



U.S. Department of Veterans Affairs

Department of Veterans Affairs
Office of Patient Centered Care and
Cultural Transformation



Evaluating HEART - Hospital Employee Awareness and Resilience Training

Complementary Integrative Health Evaluation Center (CIHEC)

Evaluation Team: Susan Stockdale, Stephanie L. Taylor, Briana Lott

Intervention Team: J. Greg Serpa, Caroline Prouvost (HEART co-developers)

Partners/Funding: VA Office of Patient Centered Care and Cultural Transformation (OPCC&CT) and VA QUERI (PEC 16-354)



CIH Series

May 19, 2022



Issues to Address

- Leaders recognize that burnout is a pervasive issue that may be contributing to turnover.
- High turnover is costly, impacts patient care.
- Mindfulness-based resiliency is an evidence-based practice to help providers/staff cope with burnout.



Purpose of the HEART Project

- To design and evaluate an intervention aimed at improving:
 - skills to alleviate burnout (resiliency, stress management, and self-compassion).
 - burnout
 - workforce job satisfaction and intent to remain in VA
- Ensure that the intervention will be feasible to implement in a clinical setting with minimal disruption to clinic flow
 - Especially challenging with multiple and unpredictable COVID surges



Objectives of This Presentation

- Describe the HEART intervention that Dr. Greg Serpa and his colleagues designed and its modification in collaboration with operations partners
- Share preliminary results and next steps



Mindfulness In Healthcare Settings

- Meta-analysis of 41 studies of mindfulness-based courses consistently found small to medium effect sizes for burnout, stress and mindfulness (Lomas et al., 2019)
- Yet the VA CALM study (Serpa et al., in press) found large effect sizes on all measures
 - Likely distinct populations (mindfulness naïve vs practitioners with a daily practice)
 - Differences in duration and intensity of the intervention
 - “Dose makes a difference”



The (Virtual) HEART Intervention

- 7-week virtual program for providers and staff
- Teaches self-care and patient interaction skills including mindfulness, self-compassion, finding one's purpose and holding human suffering
 - PACT clinicians and staff (MDs, MSAs, RNs, LPNs, SWs, PharmDs, etc)
 - 4 PC practices from 2 LA and Long Beach VAs
- Includes:
 - 6 weekly one-hour staff resilience and self-care trainings during clinic hours
 - 1 3-hour wellness retreat
 - Handouts and audio links to encourage home practice
 - Weekly wellness newsletters



HEART: Core Elements

- HEART was informed by my clinical work as a Mindfulness Based Stress Reduction (MBSR) and Mindful Self-Compassion (MSC) teacher as well as work as a Whole Health National Education Champion
 - Challenging provider shaming
 - Mindfulness
 - Self-Compassion
 - Whole Health: mapping your MAP
 - Healer's Journey
 - Gratitude



Methods – Design Decision Was a Direct Result of Operation Partners' Input/Needs

- Opted for quasi-experimental, recurrent institutional cycle (“patched-up) design
 - Implementation tailored to each site
 - Group-level randomization of teams (when possible)
 - Pre- and post-assessments
- Combines longitudinal and cross-sectional approaches
 - Cross-sectional comparison between post- for group 1 and pre- for group 2
 - Longitudinal comparison of pre- vs post- for all groups
- Sample size goal: 100+(50 intervention, 50 control)



Methods – Data Collection

- 2 cohorts received the HEART intervention– Fall 2021, Winter 2022
 - Both received pre and post intervention surveys
 - Pre-intervention survey for Winter same time frame as post for Fall
- Key measures:
 - Freiburg Mindfulness Inventory, Brief-resilience scale, Neff’s Self-Compassion scale, Perceived Stress Scale-4, AES questions on job satisfaction and turnover, abbreviated Maslach Burnout Inventory
- Post assessment survey open ended items asking:
 - “How have you benefited from the program?”
 - “How can we improve the program?”



