Depression/ or Depressive Disorder/ or Depressive Disorder, Major/ or Depressive Disorder, Treatment-Resistant/
7	(depressed or depressive or depression* or suicidal or suicide or suicides).ti,ab,kf.
8	or/6-7
9	and/5,8
10	Brief Psychiatric Rating Scale/ or Diagnostic Self Evaluation/ or "Diagnostic Techniques and Procedures"/ or Mental Status Schedule/ or Neuropsychological Tests/ or Patient Health Questionnaire/ or Psychiatric Status Rating Scales/ or exp Psychological Tests/ or exp "Surveys and Questionnaires"/
11	(checklist* or check-list* or questionnaire or questionnaires or instrument or instruments or inventory or inventories or scale or scales or schedule or schedules or screen or screened or screening or "Beck Depression" or BDI or BDI2 or "geriatric depression scale" or GDS or "Hamilton Rating Scale for Depression" or "Hospital Anxiety and Depression Scale" or HADS or "Kidney Disease Quality of Life" or KDQOL or "Medical Outcomes Study Short Form Health Survey 36" or MOS-SF36 or "Minnesota Multiphasic Personality Inventory" or MMPI or "Multiple Affect Adjective Check List" or MAACL or "Patient Health Questionnaire" or PHQ2 or PHQ-2 or PHQ9 or PHQ-9 or "PRIME-MD" or "Epidemiologic Studies Depression Scale" or CED or CESD or BREF or DASS21 or IDID or "Quick Inventory of Depressive Symptomatology Self-Report" or QIDS-SR or "RAND 36-Item Health Survey" or RAND-36 or "short form 36" or SF-36 or "Structured Clinical Interview" or SCID or "self-rating depression scale" or SDS or "Short Form Health Survey 36" or SF36).ti,ab,kf.
12	exp Behavior Therapy/ or exp Cognitive Behavioral Therapy/ or exp Mental Health Services/ or exp Psychotherapy/ or Psychosocial Support Systems/ or Social Support/ or Motivational Interviewing/ or Patient Participation/
13	(cognitive-behavior* or cognitive-behaviour* or intervention or interventions or nondrug or non-drug or nonpharmac* or non-pharmac* or pharmac* or program* or psych* or psychosocial or psycho-social or rehabilitation or therapy or therapies or treat*).ti,ab,kf.
14	Antidepressive Agents/ or Antidepressive Agents, Second-generation/ or Serotonin Uptake Inhibitors/ or "Serotonin and Noradrenaline Reuptake Inhibitors"/ or Adrenergic Uptake Inhibitors/ or 5-hydroxytryptophan/ or Amisulpride/ or Bupropion/ or Citalopram/ or Fluoxetine/ or Fluvoxamine/ or Maprotiline/ or Mianserin/ or Paroxetine/ or Quipazine/ or Ritanserin/ or Sulpiride/ or Trazodone/ or Tryptophan/ or Venlafaxine Hydrochloride/ or Viloxazine/
15	(antidepress* or anti-depress* or 5-hydroxytryptophan or Amisulpride or Bupropion or Citalopram or Escitalopram or Fluoxetine or Fluvoxamine or Maprotiline or Mianserin or Paroxetine or Quipazine or Ritanserin or Sulpiride or Trazodone or Tryptophan or Venlafaxine Hydrochloride or Viloxazine or SSRI or SSRIs or "selective serotonin reuptake" or "selective serotonin re-uptake" or SNRI or SNRIs or "Serotonin and Noradrenaline Reuptake Inhibitor" or "Serotonin and Noradrenaline Reuptake Inhibitors" or NRI or NRIs or "norepinephrine reuptake inhibitor" or "norepinephrine reuptake inhibitors").ti,ab,kf.

16	Antidepressive Agents, Tricyclic/ or Amitriptyline/ or Amoxapine/ or Clomipramine/ or Desipramine/ or Dothiepin/ or Doxepin/ or Imipramine/ or Iprindole/ or Lofepramine/ or Nortriptyline/ or Opipramol/ or Protriptyline/ or Trimipramine/
17	(Amitriptyline or Amoxapine or Clomipramine or Desipramine or Dothiepin or Doxepin or Imipramine or Iprindole or Lofepramine or Nortriptyline or Opipramol or Protriptyline or Trimipramine or Gabapentin or Sildenafil or Vardenafil).ti,ab,kf,nm.
18	(nondrug or non-drug or nonpharmacolog* or non-pharmacolog*).ti,ab,kf.
19	Exercise Therapy/ or Resistance Training/
20	((((aerobic or resistance) adj2 (exercis* or program* or therap* or train*)) or (exercise adj2 (program* or therap* or train*)) or cross-training).ti,ab,kf.
21	Music Therapy/
22	music therapy.ti,ab,kf.
23	or/10-22
24	and/9,23
25	limit 24 to english language

