

Integrating Care Coordination and Mental Health Research Into Dialysis Practice: Stakeholder Perspectives, Methods, and Outcomes



Amber B. Paulus, PhD, Jered M. Wendte, PhD, and Brandy Vinson, BBA

Rationale & Objective: Despite many studies suggesting beneficial innovations for patients, few make it into clinical practice. This study aims to enhance patient care by facilitating effective dissemination of patient-centered outcomes research to health care workers in outpatient dialysis facilities, aided by the Patient-Centered Outcomes Research Institute's (PCORI) dissemination and implementation framework.

Study Design: Dissemination and implementation project.

Setting & Population: Outpatient hemodialysis facilities in the United States.

Methods: We brought together panels of key stakeholders, which included researchers, patient subject matter experts, and dialysis personnel. Their role was to provide guidance on the content and methods for disseminating research findings. With a focus on 2 critical patient safety areas—care coordination or care transitions and mental or behavioral health—we developed virtual education modules. These modules were then made available to outpatient dialysis facilities by the national 5-Diamond Patient Safety Program.

Results: In 2022, the training was used by more than 2,500 dialysis facilities and approximately 40,000 dialysis staff in the care coordination module, and by more than 300 dialysis facilities and 5,000 staff for the mental health module. Cumulatively, the modules affected more than 179,000 patients. Evidence of efficacy was the significant increase in trainee knowledge of research findings and implementation considerations ($P \leq 0.05$).

Limitations: Potential selection bias because dialysis facilities that did not participate in the program may differ significantly from those that did, which may affect generalizability. In addition, variable timing in release of the different modules may have influenced uptake by facilities.

Conclusions: By using key stakeholder guidance and accessible virtual education modules, the implementation framework shows promise in effectively disseminating research findings within outpatient dialysis settings. This method potentially carries implications for broader health care settings as well.

Complete author and article information provided before references.

Correspondence to
A.B. Paulus (paulusab@vcu.edu)

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Kidney disease is a prevalent condition in the United States, with more than 557,000 patients receiving dialysis treatment, the majority of which takes place in outpatient dialysis facilities.¹ These facilities are complex environments where multidisciplinary providers use advanced technology to manage kidney disease. However, this often leads to unintended consequences for patients, such as increased hospitalizations, health care-associated infections, adverse events, and complications related to treatment. Despite the Patient-Centered Outcomes Research Institute (PCORI) funding more than 20 comparative effectiveness research studies focused on improving kidney disease care,² significant barriers impede the effective dissemination and implementation of research findings into clinical practice. Current knowledge emphasizes the role of research in supporting evidence-based, patient-centered care; however, targeted efforts are necessary to extend the reach to health care workers in the outpatient dialysis setting. Overcoming these barriers is critical to facilitate the translation of research findings into daily practice, thereby enhancing patient outcomes and reducing adverse events within these complex organizations.

The substantial delay in translating patient-centered outcomes research (PCOR) into practice is exacerbated by limited awareness, accessibility, and understanding of research among health care workers in dialysis facilities nationwide. There is an added constraint of maintaining staff engagement with the research findings because some research encompasses expanded care teams that facilities have limited financial resources to implement. Hence, this project was initiated to address the need to effectively disseminate relevant PCORI-funded comparative effectiveness research findings to impact dialysis health care workers' awareness and understanding of evidence.

The primary objective of our intervention was to enhance dialysis health care workers' understanding of kidney disease research findings in 2 key areas: care coordination/care transitions and mental/behavioral health. We aimed to augment the efficacy of patient care processes and ultimately enhance patient outcomes by equipping health care workers with evidence-based knowledge. The timing of this study is pertinent given the continued growth of the dialysis patient population and the evolving health care landscape towards value-based care that demands an increasingly evidence-based approach. We

