

A Novel Approach to Identifying Nonclinical Factors that Impact Outcomes in Dialysis Patients

Claire Ryan, MSBA¹; Scott Sibbel, MPH, PhD²; Janice Engel, MBA¹; Amber Pace, LCSW, LAC¹; Steven M. Brunelli, MSCE, MD²; Ania Filus, PhD²; Francesca Tentori, MS, MD²

¹DaVita Inc, Denver, Colorado, USA; ²DaVita Clinical Research, Minneapolis, Minnesota, USA

Disclosures

Claire Ryan: employee of DaVita Clinical Research

Scott Sibbel: employee of DaVita Clinical Research

Janice Engel: employee of DaVita, Inc. at time of abstract submission

Amber Pace: employee of DaVita, Inc.

Steven M. Brunelli: employee of DaVita Clinical Research, spouse
employee of AstraZeneca

Ania Filus: employee of DaVita Clinical Research

Francesca Tentori: employee of DaVita Clinical Research

Introduction

- Nonclinical factors can heavily impact quality of life and outcomes in severely ill patients.
- In other fields, such as oncology, self-reported levels of distress are routinely assessed via the distress thermometer (DT) in order to identify those patients with a higher risk of adverse outcomes and offer possible interventions.¹⁻³
- This type of screening is not a part of the current standard of care for dialysis patients.
- In an effort to enhance a patient-centered and holistic approach to care, we tested the use of the DT among patients at a dialysis organization.

1. Roth AJ, Kornblith AB, et. al., Rapid Screening for Psychologic Distress in Men with Prostate Carcinoma, *Cancer* 1998; 82:1904-8.
2. Iskandarsyah A, de Klerk C, et al. (2013) The Distress Thermometer and Its Validity: A First Psychometric Study in Indonesian Women with Breast Cancer. *PLOS ONE* 8(2): e56353.
3. Graham-Wisener L, Dempster M, et. al., Validation of the Distress Thermometer in patients with advanced cancer receiving specialist palliative care in a hospice setting. *Palliative Medicine*. 2021;35(1):120-129.

Distress Thermometer Questionnaire

Patient Name: _____ Date: _____ / _____ / _____

1) Circle the number from **0** to **10** on the thermometer that best describes how much distress* you have felt in the past week, including today.

2) Please check any of the following that has been a cause of distress for you in the past week, including today.

Score 7-10
High Distress

Score 4-6
Medium Distress

Score 1-3
Low Distress

Score 0
No Distress

10 - Extreme Distress

*Distress is a term used to describe unpleasant feelings or emotions that may interfere with your ability to cope with kidney failure, its physical symptoms and its treatment. Distress covers a wide range of feelings including anger, frustration, sadness, fear, depression, guilt and anxiety.

0 - No Distress

FOR TEAMMATE USE ONLY:

Unable to complete due to health reasons Patient refused Distress Thermometer

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Practical Problems

Housing Finances

Insurance Food

Medications Recent loss of employment

Transportation Pending loss of employment

Child care Dialyzing at home

Caring for a relative Caregiver/family support

Family Problems

Relationship with partner

Relationship with children

Coping with elderly relatives and/or dependents

Emotional/Spiritual Problems

Worry

Sadness

Loneliness

Depression

Nervousness/anxiety

Anger

Loss of enjoyment

Loss of faith

Loss of meaning

Physical Problems

Vision

Dental

Bathing/dressing

Shortness of breath

Cough

Congestion

Loss of appetite

Nausea

Vomiting

Constipation

Diarrhea

Memory/concentration

Sleep

Energy

Intimacy

Walking issues

Restless legs

Frequency of urinating

Burning with urination

Skin warmth

Blisters

Skin redness

Infection

Pain (where?): _____

Other?

Objective

- Explore relationships between Distress Thermometer responses and hospitalizations and missed treatments in In-Center Hemodialysis (ICHD) patients
- Explore relationships between Distress Thermometer responses and hospitalizations and modality loss in Peritoneal Dialysis (PD) patients

Methods

- **Questionnaire Administration and Scoring**

- In the course of ongoing care between September 2019 and January 2021, social workers administered a dialysis-adapted version of the DT to over 30,000 patients.