## PsycINFO 1806 to June 2019

Date searched: June 24, 2020

	Searches
1	Kidney Diseases/
2	((((chronic or endstage or end-stage or endstate or end-state or failure or long-term or maintenance) adj2 (kidney or renal)) or ESKD or ESKF or ESRD or ESRF).ti,ab.
3	Dialysis/ or Hemodialysis/
4	(dialysis or haemodiafiltration or hemodiafiltration or haemo-diafiltration or hemo-diafiltration or haemofiltration or hemofiltration or haemo-filtration or hemo-filtration or haemodialysis or hemodialysis or haemo-dialysis or hemo-dialysis).ti,ab.
5	or/1-4
6	"Depression (Emotion)"/ or Major Depression/ or Reactive Depression/ or Recurrent Depression/ or Treatment Resistant Depression/
7	(depressed or depressive or depression* or suicidal or suicide or suicides).ti,ab.
8	or/6-7
9	and/5,8
10	exp Measurement/ or exp Attitude Measures/ or exp "Checklist (Testing)"/ or exp Inventories/ or exp Psychological Assessment/ or exp Questionnaires/ or exp Rating Scales/ or exp Screening/ or exp Screening Tests/ or exp Standardized Tests/ or exp "Stress and Coping Measures"/ or exp Testing/
11	(checklist* or check-list* or questionnaire or questionnaires or instrument or instruments or inventory or inventories or scale or scales or schedule or schedules or screen or screened or screening or "Beck Depression" or BDI or BDI2 or "geriatric depression scale" or GDS or "Hamilton Rating Scale for Depression" or "Hospital Anxiety and Depression Scale" or HADS or "Kidney Disease Quality of Life" or KDQOL or "Medical Outcomes Study Short Form Health Survey 36" or MOS-SF36 or "Minnesota Multiphasic Personality Inventory" or MMPI or "Multiple Affect Adjective Check List" or MAACL or "Patient Health Questionnaire" or PHQ2 or PHQ-2 or PHQ9 or PHQ-9 or "PRIME-MD" or "Epidemiologic Studies Depression Scale" or CED or CESD or BREF or DASS21 or IDID or "Quick Inventory of Depressive Symptomatology Self-Report" or QIDS-SR or "RAND 36-Item Health Survey" or RAND-36 or "short form 36" or SF-36 or "Structured Clinical Interview" or SCID or "self-rating depression scale" or SDS or "Short Form Health Survey 36" or SF36).ti,ab.
12	("Beck Depression" or BDI or BDI2 or "geriatric depression scale" or GDS or "Hamilton Rating Scale for Depression" or "Hospital Anxiety and Depression Scale" or HADS or "Kidney Disease Quality of Life" or KDQOL or "Medical Outcomes Study Short Form Health Survey 36" or MOS-SF36 or "Minnesota Multiphasic