PLAIN-LANGUAGE SUMMARY

Our study addresses a common health care challenge—many promising ideas for improving patient care never actually reach the patients. We aimed to bridge the dissemination gap by sharing research with health care workers in outpatient dialysis, promoting evidence-based practice. We collaborated with experts, patients, and dialysis personnel to develop easy-to-understand educational materials focused on 2 critical topics: care coordination and mental health. In 2022, our training benefited more than 2,500 facilities and 40,000 staff for care coordination, and 300 facilities with 5,000 staff for mental health, positively affecting more than 179,000 patients. We found that the training significantly increased knowledge among staff. Our approach shows promise for sharing research effectively in dialysis centers and potentially in other health care settings.

believe that by increasing awareness, accessibility, and understanding of research findings, we can successfully drive changes in care processes and positively affect patient outcomes.

The primary study question was: will the implementation of a structured educational intervention focus on 2 key domains—care coordination or care transitions and mental or behavioral health—increase dialysis health care workers' knowledge of comparative effectiveness research?

METHODS**Ethical Issues**

By conducting this study at the dialysis facility level, no person-specific data was collected, effectively minimizing potential ethical concerns regarding individual privacy and data protection.

Setting

The project was implemented using the established 5-Diamond Patient Safety Program, a virtual education platform designed to enhance patient safety and foster a safety-oriented culture within outpatient hemodialysis facilities across the United States. The program, operational since 2008, boasts a resource library of 19 education modules, each equipped with tools and resources essential for patient safety concepts. These modules are periodically updated in line with pertinent literature.

The program, available to all US dialysis facilities, offers a diamond as a reward for completing each module. Facilities achieving all program requirements are annually recognized as 5-Diamond Patient Safety Facilities. Enrollment for the program is open to all facilities annually and can be accessed on the 5-Diamond website.³ In addition, strategic partnerships with Fresenius kidney care and dialysis clinic, Inc



Figure 1. Framework for dissemination and implementation of patient-centered outcomes research.

further enhance its offerings. Since 2014, the program has consistently served an average of 2,675 dialysis facilities annually, signifying its widespread reach and potential for implementing nationwide improvements in patient safety within the outpatient dialysis setting.

Planning the Intervention

To disseminate research findings, we followed the Dissemination and Implementation Framework by the PCORI displayed in Fig 1.⁴

A focus on care coordination or care transitions as a priority topic for dissemination of evidence was influenced by the complexity of care coordination in dialysis facilities, particularly with interprofessional collaboration and the presence of advanced technology in the care setting. In 2001, the Institute of Medicine published *Crossing the Quality Chasm: A New Health System for the 21st Century*, which articulated the divide between status quo health care and desired health care that produces positive outcomes.⁵ Care coordination was identified as a key strategy to improve the effectiveness, efficiency, and safety of the health care system. Care coordination is the process of organizing and coordinating health care services and resources to meet the needs of patients, particularly those with complex or chronic conditions.⁶ Individuals with chronic kidney disease (CKD) often have multiple comorbid conditions and are managed by many different medical specialists. This complexity coupled with a fragmented health care system with ineffective communication can create challenges in care delivery that yield suboptimal outcomes and opportunities for patient safety issues.

Table 1. Dissemination and Implementation of PCOR in Care Coordination or Care Transitions and Mental or Behavioral Health Based on PCORI's Framework

