



ICU Healthcare Worker Resiliency via Telehealth

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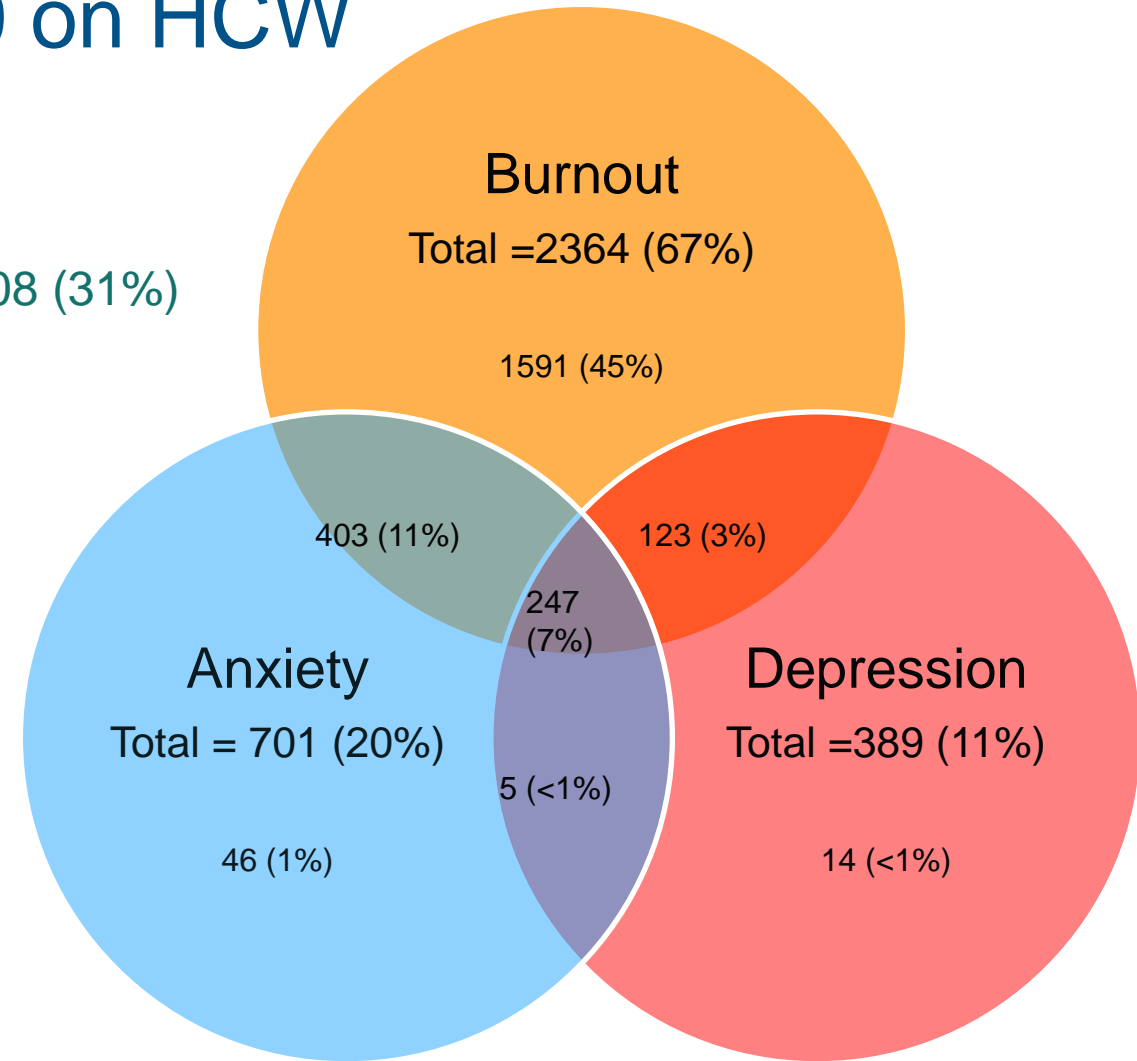
Impact of COVID-19 on HCW



Psychologic Impact of COVID-19 on HCW

N= 3537

No psychological sequelae 1108 (31%)



Chuang, et.al Medicine (2016)
Denning et.al PLOS ONE (2021)



Mental Health of ICU staff in UK

	Doctor (%)	Nurse (%)	Other (%)	Total (%)
Good well being	64	54	62	59
PTSD	32	49	27	40
Problem Drinking	7	8	4	7
Moderate Depression	26	49	26	37
Severe Depression	5	9	3	6
Moderate Anxiety	20	33	22	27
Severe Anxiety	8	15	7	11

- 9 hospitals in England.
- 709 participants (41% doctors, 49% nurses, 10% others)
- 59% reported wellbeing but 45% met criteria for mental disorders.
- 13% reported suicidal ideation [Nurses (19%) >>> Doctors (8%)]





Strategies for fostering resilience in healthcare

The Stanford Model of Professional Fulfillment™



Culture of Wellbeing



CULTURE OF WELLBEING

Organizational values and actions that promote personal and professional growth, self-care and compassion for ourselves, our colleagues and those we serve.