HEART Evaluation Design - cross-sectional comparison

Fall 2021 Wave	October 2021	Oct 25, 2021 thru Dec 20, 2021	Dec 2021 – Jan 2022		
Group 1 - PACT	Pre-assessment	HEART	Post-assessment		
Group 2 - HPACT	Pre-assessment	HEART	Post-assessment		
Winter 2022 Wave			Dec 2021 – Jan 2022	Jan 24, 2022 thru March 22, 2022	March-April 2022
Group 1 – PACT (2 sites)			Pre-assessment	HEART	Post-assessment
Group 2 - HPACT			Pre-assessment	HEART	Post-assessment



HEART Evaluation Design - longitudinal comparison

Fall 2021 Wave	October 2021	Oct 25, 2021 thru Dec 20, 2021	Dec 2021 – Jan 2022		
----------------	--------------	--------------------------------------	------------------------	--	--

Group 1 - PACT Pre-assessment HEART Post-assessment

Group 2 - HPACT Pre-assessment HEART Post-assessment

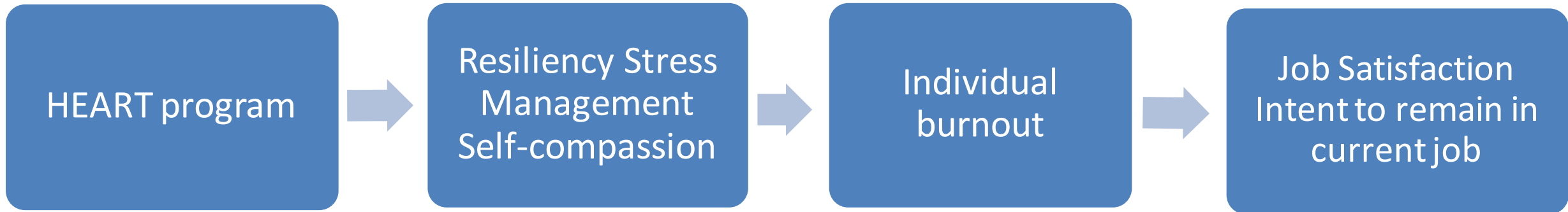
Winter 2022 Wave			Dec 2021 – Jan 2022	Jan 24, 2022 thru March 22, 2022	March-April 2022
------------------	--	--	------------------------	--	------------------

Group 1 – PACT (2 sites) Pre-assessment HEART Post-assessment

Group 2 - HPACT Pre-assessment HEART Post-assessment



HEART Program Conceptual Model Informing Evaluation



- Longitudinal analysis: pre vs post for 2 cohorts combined
 - Group t-tests (scales), cross-tabulation with chi-square (ordinally measured items)
- Cross-sectional analysis: Cohort 2 pre-test serves as control group, compare against post-test for Cohort 1
 - Regression (OLS for indexes, logistic for dichotomous outcomes) with predictors for intervention and attendance
- Preliminary analysis: unadjusted results



Results – Baseline Sample Characteristics

Characteristic	Cohort 1 (n=45)	Cohort 2 (n=50)	Total (n=95)
Female	71%	82%	77%
White, non-Hispanic	33%	27%	29%
Age less than 35 years	48%	20%	33%
Job title (32 in Cohort 1 and 36 in Cohort 2 answered)			
PCP (all NPs)	13%	14%	13%
RN/RNCM	16%	22%	19%
LVN	19%	19%	19%
Clerk	13%	8%	10%
Other	41%	36%	37%
Full-time	98%	92%	95%
VA tenure less than 3 years	53%	36%	43%
Engage in regular mindfulness practice	18%	22%	20%
“Some/a lot” of previous formal training in mindfulness	64%	61%	63%



RESULTS – HEART ATTENDANCE

# Sessions	Cohort 1 % Attending n=56	Cohort 2 % Attending n=75	Total n=131
0	20%	31%	26%
1	16%	3%	8%
2	5%	11%	8%
3	5%	3%	4%
4	13%	12%	12%
5	11%	15%	13%
6	18%	21%	20%
7	14%	5%	9%