	Care Coordination/Care Transitions	Mental/Behavioral Health
Evidence assessment	The technical expert panel evaluated the feasibility of implementing the Hynes et al ⁷ study findings and suggested telehealth solutions and utilization of kidney disease quality of life (KDQOL) measures in practice.	In the context of end stage renal disease (ESRD) Quality Incentive Program (QIP) requirements for depression screening, ¹² the technical expert panel evaluated the findings from the ASCEND (Mehrotra et al ⁹) and Nestsiarovich studies, discussing challenges related to medication prescribing and cognitive-behavioral therapy (CBT) provision.
Audience identification and partner engagement	The technical expert panel identified dialysis facility medical directors, nephrologists, ESRD networks, and dialysis organizations as key roles and stakeholders.	Key stakeholders identified included medical directors, nephrologists, ESRD networks, dialysis organizations, and kidney patient advocate organizations.
Dissemination	Emphasized sharing evidence of reduced hospitalizations and emergency department visits through increased primary care physician (PCP) visits and creating tools to support care transitions.	Recommended education around QIP measure requirements and developing resources considering the stigma associated with mental health diagnosis.
Implementation	Proposed telehealth visits with PCPs, nurse coordinators, or pharmacists, and adoption of a hub-and-spoke model for telehealth PCPs. ¹¹	Suggested freeing up social workers' time for CBT provision, providing CBT training, and implementing electronic health record system prompts for medication interaction checks.
Evaluation	Pretests and posttests designed to assess understanding of care coordination and care transitions, patient-centered medical home, and interventions to improve care coordination.	Pretests and posttests created to gauge comprehension of psychiatric disorder prevalence among dialysis recipients, depression symptoms, frequency of depression screenings, and interventions for securing necessary mental health services for dialysis patients.

Therefore, we sought to disseminate the findings of a comparative effectiveness research study conducted by Hynes et al.⁷ The authors evaluated a patient-centered medical home model for dialysis patients. Patients managed through a patient-centered medical home reported better quality of life and improved mental health after receiving coordinated care, leading the researchers to conclude that the patient-centered medical home model could improve outcomes and reduce health care costs.⁷

Our focus on mental or behavioral health took into consideration the rising instances of mental health issues among patients with kidney failure. Evidence suggests a link in patients diagnosed with kidney failure and declining mental health.⁸ Poorly managed mental health can lead to several patient safety issues including medication errors, self-harm, and an increase in undesirable behaviors. We sought to disseminate findings of 2 comparative effectiveness research studies that considered the treatment of CKD and mental or behavioral health in parallel. First, a comparative effectiveness research study by Mehrotra et al⁹ explored the outcomes of providing treatment for depression coincident with hemodialysis therapy. The researchers found that patients who received either cognitive-behavioral therapy or sertraline had similar reductions in depression symptoms.⁹ Second, we sought to disseminate the findings of a study by Nestsiarovich et al¹⁰ that examined the risk of kidney disorders associated with 71 pharmacotherapies used in treatment of

bipolar disorder. The researchers found that some medications, such as lithium and valproate, were associated with increased risk of kidney disorders.¹⁰

After the PCORI framework, we conducted a comprehensive engagement with stakeholders including researchers, patients with kidney disease, and dialysis facility health care workers (ie, end-users of the 5-Diamond Program—social workers, dietitians, and nurses), grouped into technical expert panels for each focus area. The care coordination or care transitions technical expert panel comprised 8 key stakeholders, including nurses, patient subject matter experts, a research subject matter expert, and the principal investigator of the study by Hynes et al.⁷ The mental or behavioral health technical expert panel included nurses, a social worker, patient subject matter experts, and principal investigators from the studies by Nestsiarovich et al¹⁰ and Mehrotra et al.⁹ Technical expert panels were presented with comparative effectiveness research study findings relevant to their focus area.

Initial implementation plans involved designing virtual education modules based on insights from the technical expert panels. The process of technical expert panel evaluation using the PCORI framework is described in Table 1.^{11,12}

The care coordination or care transitions module stressed the benefits of patient-centered medical home models. The module facilitated the application of the care coordination intervention, despite the acknowledged complexities in implementing the patient-centered

medical home model across all dialysis facilities. Our technical expert panel recognized the financial and logistical barriers to full implementation of the patient-centered medical home model as it was presented in the study by Hynes et al,⁷ primarily because of the requirement for additional personnel, including a primary care doctor, a nurse coordinator, a pharmacist, and a community health worker.⁷ Full implementation of the patient-centered medical home intervention would present financial constraints at the facility-level; however, the technical expert panel strongly advocated for increasing awareness among dialysis facilities of the roles and responsibilities of these additional team members as delineated in the patient-centered medical home model. They believed that this knowledge could inspire facilities to creatively adapt their existing task roles, thus incorporating elements of the patient-centered medical home approach and improving care coordination. The modules were designed to provide adaptable insights and strategies that could catalyze positive changes in patient care, within the diverse and varied constraints of individual dialysis facilities.

