The Pearls Program: Community-Based, In-Home Collaborative Care For Treating Depression In Individuals With Co-Morbid Medical Conditions

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Acknowledgments

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COLLABORATIVE CARE

PEARLS COUNSELOR

MEDICAL PROVIDER

PATIENT

PSYCHIATRIST
Community-Integrated Home-Based Depression Treatment in Older Adults
A Randomized Controlled Trial

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Context  Older adults with social isolation, medical comorbidity, and physical impairment are more likely to be depressed but may be less able to seek appropriate care for depression compared with older adults without these characteristics.

Objective  To determine the effectiveness of a home-based program of detecting and managing minor depression or dysthymia among older adults.

Design and Setting  Randomized controlled trial with recruitment through community senior service agencies in metropolitan Seattle, Wash, from January 2000 to May 2003.

Patients  One hundred thirty-eight patients aged 60 years or older with minor depression (51.4%) or dysthymia (48.6%). Patients had a mean of 4.6 (SD, 2.1) chronic medical conditions; 42% of the sample belonged to a racial/ethnic minority, 72% lived alone, 58% had an annual income of less than $10,000, and 69% received a form of home assistance.

Interventions  Patients were randomly assigned to the Program to Encourage Active, Rewarding Lives for Seniors (PEARLS) intervention (n=72) or usual care (n=66). The PEARLS intervention consisted of problem-solving treatment, social and physical activation, and potential recommendations to patients’ physicians regarding antidepressant medications.
# Study Participant Demographics

<table>
<thead>
<tr>
<th></th>
<th>Usual Care (n=66)</th>
<th>Intervention (n=72)</th>
<th>Total (n=138)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>50 (76%)</td>
<td>59 (82%)</td>
<td>109 (79%)</td>
</tr>
<tr>
<td>Average age</td>
<td>73.5</td>
<td>72.6</td>
<td>73.0</td>
</tr>
<tr>
<td>Living Alone</td>
<td>43 (65%)</td>
<td>56 (78%)</td>
<td>99 (72%)</td>
</tr>
<tr>
<td>Married or Living with</td>
<td>7 (11%)</td>
<td>8 (11%)</td>
<td>15 (11%)</td>
</tr>
<tr>
<td>Partner</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ethnic Minority</td>
<td>28 (43%)</td>
<td>30 (42%)</td>
<td>58 (42%)</td>
</tr>
<tr>
<td>Annual Household income</td>
<td>33 (51%)</td>
<td>45 (64%)</td>
<td>78 (58%)</td>
</tr>
<tr>
<td>&lt;$10,000</td>
<td></td>
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<tr>
<td>Clinical Characteristics</td>
<td>Usual Care (n=66)</td>
<td>Intervention (n=72)</td>
<td>Total (n=138)</td>
</tr>
<tr>
<td>--------------------------------------------------------------</td>
<td>-------------------</td>
<td>---------------------</td>
<td>---------------</td>
</tr>
<tr>
<td>Average Depression Score</td>
<td>1.2</td>
<td>1.3</td>
<td>1.3</td>
</tr>
<tr>
<td>No. of Chronic Conditions</td>
<td>4.6</td>
<td>4.5</td>
<td>4.6</td>
</tr>
<tr>
<td>Receiving Treatment for Depression</td>
<td>16 (24%)</td>
<td>24 (33%)</td>
<td>40 (29%)</td>
</tr>
<tr>
<td>Hospitalizations in past 6 months</td>
<td>19 (29%)</td>
<td>20 (28%)</td>
<td>39 (28%)</td>
</tr>
<tr>
<td>ER visits in the past 6 months</td>
<td>25 (38%)</td>
<td>29 (40%)</td>
<td>54 (39%)</td>
</tr>
</tbody>
</table>
Intervention Group

Intervention participants received:

• a mean of 6 in-person visits (3 had no visits)
• a mean of 3.5 follow-up phone contacts (23 participants received no follow-up phone contacts)
Intervention Group

The psychiatrist made 52 telephone contacts during the course of the intervention.