- Many invited completed baseline survey
- 26% did not attend any sessions
- 42% attended 5 or more sessions



Results – Longitudinal Comparison (intervention vs control)

- Both cohorts combined: N = 94 for pre-assessment, 62 for post-assessment
- Trends were in the right direction, but not statistically significant
 - Resiliency (higher is better: $\beta = .04$)
 - Perceived stress (lower is better: $\beta = -.39$)
 - High Emotional exhaustion (lower is better: odds ratio = .75)
 - Single item personal accomplishment from AES (lower is better: intervention = 18.5%, control = 26.0%)
 - Job satisfaction (satisfied/very satisfied: Odds ratio = 1.39)
 - Organizational satisfaction (satisfied/very satisfied: Odds ratio = 1.14)

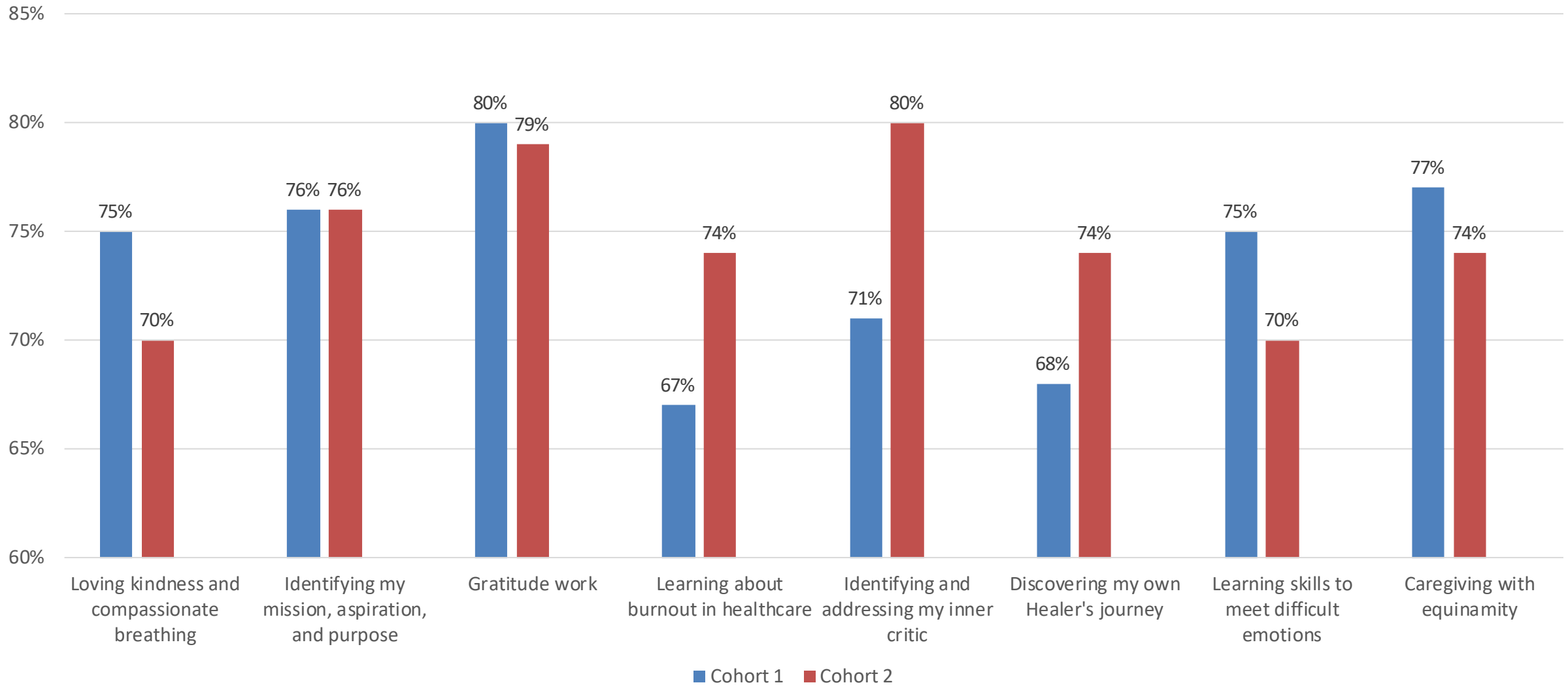


Results – Cross-sectional Comparison (pre vs post)