- Questionnaire Scoring:

Score = 7-10 High Distress	Score = 4-6 Medium Distress	Score = 1-3 Low Distress	Score = 0 No Distress
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- **Analysis**

- We performed a retrospective observational cohort study to estimate associations between distress level and clinical outcomes using logistic regression models.
- Outcomes were also compared between patients who indicated specific items as causing distress and those who did not indicate those items as causing distress.
- All models were adjusted for age, race, sex, and dialysis vintage. Models in ICHD patients were also adjusted for vascular type access.

Demographic characteristics by distress level

Distress level categories and demographics were computed using the first available DT score for each patient (includes all modalities).

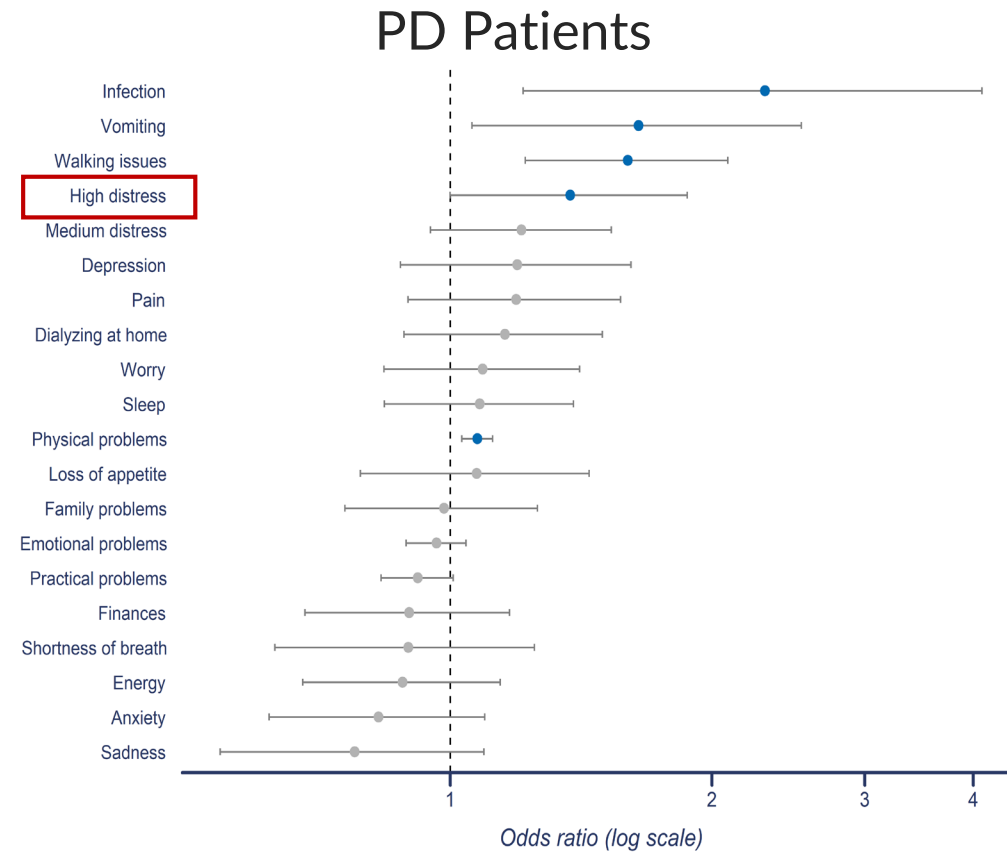
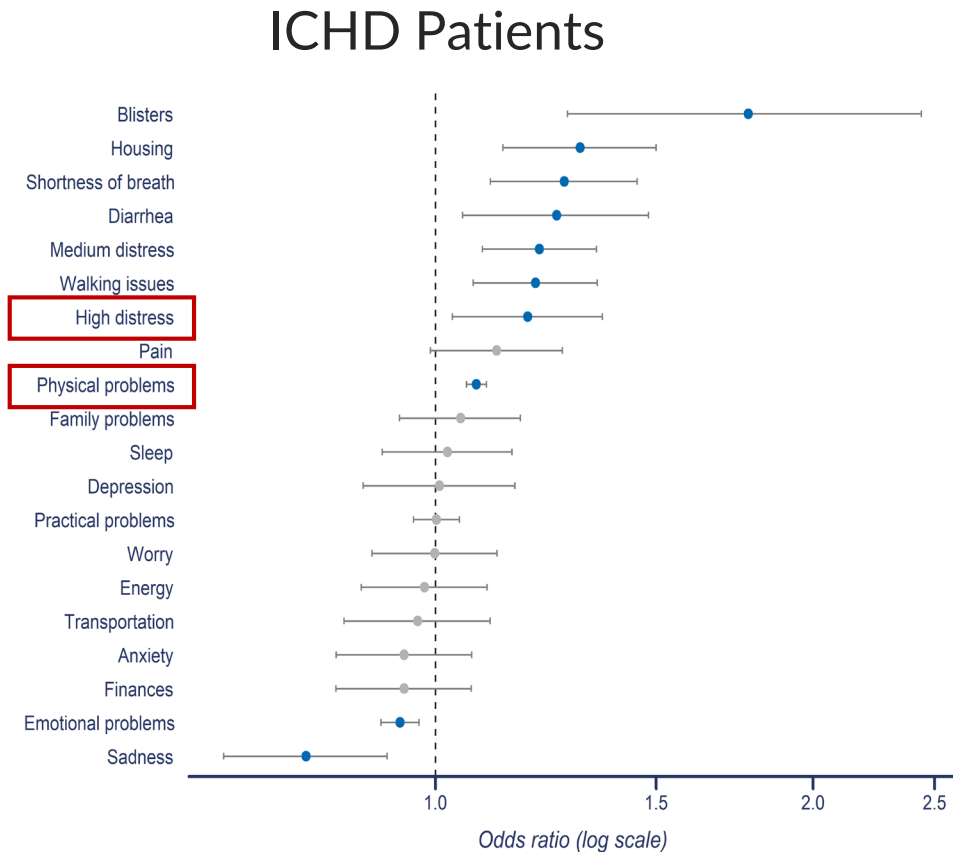
	Distress Level			
	None	Low	Medium	High
N	8,793	10,068	8,940	5,139
Female (%)	37.1	40.3	45.2	51.5
Age (%)				
<45	11.7	14.1	17.2	17.9
45-64	37.2	39.3	43.7	47.6
65-74	27.4	26.7	23.7	21.9
75+	23.8	19.9	15.4	12.6
In-center (%)	76.8	77.1	80	81
Domains				
Practical problems	.17	.57	1.0	1.41
Family problems	.02	.08	.18	.31
Emotional problems	.11	.5	1.34	2.46
Physical problems	.72	1.41	2.34	3.47