The mental or behavioral health module underscored the importance of regular mental health check-ups and concurrent offering of depression treatment for improving quality of life. Furthermore, the modules emphasized regular kidney function monitoring for possible medication risks in patients with bipolar disorder and kidney disease, especially for those considering kidney transplant.

Planning the Study of the Intervention

Leveraging the technical expert panel recommendations, the project team conducted an observational quality improvement project aimed to assess the successful integration of PCORI-funded research into the 5-Diamond Program. This was achieved through the creation of educational modules, enabling dialysis health care workers to comprehend and apply the research findings within their practice settings. The intervention was planned to function at multiple levels: enhancing understanding of evidence and facilitating the application of evidence into routine clinical practice. We anticipated that the intervention would lead to changes in the care delivery process, mainly through increased awareness and understanding of evidence-based practices among dialysis health care workers. By assessing preintervention and postintervention test results and conducting regular implementation assessments through postintervention surveys, we aimed to test the effectiveness of these mechanisms.

In terms of the quality improvement project design, the team used an observational approach. This decision was guided by the nature of the intervention, which involved the dissemination of research findings through educational modules rather than a direct change in clinical practice. As for internal validity, we addressed this by ensuring that our data collection and analysis methods were rigorous and

Table 2. Learning Objectives by Module

Domain	Learning Objectives
Care coordination/care transition	<ol style="list-style-type: none"> 1. Define care coordination and care transitions 2. Discuss challenges associated with care coordination 3. Understand the patient-centered medical home care model 4. Identify personnel or high impact job tasks to improve care coordination 5. Identify potential interventions to support care coordination and transitions
Mental/behavioral health	<ol style="list-style-type: none"> 1. Prevalence of psychiatric disorders among recipients receiving dialysis 2. Common symptoms of depression 3. Frequency of depression screenings as required by the Centers for Medicare and Medicaid Services 4. Interventions to secure necessary mental health services for patients receiving dialysis

consistent, reducing the possibility of measurement or information errors. For external validity, we designed our intervention to be applicable and generalizable to different dialysis facilities across the United States, facilitating widespread adoption and leading to a broader improvement in patient care outcomes.

Methods of Evaluation

To assess the effectiveness of the intervention, we evaluated the learning achieved through the intervention with pretest and posttest evaluations of the dialysis health care workers' understanding and application of the PCORI-funded research findings. The technical expert panel designed specific learning objectives for the disseminated educational content that were used to shape our assessment tools (see Table 2). These objectives served as key metrics to evaluate the effectiveness of the intervention and the contribution of different components to the overall success of the program.

The technical expert panel also identified several resources during a final debrief before educational module release in the 5-Diamond program. These resources included a care management team form to organize and synthesize care teams, a telehealth mental health resource to provide utilization support for patients, and an anti-psychotics and kidney disease resource to create awareness of drugs that negatively affect kidney function.

Analysis

Descriptive statistics were used to evaluate the characteristics of the participating dialysis facilities, providing us with an understanding of the variation in the types of facilities and their contexts. This helped align our unit of analysis with the level at which the intervention was

implemented, offering valuable insights into the intervention's effectiveness across diverse settings.

Our key outcome measure was the change in health care workers' understanding and application of PCORI-funded research findings in the dialysis practice setting, as gauged by pretest and posttest performance. Paired sample t tests were conducted to compare the scores on these tests. This allowed us to quantify the effect of our intervention, indicating the degree of change in the health care workers' understanding and application of the research findings.