	Personality Inventory" or MMPI or "Multiple Affect Adjective Check List" or MAACL or "Patient Health Questionnaire" or PHQ2 or PHQ-2 or PHQ9 or PHQ-9 or PHQ-ADS or "PRIME-MD" or "Epidemiologic Studies Depression Scale" or CED or CESD or BREF or DASS21 or IDID or "Quick Inventory of Depressive Symptomatology Self-Report" or QIDS-SR or "RAND 36-Item Health Survey" or RAND-36 or "short form 36" or SF-36 or "Structured Clinical Interview" or SCID or "self-rating depression scale" or SDS or "Short Form Health Survey 36" or SF36).tm.
13	exp Treatment/
14	exp Behavior Modification/ or exp Behavior Therapy/ or Biofeedback Training/ or Contingency Management/ or Self-management/ or Anxiety Management/ or Cognitive Therapy/ or Readiness to Change/ or Relaxation Therapy/ or Self-help Techniques/ or Self-monitoring/ or Stress Management/
15	(cognitive-behavior* or cognitive-behaviour* or intervention or interventions or nondrug or non-drug or nonpharmac* or non-pharmac* or pharmac* or program* or psych* or psychosocial or psycho-social or rehabilitation or therapy or therapies or treat*).ti,ab.
16	Antidepressant Drugs/ or Serotonin Norepinephrine Reuptake Inhibitors/ or Serotonin Reuptake Inhibitors/ or Tricyclic Antidepressant Drugs/ or Bupropion/ or Citalopram/ or Fluoxetine/ or Fluvoxamine/ or "Hydroxytryptophan (5-)" or MAPROTILINE/ or Mianserin/ or Paroxetine/ or RITANSERIN/ or Sulpiride/ or Trazodone/ or Tryptophan/ or Venlafaxine/
17	(antidepress* or anti-depress* or 5-hydroxytryptophan or Amisulpride or Bupropion or Citalopram or Escitalopram or Fluoxetine or Fluvoxamine or Maprotiline or Mianserin or Paroxetine or Quipazine or Ritanserin or Sulpiride or Trazodone or Tryptophan or Venlafaxine Hydrochloride or Viloxazine or SSRI or SSRIs or "selective serotonin reuptake" or "selective serotonin re-uptake" or SNRI or SNRIs or "Serotonin and Noradrenaline Reuptake Inhibitor" or "Serotonin and Noradrenaline Reuptake Inhibitors" or NRI or NRIs or "norepinephrine reuptake inhibitor" or "norepinephrine reuptake inhibitors").ti,ab.
18	(Amitriptyline or Amoxapine or Clomipramine or Desipramine or Dothiepin or Doxepin or Imipramine or Iprindole or Lofefamil or Nortriptyline or Opipramol or Protriptyline or Trimipramine or Gabapentin or Sildenafil or Vardenafil).ti,ab.
19	(nondrug or non-drug or nonpharmacolog* or non-pharmacolog* or coping or psychosocial* or psycho-social* or "social support" or "social work*" or stress).ti,ab.
20	exp Exercise/
21	((((aerobic or resistance) adj2 (exercis* or program* or therap* or train*)) or (exercise adj2 (program* or therap* or train*)) or cross-training).ti,ab.
22	Music Therapy/
23	music therapy.ti,ab.
24	or/10-23
25	and/9,24
26	limit 25 to english language

## Embase.com

Date search: June 24, 2020

#	Search
#26	#25 AND [embase]/lim NOT ([embase]/lim AND [medline]/lim)
#25	#9 AND #23 AND [english]/lim
#24	#9 AND #23
#23	#10 OR #11 OR #12 OR #13 OR #14 OR #15 OR #16 OR #17 OR #18 OR #19 OR #20 OR #21 OR #22
#22	'music therapy':ti,ab,kw
#21	'music therapy'/de
#20	((((aerobic OR resistance) NEAR/2 (exercis* OR program* OR therap* OR train*)):ti,ab,kw) OR ((exercise NEAR/2 (program* OR therap* OR train*)):ti,ab,kw) OR 'cross training':ti,ab,kw
#19	'kinesiotherapy'/de OR 'resistance training'/de
#18	nondrug:ti,ab,kw OR 'non drug':ti,ab,kw OR nonpharmacolog*:ti,ab,kw OR 'non pharmacolog*':ti,ab,kw