- Patients indicating high levels of distress were more likely to be **female, ICHD patients, and younger** than patients indicating low levels of distress.
- **Emotional and physical complaints** were the most commonly mentioned distress items in patients indicating medium-high levels of distress. Family problems were the least commonly reported.

Risk of Hospital Admission for ICHD and PD Patients

90-day risk of admission in ICHD and PD patients: odds ratios with 95% confidence intervals

Statistically significant values shown in blue, with non-significant values shown in grey.

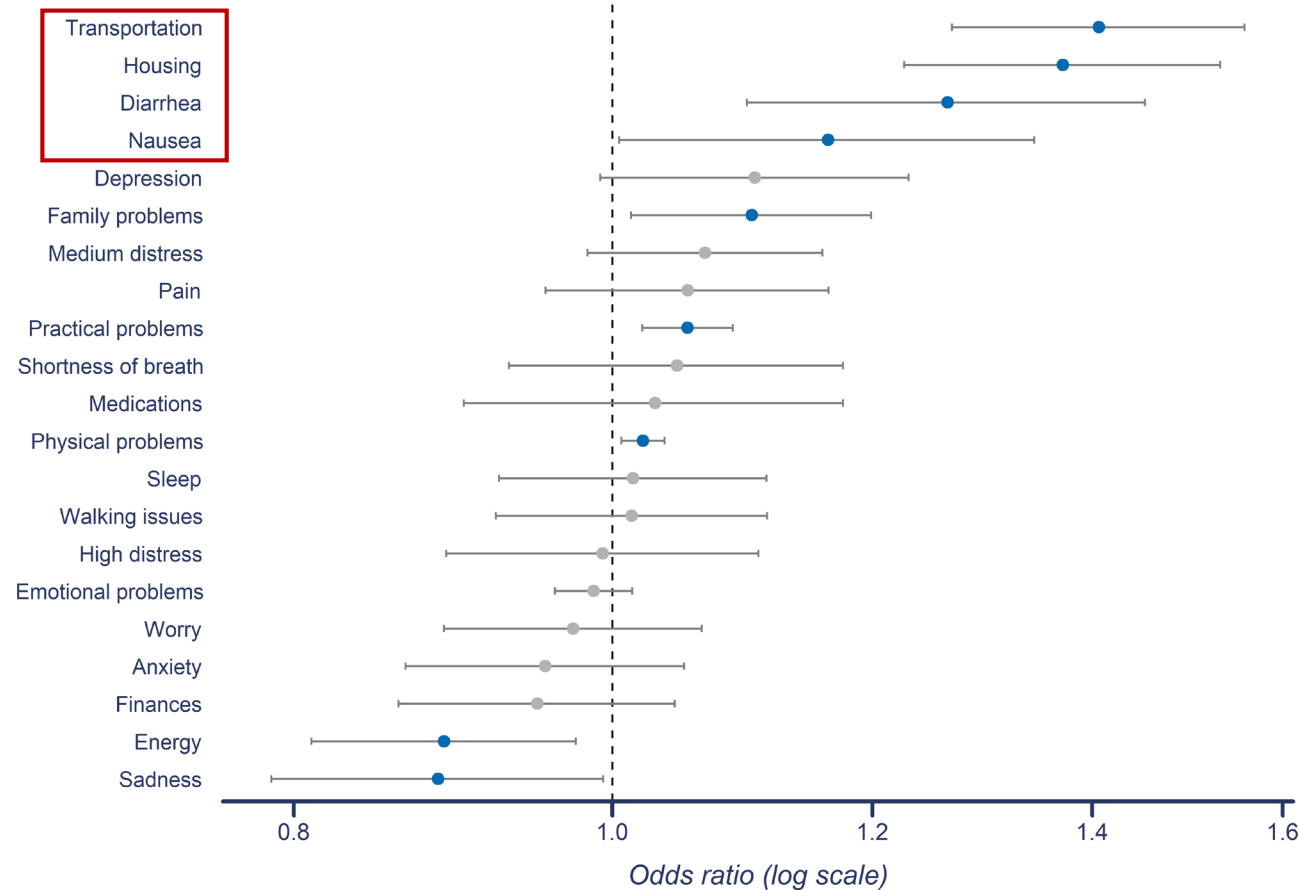


- High DT scores (≥ 7) were associated with greater hospitalization risk in ICHD and PD patients.
- Physical problems were associated with greater hospitalization risk in ICHD patients.

Transportation and Housing Problems are Associated with Risk for Missed Treatments in ICHD Patients

90-day risk of missing a treatment: odds ratios with 95% confidence intervals

Statistically significant values shown in blue, with non-significant values shown in grey.