RESULTS

Outcomes

According to the Centers for Medicare and Medicaid Services (CMS), Medicare Dialysis Facilities Data—FY2022, there were 7,961 certified dialysis facilities in the United States and associated territories.¹³ The 2022 5-Diamond Program was able to reach approximately one-third (2,668; 34%) of all dialysis facilities in the United States with PCORI-funded educational modules. As of December 2022, 2,541 (32%) dialysis facilities completed the care coordination or care transitions module, inclusive of 39,853 dialysis staff. In addition, 319 (4%) facilities and 5,041 staff completed the mental or behavioral health module. A total of 192 (2%) dialysis facilities completed both modules. Collectively, this translates to 179,107 patients receiving dialysis who may be affected by staff education on topics related to patient safety. Table 3 provides an overview of dialysis facility characteristics participating in the PCORI-funded educational modules.

Most participants in both the care coordination and mental health modules were situated in the southern region of the United States and large metropolitan areas. It is worth mentioning that although only 60 Medicare-certified facilities, which is roughly 1% of all facilities, are in rural areas, around 30% of rural facilities in the United States completed the care coordination module. Most participants offer all dialysis facility services (ie, in-center and home dialysis), are associated with a dialysis chain and for-profit, and have more than 20 dialysis chairs in their facility. The majority of participants had previously participated in the 5-Diamond Program and almost all facilities who participated in the PCORI-funded modules were able to achieve 5-Diamond status for the 2022 program year.

Evaluation of participant learning is reflected in Tables 4 and 5 which displays aggregate performance of participants on pretest and posttests.

The participants in the care coordination module showed the greatest improvement in identifying challenges (question 2) associated with care coordination. Participants in the mental or behavioral health module had the greatest improvement in their understanding of symptoms of depression (question 2) and the frequency of required clinical depression screenings in the dialysis practice setting (question 3). Overall, there was a significant improvement ($P \leq 0.05$) in pretest and posttest scores

Table 3. Dialysis Facility Participant Characteristics

Characteristic	Care Coordination/ Care Transitions	Mental/ Behavioral Health
Geographic region		
Northeast	360 (14%)	57 (18%)
South	1,180 (46%)	171 (54%)
Midwest	646 (25%)	51 (16%)
West	355 (14%)	40 (13%)
Geographic location		
Large metropolitan	2,056 (81%)	261 (82%)
Medium/small metro	162 (6%)	18 (6%)
Suburban	305 (12%)	38 (12%)
Rural	18 (1%)	2 (1%)
Facility services		
In-center HD only	1,205 (47%)	140 (44%)
Home only	117 (5%)	14 (4%)
In-center and home	1,218 (48%)	165 (62%)
Unknown	1 (<1%)	0 (0%)
Dialysis chain association		
Yes	2,529 (99%)	303 (95%)
No	12 (<1%)	16 (5%)
Profit status		
For-profit	2,469 (97%)	248 (78%)
Not-for-profit	72 (3%)	71 (22%)
Additional characteristics		
Clinic size (chair \geq 20)	1,059 (42%)	133 (42%)
Previous 5-Diamond participant	2,439 (96%)	207 (65%)
5-Diamond facility	2,530 (99%)	311 (97%)

for both the care coordination (pre = 65%, post = 83%; +18%) and mental or behavioral health (pre = 68%, post = 81%; +13%) modules.

Dialysis facilities reported that the technical expert panel created resource—care management team form, was used by 41% of facilities completing the care coordination module to track their individual patient care teams. Technical expert panel members were curious about the depression screening tool used by dialysis staff to meet CMS requirements. Results from the mental or behavioral health education module revealed that the Patient Health Questionnaire (PHQ)-2 tool was the most used, with 60% of facilities reporting its use. Other tools used by a smaller percentage of facilities included PHQ-9 (25%), KDQOL (10%), Quick Inventory of Depressive Symptomatology (3%), Center of Epidemiologic Studies Depression Scale (2%), and Beck Depression Inventory II (<1%). The CMS does not mandate the use of a specific tool but has stated that tools that are not specific to depression (such as the KDQOL) are not considered valid for measuring clinical depression.