#17	amitriptyline:ti,ab,kw OR amoxapine:ti,ab,kw OR clomipramine:ti,ab,kw OR desipramine:ti,ab,kw OR dothiepin:ti,ab,kw OR doxepin:ti,ab,kw OR imipramine:ti,ab,kw OR iprindole:ti,ab,kw OR lofepramine:ti,ab,kw OR nortriptyline:ti,ab,kw OR opipramol:ti,ab,kw OR protriptyline:ti,ab,kw OR trimipramine:ti,ab,kw OR gabapentin:ti,ab,kw OR sildenafil:ti,ab,kw OR vardenafil:ti,ab,kw
#16	'tricyclic antidepressant agent'/de OR 'amitriptyline'/de OR 'clomipramine'/de OR 'desipramine'/de OR 'dosulepin'/de OR 'doxepin'/de OR 'imipramine'/de OR 'iprindole'/de OR 'lofepramine'/de OR 'nortriptyline'/de OR 'opipramol'/de OR 'protriptyline'/de OR 'trimipramine'/de
#15	((antidepress*:ti,ab,kw OR 'anti depress*:ti,ab,kw OR '5 hydroxytryptophan':ti,ab,kw OR amisulpride:ti,ab,kw OR bupropion:ti,ab,kw OR citalopram:ti,ab,kw OR escitalopram:ti,ab,kw OR fluoxetine:ti,ab,kw OR fluvoxamine:ti,ab,kw OR maprotiline:ti,ab,kw OR mianserin:ti,ab,kw OR paroxetine:ti,ab,kw OR quipazine:ti,ab,kw OR ritanserin:ti,ab,kw OR sulpiride:ti,ab,kw OR trazodone:ti,ab,kw OR tryptophan:ti,ab,kw OR 'venlafaxine hydrochloride':ti,ab,kw OR viloxazine:ti,ab,kw OR ssri:ti,ab,kw OR ssris:ti,ab,kw OR 'selective serotonin reuptake':ti,ab,kw OR 'selective serotonin re-uptake':ti,ab,kw OR snri:ti,ab,kw OR snris:ti,ab,kw OR serotonin:ti,ab,kw) AND 'noradrenaline reuptake inhibitor':ti,ab,kw OR serotonin:ti,ab,kw) AND 'noradrenaline reuptake inhibitors':ti,ab,kw OR nri:ti,ab,kw OR nrri:ti,ab,kw OR 'norepinephrine reuptake inhibitor':ti,ab,kw OR 'norepinephrine reuptake inhibitors':ti,ab,kw
#14	'antidepressant agent'/de OR 'serotonin uptake inhibitor'/de OR 'serotonin noradrenalin reuptake inhibitor'/de OR 'adrenergic receptor affecting agent'/de OR '5 hydroxytryptophan'/de OR 'amisulpride'/de OR 'amfebutamone'/de OR 'citalopram'/de OR 'fluoxetine'/de OR 'fluvoxamine'/de OR 'maprotiline'/de OR 'mianserin'/de OR 'paroxetine'/de OR 'quipazine'/de OR 'ritanserin'/de OR 'sulpiride'/de OR 'trazodone'/de OR 'tryptophan'/de OR 'venlafaxine'/de OR 'viloxazine'/de
#13	'cognitive behavior*:ti,ab,kw OR 'cognitive behaviour*:ti,ab,kw OR intervention:ti,ab,kw OR interventions:ti,ab,kw OR nondrug:ti,ab,kw OR 'non drug':ti,ab,kw OR nonpharmac*:ti,ab,kw OR 'non pharmac*:ti,ab,kw OR pharmac*:ti,ab,kw OR program*:ti,ab,kw OR psych*:ti,ab,kw OR psychosocial:ti,ab,kw OR 'psycho social':ti,ab,kw OR rehabilitation:ti,ab,kw OR therapy:ti,ab,kw OR therapies:ti,ab,kw OR treat*:ti,ab,kw
#12	'behavior therapy'/de OR 'cognitive behavioral therapy'/de OR 'mental health service'/de OR 'psychotherapy'/de OR 'psychosocial care'/de OR 'social support'/de OR 'motivational interviewing'/de OR 'patient participation'/de
#11	(checklist*:ti,ab,kw OR 'check list*:ti,ab,kw OR questionnaire:ti,ab,kw OR questionnaires:ti,ab,kw OR instrument:ti,ab,kw OR instruments:ti,ab,kw OR inventory:ti,ab,kw OR inventories:ti,ab,kw OR scale:ti,ab,kw OR scales:ti,ab,kw OR schedule:ti,ab,kw OR schedules:ti,ab,kw OR screen:ti,ab,kw OR screened:ti,ab,kw OR screening:ti,ab,kw OR 'beck depression':ti,ab,kw OR bdi:ti,ab,kw OR bdi2:ti,ab,kw OR 'geriatric depression scale':ti,ab,kw OR gds:ti,ab,kw OR 'hamilton rating scale for depression':ti,ab,kw OR 'hospital anxiety':ti,ab,kw) AND 'depression scale':ti,ab,kw OR hads:ti,ab,kw OR 'kidney disease quality of life':ti,ab,kw OR kdql:ti,ab,kw OR 'medical outcomes study short form health survey 36':ti,ab,kw OR 'mos sf36':ti,ab,kw OR 'minnesota multiphasic personality inventory':ti,ab,kw OR mmpi:ti,ab,kw OR 'multiple affect adjective check list':ti,ab,kw OR maac:ti,ab,kw OR 'patient health questionnaire':ti,ab,kw OR phq2:ti,ab,kw OR 'phq 2':ti,ab,kw OR phq9:ti,ab,kw OR 'phq 9':ti,ab,kw OR 'prime-md':ti,ab,kw OR 'epidemiologic studies depression scale':ti,ab,kw OR ced:ti,ab,kw OR cesd:ti,ab,kw OR bref:ti,ab,kw OR dass21:ti,ab,kw OR idid:ti,ab,kw OR 'quick inventory of depressive symptomatology self-report':ti,ab,kw OR 'qids sr':ti,ab,kw OR 'rand 36-item health survey':ti,ab,kw OR 'rand 36':ti,ab,kw OR 'short form 36':ti,ab,kw OR 'sf 36':ti,ab,kw OR 'structured clinical interview':ti,ab,kw OR scid:ti,ab,kw OR 'self-rating depression scale':ti,ab,kw OR sds:ti,ab,kw OR 'short form health survey 36':ti,ab,kw OR sf36:ti,ab,kw
#10	'brief psychiatric rating scale'/de OR 'diagnostic procedure'/de OR 'neuropsychological test'/de OR 'patient health questionnaire'/de OR 'psychological rating scale'/de OR 'psychologic test'/de OR 'questionnaire'/de
#9	#5 AND #8
#8	#6 OR #7
#7	depressed:ti,ab,kw OR depressive:ti,ab,kw OR depression*:ti,ab,kw OR suicidal:ti,ab,kw OR suicide:ti,ab,kw OR suicides:ti,ab,kw
#6	'depression'/exp
#5	#1 OR #2 OR #3 OR #4
#4	dialysis:ti,ab,kw OR haemodiafiltration:ti,ab,kw OR hemodiafiltration:ti,ab,kw OR 'haemo diafiltration':ti,ab,kw OR 'hemo diafiltration':ti,ab,kw OR haemofiltration:ti,ab,kw OR hemofiltration:ti,ab,kw OR 'haemo filtration':ti,ab,kw OR 'hemo filtration':ti,ab,kw OR haemodialysis:ti,ab,kw OR hemodialysis:ti,ab,kw OR 'haemo dialysis':ti,ab,kw OR 'hemo dialysis':ti,ab,kw