• 37 were with providers to discuss:
  - antidepressant recommendations (19)
  - laboratory tests (10)
  - cognition (7)
  - other medications (4)
  - alcohol rehabilitation (2)
  - sleep apnea (1)
  - falls (1)
  - pain complaints (1)
≥50% Drop in HSCL-20 Depression Score from Baseline

JAMA 2004; 291:1569-1577

P<.001

P<.001

percent

month

6

12

Usual care

Intervention
% Achieving Remission (HSCL-20 score < 0.5)

JAMA 2004; 291:1569-1577

P<.001

P=.002

percent

month

Usual care  Intervention
Quality of Life

Change in participants over 12 months

• **Functional well-being:**
  intervention = .52 (95% CI = .29 to .74)
  usual care = .09 (95% CI = -.14 to .33)

• **Emotional well-being:**
  intervention = .33 (95% CI = .14 to .52)
  usual care = .11 (95% CI = -.09 to .31)
Health Care Utilization: Any Hospitalizations in Prior 6 mos.

JAMA 2004; 291:1569-1577

P = .07
Cost Assessment

Mean costs of providing the PEARLS program per participant:

- $422 for PST intervention
- $28 for follow-up phone calls
- $12 in psychiatric follow-up phone calls
- $87 for psychotherapy quality assurance
- $81 for depression management team sessions

**Total mean cost per participant = $630**
PEARLS depression treatment for individuals with epilepsy: A randomized controlled trial

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ABSTRACT

Objective: Depression is associated with higher rates of suicide and lower levels of functioning and quality of life in individuals with epilepsy. The objective of this randomized controlled trial was to determine the effectiveness of PEARLS, a home-based program for managing depression in adult individuals with epilepsy and clinically significant acute and chronic depression.

Methods: Delivered by masters-level counselors, PEARLS is a collaborative care intervention consisting of problem solving treatment, behavioral activation, and psychiatric consultation. Patients were randomly assigned to the PEARLS intervention (N = 40) or usual care (N = 40), and assessed at baseline, 6 months, and 12 months.

Results: Compared with patients who received usual care, patients assigned to the PEARLS intervention achieved lower depression severity (P < 0.005) (Hopkins Symptoms Checklist-20) and lower suicidal ideation (P = 0.025) over 12 months.

Conclusions: The PEARLS program, a community-integrated, home-based treatment for depression, effectively reduces depressive symptoms in adults with epilepsy and comorbid depression.
## Demographics

<table>
<thead>
<tr>
<th>Category</th>
<th>Usual Care (n=40)</th>
<th>Intervention (n=40)</th>
<th>Total (n=80)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average age</td>
<td>44.4</td>
<td>43.4</td>
<td>43.9</td>
</tr>
<tr>
<td>Female</td>
<td>23 (58%)</td>
<td>19 (48%)</td>
<td>42 (53%)</td>
</tr>
<tr>
<td>Living Alone</td>
<td>8 (20%)</td>
<td>17 (43%)</td>
<td>25 (31%)</td>
</tr>
<tr>
<td>Married/Living with Partner</td>
<td>29 (73%)</td>
<td>26 (65%)</td>
<td>55 (69%)</td>
</tr>
<tr>
<td>Ethnic Minority</td>
<td>11 (28%)</td>
<td>11 (28%)</td>
<td>22 (28%)</td>
</tr>
<tr>
<td>Education Beyond HS</td>
<td>19 (48%)</td>
<td>26 (65%)</td>
<td>45 (56%)</td>
</tr>
<tr>
<td>Unemployed</td>
<td>31 (80%)</td>
<td>24 (60%)</td>
<td>55 (70%)</td>
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</table>
## Clinical Characteristics

<table>
<thead>
<tr>
<th></th>
<th>Usual Care (n=40)</th>
<th>Intervention (n=40)</th>
<th>Total (n=80)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of Chronic Conditions</td>
<td>2.9</td>
<td>2.8</td>
<td>2.9</td>
</tr>
<tr>
<td>Hospitalizations in past 6 months</td>
<td>6 (15%)</td>
<td>10 (25%)</td>
<td>16 (20%)</td>
</tr>
<tr>
<td>ER visits in the past 6 months</td>
<td>18 (45%)</td>
<td>20 (50%)</td>
<td>38 (48%)</td>
</tr>
<tr>
<td>Seizure with LOC past 6 months</td>
<td>22 (55%)</td>
<td>19 (48%)</td>
<td>41 (51%)</td>
</tr>
<tr>
<td>Seizure without LOC past 6 months</td>
<td>22 (55%)</td>
<td>23 (58%)</td>
<td>45 (56%)</td>
</tr>
<tr>
<td>Any seizure, past 6 months</td>
<td>30 (75%)</td>
<td>29 (73%)</td>
<td>59 (74%)</td>
</tr>
<tr>
<td>Cognitive MMSE screen score (of 6)</td>
<td>5.7</td>
<td>5.6</td>
<td>5.6</td>
</tr>
</tbody>
</table>
## Depression