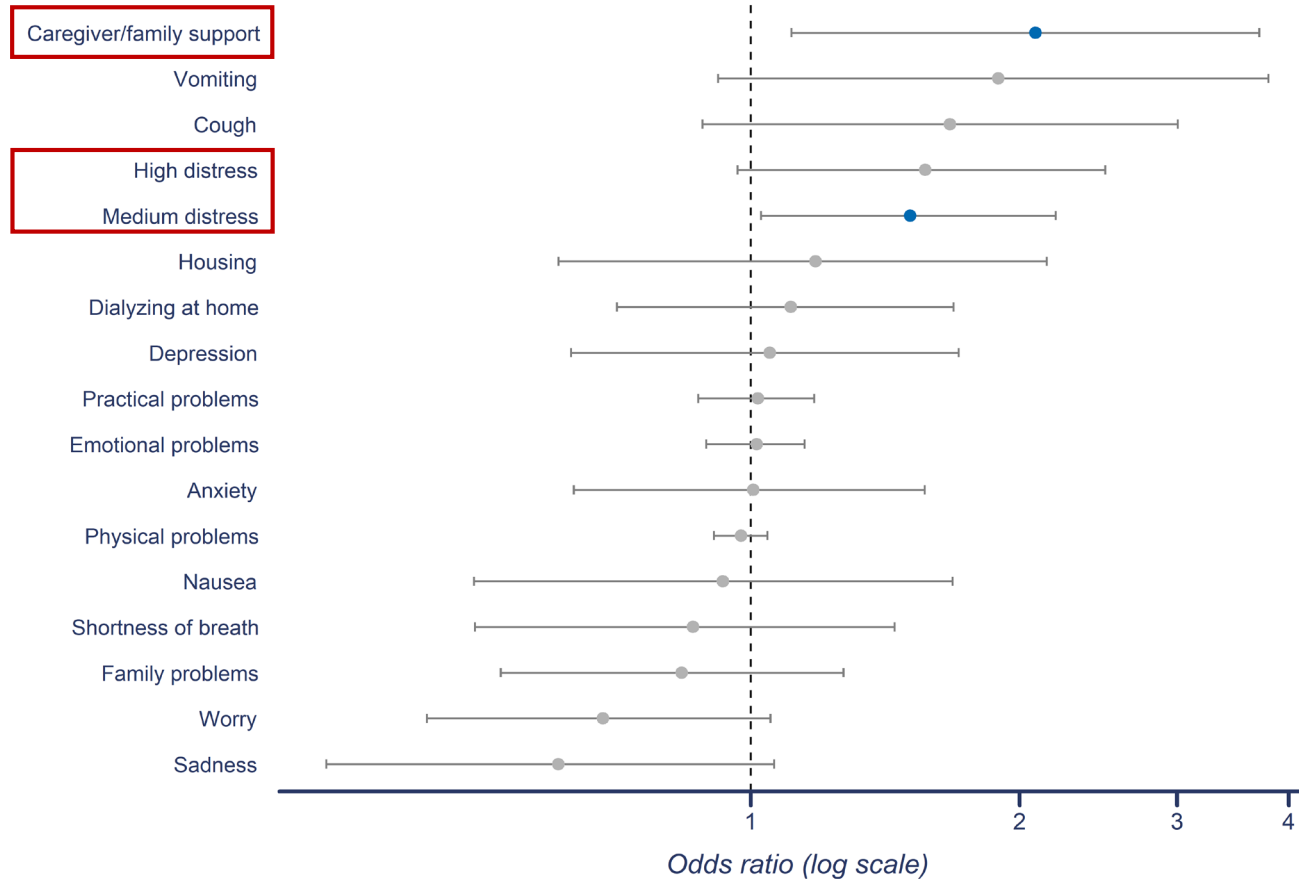


- Distress associated with housing, transportation, nausea, and diarrhea was associated with higher odds of missing a treatment within 90 days (excluding hospitalizations).
- Distress level and emotional symptoms were not associated with missed treatments.

PD Modality Loss

90-day risk of PD loss: odds ratios with 95% confidence intervals

Statistically significant values shown in blue, with non-significant values shown in grey.



- Distress associated with [lack of] caregiver/family support and medium/high distress were associated with higher odds of PD loss.

Conclusions

- This is a novel screening tool that may be useful for identifying dialysis patients at high risk for adverse clinical outcomes.
- Practices aimed at addressing specific problems dialysis patients face could have the potential to impact patients' quality of life and clinical outcomes.