

# Effectively training dementia care specialists and other dementia professionals on using the DICE Approach™ with caregivers to improve the management of behavioral and psychological symptoms of dementia

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## Abstract

**Introduction:** Most persons living with dementia will exhibit at least one behavioral or psychological symptom of dementia (BPSD) (Kales, et al., 2015). As brain pathology progresses, challenging behaviors can increase in frequency and severity, causing an increase in caregiver stress and burden. Furthermore, BPSD can result in unplanned hospitalizations and unnecessary use of psychotropic medications. Non-pharmacological management of BPSD should be the first line of treatment. The DICE (Describe, Investigate, Create, Evaluate) Approach™ was developed by experts from the University of Michigan and John Hopkins University, to help caregivers learn how to identify and manage BPSD. This project describes a statewide implementation of the DICE approach with community-based dementia care providers.

**Methods:** From September 2017 to April 2020, we held four DICE trainings (three in-person trainings, one web-based training) for Dementia Care Specialists (DCSs) and other dementia care professionals who work directly with family caregivers of people with dementia in Wisconsin. We assessed trainees' knowledge and attitudes from the Dementia Attitudes Scale (DAS) and the Knowledge about Memory Loss and Care test (KAML-C) at baseline of training, immediately after training, and six months after training. Consultations were provided to address challenging cases.

**Results:** Participants (N=136) in both in-person and online DICE trainings experienced significant changes in knowledge, self-efficacy and attitudes from baseline to post-training (immediately after training) assessments ( $p < .01$ ) (see Table 2 for details). Narrative feedback from trainees was generally very positive. Trainees used DICE with 165 caregivers who were primarily non-Hispanic white (92%) females (74.4%) from an urban location (68.1%), caring for their spouse (52.7%) (Table 1).

**Discussion:** By using the DICE approach with caregivers of persons with dementia, Wisconsin's DCSs and other dementia professionals are uniquely positioned to

help reduce risks associated with BPSD, including the use of psychotropic medications. Training satisfaction was high, knowledge about BPSD increased, and attitudes improved. The DICE trainings prepared trainees to implement this intervention with 165 family caregivers. A follow-up survey will explore the real-world application of DICE, including barriers to its use and modifications made in communities across the state.

TABLE 1

Table 1. Demographics of Caregivers Served (N=165)

Demographics	N (%)
<b>Gender</b>	
Male	42 (25.6%)
Female	122 (74.4%)
<b>Age</b>	
Under 60 years old	52 (31.5%)
60 years old or over	113 (68.5%)
<b>Ethnicity</b>	
Hispanic	3 (1.8%)
non-Hispanic	161 (98.2%)
<b>Race</b>	
White or Caucasian	161 (92%)
American Indian or Alaska Native	1 (.6%)
Asian or Asian-American	0 (0%)
Black or African American	2 (1.1%)
Other	1 (.6%)
<b>Geographic Area</b>	
Urban	111 (68.1%)
Rural	52 (31.9%)
<b>Relationship to PWD</b>	
Spouse/Partner	87 (52.7%)
Parent	67 (40.6%)
Other	11 (6.7%)
<b>Years of education</b>	
Middle / High School (6-12 years)	23 (31.5%)
Technical / 4-yr College (13-16 years)	38 (52.1%)
Graduate School (17-23+ years)	12 (16.4%)

**TABLE 2**

**Table 2. Efficacy of DICE Training**

Scale and Sub-scale Totals	N	Baseline	Post-Test*	p-value
Knowledge – Total KAML-C scores (maximum = 9)	82	7.63	7.89	.007
Self-Efficacy –DICE Self-efficacy scores (9-item version)	125	18.39	22.13	.000
Dementia Attitudes Scale (DAS)– Total Score (maximum = 140)	84	124.59	126.75	.007
Comfort DAS subscale	84	52.87	53.92	.059
Knowledge DAS scale	84	65.83	66.80	.019

\*immediately post-training