#3	'hemodialysis'/exp OR 'hemofiltration'/exp OR 'hemodiafiltration'/exp OR 'peritoneal dialysis'/exp
#2	((((chronic OR endstage OR 'end stage' OR endstate OR 'end state' OR failure OR 'long term' OR maintenance) NEAR/2 (kidney OR renal)):ti,ab,kw) OR eskd:ti,ab,kw OR eskf:ti,ab,kw OR esrd:ti,ab,kw OR esrf:ti,ab,kw
#1	'chronic kidney failure'/exp

## EBM Reviews:

**Cochrane Central Register of Controlled Trials June 2020**

**Cochrane Database of Systematic Reviews 2005 to June 24, 2020**

**Database of Abstracts of Reviews of Effects 1st Quarter 2016**

**Health Technology Assessment 4th Quarter 2016**

Date searched: June 24, 2020

#	Searches
1	((((chronic or endstage or end-stage or endstate or end-state or failure or long-term or maintenance) adj2 (kidney or renal)) or ESKD or ESKF or ESRD or ESRF).ti,ab.
2	(dialysis or haemodiafiltration or hemodiafiltration or haemo-diafiltration or hemo-diafiltration or haemofiltration or hemofiltration or haemo-filtration or hemo-filtration or haemodialysis or hemodialysis or haemo-dialysis or hemo-dialysis).ti,ab.
3	or/1-2
4	(depressed or depressive or depression* or suicidal or suicide or suicides).ti,ab.
5	and/3-4
6	(checklist* or check-list* or questionnaire or questionnaires or instrument or instruments or inventory or inventories or scale or scales or schedule or schedules or screen or screened or screening or "Beck Depression" or BDI or BDI2 or "geriatric depression scale" or GDS or "Hamilton Rating Scale for Depression" or "Hospital Anxiety and Depression Scale" or HADS or "Kidney Disease Quality of Life" or KDQOL or "Medical Outcomes Study Short Form Health Survey 36" or MOS-SF36 or "Minnesota Multiphasic Personality Inventory" or MMPI or "Multiple Affect Adjective Check List" or MAACL or "Patient Health Questionnaire" or PHQ2 or PHQ-2 or PHQ9 or PHQ-9 or "PRIME-MD" or "Epidemiologic Studies Depression Scale" or CED or CESD or BREF or DASS21 or IDID or "Quick Inventory of Depressive Symptomatology Self-Report" or QIDS-SR or "RAND 36-Item Health Survey" or RAND-36 or "short form 36" or SF-36 or "Structured Clinical Interview" or SCID or "self-rating depression scale" or SDS or "Short Form Health Survey 36" or SF36).ti,ab.
7	(cognitive-behavior* or cognitive-behaviour* or intervention or interventions or nondrug or non-drug or nonpharmac* or non-pharmac* or pharmac* or program* or psych* or psychosocial or psycho-social or rehabilitation or therapy or therapies or treat*).ti,ab.
8	(antidepress* or anti-depress* or 5-hydroxytryptophan or Amisulpride or Bupropion or Citalopram or Escitalopram or Fluoxetine or Fluvoxamine or Maprotiline or Mianserin or Paroxetine or Quipazine or Ritanserin or Sulpiride or Trazodone or Tryptophan or Venlafaxine Hydrochloride or Viloxazine or SSRI or SSRIs or "selective serotonin reuptake" or "selective serotonin re-uptake" or SNRI or SNRIs or "Serotonin and Noradrenaline Reuptake Inhibitor" or "Serotonin and Noradrenaline Reuptake Inhibitors" or NRI or NRIs or "norepinephrine reuptake inhibitor" or "norepinephrine reuptake inhibitors").ti,ab.
9	(Amitriptyline or Amoxapine or Clomipramine or Desipramine or Dothiepin or Doxepin or Imipramine or Iprindole or Lofepramine or Nortriptyline or Opipramol or Protriptyline or Trimipramine or Gabapentin or Sildenafil or Vardenafil).ti,ab.
10	(nondrug or non-drug or nonpharmacolog* or non-pharmacolog*).ti,ab.
11	((((aerobic or resistance) adj2 (exercis* or program* or therap* or train*)) or (exercise adj2 (program* or therap* or train*)) or cross-training).ti,ab.
12	music therapy.ti,ab.
13	or/6-12
14	and/5,13