<table>
<thead>
<tr>
<th></th>
<th>Usual Care (n=40)</th>
<th>Intervention (n=40)</th>
<th>Total (n=80)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SCL-20 Depression Score</strong></td>
<td>1.9 (0.6)</td>
<td>2.1 (0.6)</td>
<td>2.0 (0.6)</td>
</tr>
<tr>
<td><strong>Major Depression</strong></td>
<td>27 (68%)</td>
<td>28 (70%)</td>
<td>55 (69%)</td>
</tr>
<tr>
<td><strong>Minor Depression</strong></td>
<td>2 (5%)</td>
<td>8 (20%)</td>
<td>10 (13%)</td>
</tr>
<tr>
<td><strong>Dysthymic Disorder</strong></td>
<td>33 (83%)</td>
<td>31 (78%)</td>
<td>64 (80%)</td>
</tr>
<tr>
<td><strong>Counseling past 6 months</strong></td>
<td>8 (20%)</td>
<td>14 (35%)</td>
<td>22 (28%)</td>
</tr>
<tr>
<td><strong>Receiving Antidepressants</strong></td>
<td>17 (43%)</td>
<td>15 (38%)</td>
<td>32 (40%)</td>
</tr>
<tr>
<td><strong>Receiving Benzodiazepines</strong></td>
<td>7 (18%)</td>
<td>7 (18%)</td>
<td>14 (18%)</td>
</tr>
</tbody>
</table>
Suicide

Change in suicidal ideation over 12 months:

Usual care:  +12%

PEARLS:  -24%

p = .025
Antidepressant use

Any addition or change in antidepressant over 12 months:

Usual care: 3.4%

PEARLS: 25.7%

p = .11
Antiepileptic agent use

Any addition or change in antiepileptic agent over 12 months:

Usual care: 10.3%

PEARLS: 31.4%

\[ p = 0.08 \]
\( p = 0.04 \)

- **QOLIE Total Score**
- **Seizure Worry**
- **Overall Quality of Life**
- **Emotional Well-Being**

**Usual Care** **Intervention**
18 Month Results
Depression BL-18 mos.

p<.05

**Graph:**
- **HSCL-20** vs. **Baseline, 6 Months, 12 Months, 18 months**
- **Usual Care** (red diamonds)
- **PEARLS** (blue squares)
- Line graph showing a decrease in HSCL-20 scores from Baseline to 18 months for both Usual Care and PEARLS, with Usual Care showing a more pronounced decrease.

**Note:** The p-value indicates statistical significance.
Suicidal Ideation BL-18 mos.

p<.01

HSCL-20 Suicide Items

Baseline 6 Months 12 Months 18 months

Usual Care  PEARLS
PEARLS is a national evidence-based treatment program for depression -- Creating active, rewarding lives in seniors and in adults with epilepsy.

PEARLS integrates a number of proven treatment strategies that can be tailored to meet the unique needs of every person you care for.

Over the decade since we created PEARLS, we continue to follow our steadfast mission to show you and your organization the best path to effective depression care for clients and patients in your community.
What is Training Xchange?

Training Xchange at the University of Washington provides researchers, educators, and program directors with innovative solutions that transform research into adult learning programs. We offer effective alternatives to disseminate interventions, deliver targeted material, and design inventive training programs for a broad audience.
The PEARLS training program teaches participants the knowledge and skills necessary to:
- Identify depression among community-dwelling clients, and
- Assist these clients to effectively manage and decrease their depression

An evidence-based behavioral treatment program, the PEARLS training focuses on two client populations: older adults and individuals with epilepsy.

Research studies have demonstrated that the PEARLS approach is effective at reducing depression symptoms and improving the quality of life for individuals. PEARLS is included in the Substance Abuse and Mental Health Services Administration’s National Registry of Evidence-Based Programs.

- Participants receiving the PEARLS depression treatment program for older adults were shown to be three times as likely as patients receiving usual care to result in complete recovery from depression. (1)
- Adults with epilepsy receiving PEARLS were more likely to have reductions in depression, suicide, and improvements in emotional well-being, as compared to usual care. (2)

Course Offerings

- In-Person Training
- Online Training

For more information on the PEARLS program, please visit www.pearlsprogram.org.