DISCUSSION

One of the primary successes was the positive effect on health care workers' understanding and application of

Table 4. Care Coordination/Care Transitions Module Pretest Posttest Results

#	Competency Assessment	Pretest	Posttest
1	Ability to define effective care coordination and care transitions as the safe movement of patients from one setting to another	26,866 (69%)	32,423 (83%)
2	Ability to identify challenge(s) associated with care coordination among patients receiving dialysis	25,486 (65%)	32,471 (83%)
3	Ability to identify team-based care coordination as a core component of a patient-centered medical home	27,233 (70%)	33,017 (85%)
4	Ability to identify appropriate interventions that focus on care coordination during care transitions	30,156 (77%)	35,212 (90%)
5	Ability to identify key interventions for the post-hospitalization period	30,331 (78%)	34,146 (88%)

PCORI-funded research findings in the dialysis practice setting. This was evidenced by significant improvements in the pretest and posttest scores. The study's key strengths lie in its focus on translating research findings into practice,

Table 5. Mental/Behavioral Health Module Pretest Posttest Results

#	Competency Assessment	Pretest	Posttest
1	Ability to identify the most common psychiatric disorder among patients receiving hemodialysis	4,364 (87%)	4,429 (88%)
2	Ability to identify symptoms of depression that mimic symptoms associated with kidney disease	3,488 (69%)	4,103 (82%)
3	Ability to identify the federally required frequency for conducting a clinical depression screening and follow-up among the population receiving dialysis	3,437 (68%)	4,073 (81%)
4	Ability to prioritize interventions in supporting patients screening positive for depression	2,683 (53%)	3,255 (65%)
5	Ability to identify the most important interventions for patients being treated for a psychiatric disorder	4,394 (88%)	4,708 (94%)

its diverse and comprehensive stakeholder engagement through technical expert panels, and its rigorous evidence assessment. The incorporation of pretest and posttests to evaluate dialysis workers' understanding and implementation of the research findings was another significant strength. Despite variability in facility characteristics, the study design and evaluation methods allowed for the detection of significant effects on the primary outcome. Overall, this study highlights the potential for improving patient outcomes through the effective translation of research findings into clinical practice.

The findings of this study corroborate with and build on the existing body of literature emphasizing the importance of care coordination and mental health care in patients with chronic diseases, specifically dialysis patients. For instance, the benefits of a patient-centered medical home model, as demonstrated by the Hynes et al⁷ study, align with the broader literature on its positive effect on the care quality for patients with chronic diseases.^{14,15} Furthermore, the value of mental health care in the context of dialysis patients, as seen in our study, is consistent with the broader evidence base. The integration of cognitive-behavioral therapy or pharmacotherapy in the dialysis setting, and the relative merits of each, as indicated by the Mehrotra et al⁹ study, also align with other studies that have shown the benefits of integrated mental health care in a variety of clinical settings.^{16,17} Our study also reinforces the importance of stakeholder engagement in implementing research findings into practice, a principle that is widely recognized in the dissemination and implementation science literature. Although the PCORI framework has been applied to various clinical contexts in existing literature,^{18,19} our study adds to the evidence base by applying it to the dialysis setting specifically. Our results suggest that this framework can be effectively used to translate research into practice in this context, thereby improving patient outcomes.

Although our study has provided significant insights into the implementation of the 5-Diamond Program, several limitations are noteworthy. First, it is important to note the context of this study. It was designed primarily as a dissemination and implementation project with the primary goal of applying research findings into practice, rather than as a research project meant to generate new knowledge. One key limitation was the potential selection bias; dialysis facilities that did not participate in the program may differ significantly from those that did, which may affect the generalizability of our findings. This situation might occur because of varying levels of resources, institutional support, and patient population characteristics because the participation in the program is largely driven by large dialysis organization support.