## **ClinicalTrials.gov**

Date searched: June 24, 2020

( depressed OR depressive OR depression\* OR suicidal OR suicide OR suicides ) AND  
INFLECT EXACT ( "Active, not recruiting" OR "Completed" OR "Suspended" OR  
"Terminated" OR "Withdrawn" OR "Unknown status" ) [OVERALL-STATUS] AND ( ( chronic OR endstage OR end-stage OR failure ) AND ( kidney OR renal ) OR ESKD OR  
ESKF OR ESRD OR ESRF OR dialysis OR haemodiafiltration OR hemodiafiltration OR  
haemo-diafiltration OR hemo-diafiltration OR haemofiltration OR hemofiltration OR  
haemo-fi ) [DISEASE]

## **WHO ICTRP**

Date searched: June 24, 2020

((((chronic OR endstage OR end-stage OR failure) AND (kidney OR renal)) OR ESKD OR  
ESKF OR ESRD OR ESRF) AND (depress\* OR suicid\*))

## **VA HSR&D**

<https://www.hsr.dresearch.va.gov/research/>

Date searched: June 24, 2020

Separately searched terms: kidney and renal. Reviewed result lists

## Item S2. Study Selection Criteria (Parent VA Review)

### Inclusion/Exclusion Criteria for Full Text Review

1. **Language:** Is the full text of the article in English?  
Yes.....Proceed to #2  
No .....Code **X1**. STOP
  
2. **Population:** Does the study include adults with ESRD or CKD (or CKF, CRF) undergoing maintenance dialysis?  
Yes .....Proceed to #3  
No .....Code **X2**. Add code **B** (example: X2 – B) if retaining for background/discussion. STOP
  
3. **Population:** Does the study include adults screened, diagnosed with, or treated for depression?  
Yes.....Proceed to #4  
No... .....Code **X2**. Add code **B** if retaining for background/discussion. STOP
  
4. **KQ1:** Does the study examine screening tool(s) for depression?  
Yes.....Proceed to Q5  
No .....Code **0** for **KQ1**. Proceed to Q6
  
5. **KQ1:** Does the study compare a screening tool against the gold standard (*e.g.*, clinical interview – *e.g.*, SCID) or another validated depression assessment tool?  
Yes, gold standard (*e.g.*, clinician interview/SCID)...Code **I** for "**I or X Code**" and **1** for **KQ1**. STOP  
Yes, another depression tool.....Code **I** for "**I or X Code**" and **1 - Tool** for **KQ1**. STOP  
No .....Proceed to Q6 (and code **0** for **KQ1**)
  
6. **Study Design:** Is the study original quantitative research, a systematic review (SR) or meta-analysis (MA; exclude other literature reviews, editorials, qualitative research, etc.)?  
Yes..... If **SR or MA** code **X3 - PEARL**.  
If other quantitative, Proceed to Q7  
No.....Code **X3**. Add code **B** (example: X3 – B) if retaining for background/discussion. Code **0** for all **KQs**. STOP
  
7. **Comparator:** The study has a comparison group (other screening tool, no screening, other intervention, waitlist controls, etc.). Pre-post studies are excluded.  
Yes ..... Proceed to Q8  
No.....Code **X4**. Add code **B** if retaining for background/discussion. Code **0** for all **KQs** STOP
  