- N = 28 for intervention-group, 49 for control- group
- Trending in right direction (intervention effectiveness), but NS
 - Resilience (higher is better: intervention mean = 3.03, control mean = 2.95)
 - Perceived stress (lower is better: intervention mean = 9.9, control mean = 10.8)
 - High emotional exhaustion (intervention = 17%, control = 22%)
 - Single item personal accomplishment from AES (lower is better: intervention = 18.5%, control = 26.0%)
 - Satisfied with job (intervention = 82.7%, control = 72.3%)
 - Satisfied w organization (intervention = 65.5%, control = 63.8%)



Post-intervention ratings of HEART components (% very or extremely helpful)





Program recipient comments from post-survey

“I do believe **this will make a change in my personal life for the better.** To be fully honest, I can try to put some of this into play with work but at times, **it's too hectic/short staffed to take a min out of the day and use the techniques provided.**”

“It reminded me of what others are going through, being mindful of what I am going through, and that self-appreciation is a very important aspect **and how you will also affect those around you.**”

“Self-compassion session was incredibly enlightening and helpful. **I plan to incorporate that during challenging times,** and also do mindfulness meditation regularly”



More Comments

“This program **helped me deal with some levels of burnout I wasn't fully aware that I had**, and has helped me be more compassionate to myself as well as my patients. I have found that I am **better able to listen to veterans and be open to their feelings**. This makes sessions with patients more rewarding for both of us.”

“This program is giving me the tools necessary to deal with very stressful situations such as my job, living in a major city and a pandemic world. **I have benefited mostly from this program, by just getting the recognition that I deserve as a frontline worker** helped me.”

“I think this program **teaches skills and encourages reflection in a very healthy way**. My only concern is that **I hope it won't be a "one and done" program where 'now primary care is fixed forever' is the attitude.**”



Summary

- HEART intervention well-received, appreciated by majority of participants
- Main outcomes= NS
- Possible explanations:
 - Not enough power to detect small effects due to sample size
 - Omicron surge Dec 2021 – March 2022
 - Both cohorts had high previous exposure to meditation/mindfulness (60-64% at baseline reported at least some)
 - Self-selection based on interest, experience with mindfulness



Hopeful Next Steps

- More analyses
 - Examine whether “dose” (number of HEART sessions attended) makes a difference
 - Adjust for individual characteristics, pre-intervention experiences with meditation/mindfulness
 - Subgroup analyses (if n permits, for example, comparing PCPs to nurses)
 - Check external validity – possible interaction of selection and treatment (people with higher attendance may have been more receptive and/or had more previous exposure)
- If found effective, in FY23-24 we (CIHEC QUERI PEI) might use and evaluate a train the trainer format (10 VAMCs)

Stay Tuned!



Acknowledgements

The evaluation was conducted by a team in our Complementary and Integrative Health Evaluation Center, a **QUERI PEI** (16-354)

Additional HEART Team Members: Eric Apaydin PhD (Analyst),
Briana Lott MPH (Coordinator)

Operational Partners:

VA Office of Patient Centered Care and Cultural Transformation



Thank You

For questions on the evaluation, Susan.Stockdale@va.gov

For questions on the HEART intervention, John.Serpa@va.gov

For questions on the Complementary and Integrative Health
Evaluation Center (CIHEC) QUERI PEI,
Stephanie.Taylor8@va.gov