The 5-Diamond Program provides numerous educational modules, none of which are obligatory, allowing dialysis facilities the flexibility to choose the modules that align with their facility-level priorities and goals for a given program year. However, we noticed a significant

disparity in the selection of the care coordination and depression modules. This divergence could be largely attributed to timing factors. The notification of the newly available depression module was sent in April, a point at which many facilities had already established their module completion plans for the year. As such, the lower uptake of the depression module might reflect the timing of its introduction rather than its relevance or value to the facilities. This aspect could be considered a limitation in our current project design and offers potential areas for improvement in future scheduling and announcement of new modules.

Our dissemination activities in this project have shed light on numerous areas for future research, particularly in the realms of care coordination or care transitions and mental or behavioral health. One such avenue involves investigating the potential effect of the care management team form on patient outcomes and care coordination in dialysis facilities. Given the essential role of effective communication and collaboration among care teams in patient care, research could investigate how the use of this tool might enhance these dynamics. Furthermore, exploring the barriers and facilitators for implementing this tool across different settings (eg, inpatient vs outpatient) and patient populations (eg, in-center vs home dialysis) could provide crucial insights into its practical application and efficacy.

In addition, the 5-Diamond care coordination or care transition module presents a unique opportunity to investigate the effect of improved care coordination on dialysis facility performance. Key quality metrics, such as patient engagement and satisfaction, hospitalization and readmission rates, and mortality, might see notable changes with the successful implementation of this module. Moreover, our focus on mental or behavioral health presents potential for research in the context of dialysis facilities that have completed the relevant 5-Diamond module. Key areas for exploration could include: measuring the frequency of depression screening, identifying trends in referrals to mental health providers, assessing nephrologists' practices in recommending patients to discuss kidney function-impacting medications with mental health providers, and evaluating patient access to mental health professionals. All these areas offer valuable contributions to our understanding and could inform future studies aimed at improving care delivery in the dialysis setting. Given the complex and multifaceted nature of health care, we believe these findings could add significant value to both the research landscape and practical clinical applications.

In conclusion, we aimed to increase the availability and access of comparative effectiveness research among outpatient dialysis practice setting health care workers to improve the care of patients with kidney disease. The PCORI framework was followed to disseminate research findings on care coordination or care transitions and mental or behavioral health to improve patient outcomes

through stakeholder engagement, rigorous evidence assessment, and the use of effective and appropriate dissemination and implementation strategies. Technical expert panels were used for each research focus area to design educational modules for dialysis facility health care workers. We were successful in reaching one-third of all dialysis facilities in the United States, with more than 2,500 facilities completing the care coordination and more than 300 completing the mental or behavioral module. Overall, we learned that providing educational modules based on a diverse group of stakeholder's perspective on research findings can improve the knowledge of dialysis staff. Increased knowledge among dialysis workers may ultimately lead to improved patient outcomes. The use of the technical expert panel created care coordination resource, and evidence on the various depression screening tools may contribute to more effective care management and adherence to CMS requirements. Results from this project support the premise that dissemination efforts bridge the gap between research and practice and could be translated to other practice settings to ensure that evidence-based practices are used in clinical settings.

ARTICLE INFORMATION

Authors' Full Names and Academic Degrees: Amber B. Paulus, PhD, Jered M. Wendte, PhD, Brandy Vinson, BBA

Authors' Affiliations: School of Nursing; Virginia Commonwealth University; Richmond, VA (ABP, JMW); Quality Insights Renal Network 5; Richmond, VA (BV).

Address for Correspondence: Amber B. Paulus, PhD, Adult Health and Nursing Systems, School of Nursing, Virginia Commonwealth University, 1100 E Leigh St, Richmond, VA 23298. Email: paulusab@vcu.edu

Authors' Contributions: Research idea and study design: AP and BV; data acquisition: AP and BV; data analysis or interpretation: AP and JW; statistical analysis: AP; supervision or mentorship: BV. Each author contributed important intellectual content during manuscript drafting or revision and accepts accountability for the overall work by ensuring that questions pertaining to the accuracy or integrity of any portion of the work are appropriately investigated and resolved.

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