8. **Outcomes:** Does the study report 1 or more of the following outcomes **specifically for the population of interest** (ESRD/CKD maintenance dialysis) Diagnostic test performance: sensitivity, specificity, positive predictive value, and negative predictive value; Therapeutic impact: timing, setting, or type of treatment.; Intermediate and Patient outcomes: depressive symptoms, mortality, suicide attempts or completion, hospitalization, ED/urgent care utilization, patient satisfaction, adherence to dialysis, medication, or treatment, pain medication reduction, BP/metabolic control, quality of life, other outcomes (*e.g.*, employment); Adverse effects or unintended consequences. Prevalence and correlational studies are excluded.  
Yes .....Proceed to Q9  
No.....Code **X5**. Add code **B** if retaining for background/discussion. Code **0** for all **KQs** STOP



9. Does the article or main study (from which the data were gathered) examine the impact of screening or the effectiveness of treatment for depression (including subgroup differences or harms)?  
 Yes, screening .....Proceed to Q10  
 Yes, treatment:  
     Is depression an inclusion criterion, or is the average depression score of participants equivalent to at least moderate depression? (Cutoffs: PHQ-9  $\geq$  10;<sup>1</sup> CES-D  $\geq$  18;<sup>2</sup> HAM-D  $\geq$  12;<sup>3</sup> BDI-II  $\geq$  16;<sup>2,3</sup> BDI-II  $\geq$  13;<sup>3</sup> HADS  $\geq$  8<sup>4,5</sup>)  
     No.....Code **X2**  
     Yes.....Proceed to Q10  
 No .....Code **X5**. Add code **B** if retaining for background/discussion. STOP
10. **Harms:** Does the article examine the harms of screening or treatment?  
 Yes.....Code **I** for "**I or X Code**" and **1** for **KQ4**. Proceed to Q11.  
 No.....Code **0** for **KQ4**. Proceed to Q11.
11. **Study Design:** Does the article describe data collected as part of an RCT or NRCT?  
 Yes.....Proceed to Q12.  
 No.....Code **X3**. Code **0** for **KQs 2, 3**. STOP.
12. **KQs 2 and 3:** Does the study examine the impact of screening or treatment?  
 Yes.....Code **I** for "**I or X Code**" and **1** for **KQ2** if screening and/or **1** for **KQ3** if treatment. Code **0** for **KQ 2 or 3** if NA. STOP.  
 No.....Code **0** for **KQs 2 and 3**. STOP.

**All articles should have at least 1 code. If not, re-review. Be sure that all articles are coded 0 for all KQs that are not relevant.**

**Table S1. PICOTS by Key Question**

<b>Key Question:</b>	<b>KQ1: What is the effectiveness of depression treatment in patients with ESRD and depression:</b> a. pharmacological? b. non-pharmacological? c. pharmacological and non-pharmacological treatments combined?	<b>KQ2: In patients with ESRD, what are the potential harms of treatment for depressed patients?</b> i. pharmacological? ii. non-pharmacological?	<b>KQ3: Do the benefits or harms of treatment differ by:</b> a. patient characteristics or other social determinants of health? b. setting? c. provider characteristics (e.g., mental health, PCP)? d. other (e.g., patient engagement/ receptivity to treatment, social support)? e. timing and type of follow up?
<b>Population</b>	Adults with ESRD and depression (Cutoffs: PHQ-9 $\geq$ 10; <sup>1</sup> CES-D $\geq$ 18; <sup>2</sup> HAM-D $\geq$ 12; <sup>3</sup> BDI-II $\geq$ 16; <sup>2,3</sup> BDI $\geq$ 13; <sup>3</sup> HADS $\geq$ 8 <sup>4,5</sup> ). If study specified inclusion of subclinical or mild depression in eligibility criteria, we excluded it.		
<b>Intervention</b>	Pharmacological (4+ weeks) and non-pharmacological treatments for depression		
<b>Comparators</b>	Placebo, waitlist control, other intervention		
<b>Outcomes</b>	<u>Intermediate and Patient outcomes:</u> depressive symptoms, mortality, suicide attempts or completion, hospitalization, ED/urgent care utilization, patient satisfaction, adherence to dialysis, medication, or treatment, pain medication reduction, BP/metabolic control, quality of life, other outcomes (e.g., employment)	Adverse effects or unintended consequences	<u>Intermediate and Patient outcomes:</u> depressive symptoms, mortality, suicide attempts or completion, hospitalization, ED/urgent care utilization, patient satisfaction, adherence to dialysis, medication, or treatment, pain medication reduction, BP/metabolic control, quality of life, other outcomes (e.g., employment)
<b>Timing</b>	Any		
<b>Settings</b>	All settings in U.S. or international (VHA, hospital community, community mental health, ED, urgent care, other community)		
<b>Study design</b>	Systematic reviews, RCTs, NRCTs	Systematic reviews, RCTs, NRCTs, Observational studies	

Note. Subpopulations may include: Patient demographic characteristics or social determinants of health; treated by HD (home or clinic); treated by PD (home or clinic); clinical severity (ESRD or depression); setting (e.g. VHA, community hospitals, community mental health, ED, urgent care visits for mental health, home vs clinic-based dialysis); other. Abbreviations: CES-D = Center for Epidemiologic Studies Depression Scale; BDI = Beck Depression Inventory; BP = blood pressure; ED = emergency department; ESRD = End-stage Renal Disease; HADS = Hospital Anxiety and Depression Scale; HAM-D = Hamilton Depression Rating Scale; NRCT = Non-randomized controlled trial; PHQ-9 = Patient Health Questionnaire-9; RCT = Randomized controlled trial; VHA = Veterans Health Administration

**Table S2. Strength of Evidence Domains and Grading**

<b>Strength of Evidence Domains</b>				
<p><b>Study Limitations</b> (Internal Validity)</p> <ul style="list-style-type: none"> <li>Degree to which the include studies for a given outcome have a high likelihood of adequate protection against bias assessed through:                             <ul style="list-style-type: none"> <li>Study Design</li> <li>Study Conduct</li> </ul> </li> </ul>	<p><b>Directness</b></p> <ul style="list-style-type: none"> <li><u>Direct</u>: the evidence links intervention to a health outcome</li> <li><u>Indirect</u>: only intermediate outcomes are available (e.g., lab tests) when outcomes of interest are health outcomes (e.g., mortality)</li> <li><u>Indirect</u>: data come from proxy respondents</li> <li><u>Indirect</u>: data do not come from head-to-head comparisons but from two or more bodies of evidence</li> </ul> <p><i>Indirectness implies that more than one body of evidence is required to link evidence to the most important health outcomes.</i></p>	<p><b>Consistency</b></p> <ul style="list-style-type: none"> <li>Degree to which included studies find either the same direction or similar magnitude of effect</li> <li><u>Direction of effect</u>: effect sizes have the same sign (are on the same side of no effect or a MID)</li> <li><u>Magnitude of effect</u>: The range of effect sizes is similar (may consider overlap in confidence intervals)</li> </ul>	<p><b>Precision</b></p> <ul style="list-style-type: none"> <li>Degree of certainty surrounding an effect estimate with respect to a given outcome based on the sufficiency of sample size and number of events</li> <li>In a meta-analysis, consider whether the CI crossed a threshold for a MID</li> <li>Consider the narrowness of individual study CI ranges or significance of p-values in evidence base</li> </ul>	<p><b>Reporting Bias</b></p> <ul style="list-style-type: none"> <li><u>Publication bias</u>: nonreporting of the full study</li> <li><u>Selective outcome reporting bias</u>: nonreporting or incomplete reporting of planned outcomes or reporting of unplanned outcomes</li> <li><u>Selective analysis reporting bias</u>: reporting of one or more favorable analyses for a given outcome while not reporting other, less favorable analyses</li> </ul>
<b>Strength of Evidence Grades</b>				
<p><b>Insufficient</b></p> <p>We have no evidence, we are unable to estimate an effect, or we have no confidence in the estimate of effect for this outcome.</p> <p><i>No evidence is available, or the body of evidence has unacceptable deficiencies, precluding reaching a conclusion.</i></p>	<p><b>Low</b></p> <p>We have limited confidence that the estimate of effect lies close to the true effect for this outcome.</p> <p><i>The body of evidence has major or numerous deficiencies (or both). We believe that additional evidence is needed before concluding either that the findings are stable or that the estimate of effect is close to the true effect.</i></p>	<p><b>Moderate</b></p> <p>We are moderately confident that the estimate of effect lies close to the true effect for this outcome.</p> <p><i>The body of evidence has some deficiencies. We believe that the findings are likely to be stable, but some doubt remains.</i></p>	<p><b>High</b></p> <p>We are very confident that the estimate of effect lies close to the true effect for this outcome.</p> <p><i>The body of evidence has few or no deficiencies. We believe that the findings are stable, that is, another study would not change the conclusions.</i></p>	

Abbreviations: CI = confidence interval; MID = minimum important difference; SOE = strength of evidence  
 Note: This table provides a summary of the elements described in Berkman and colleagues, 2015<sup>6</sup>

## References

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