Efficiency of Practice



Efficiency of Practice

Workplace systems, processes, and practices that promote safety, quality, effectiveness, positive interactions, and work-life harmony.



Personal Resilience

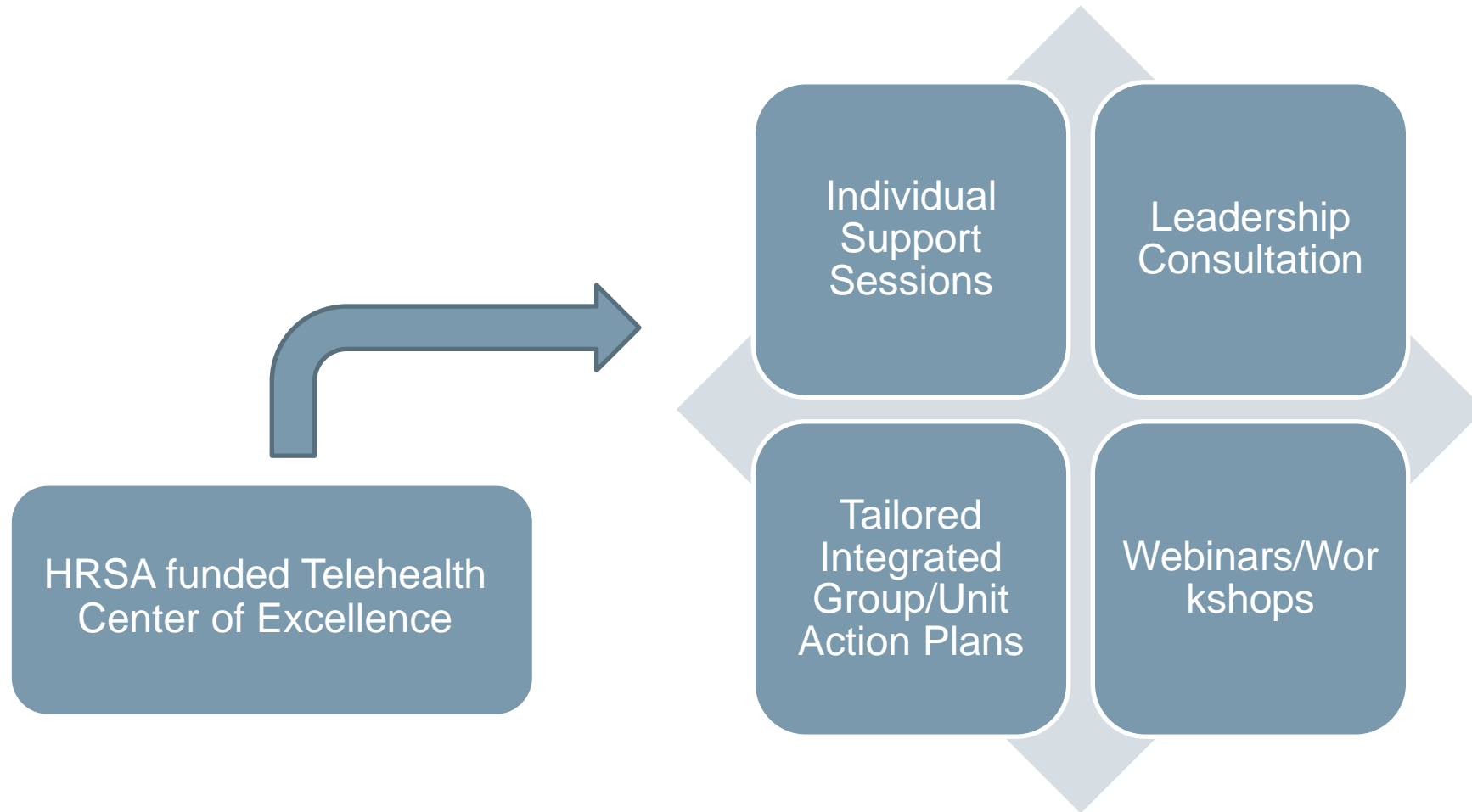


Personal Resilience

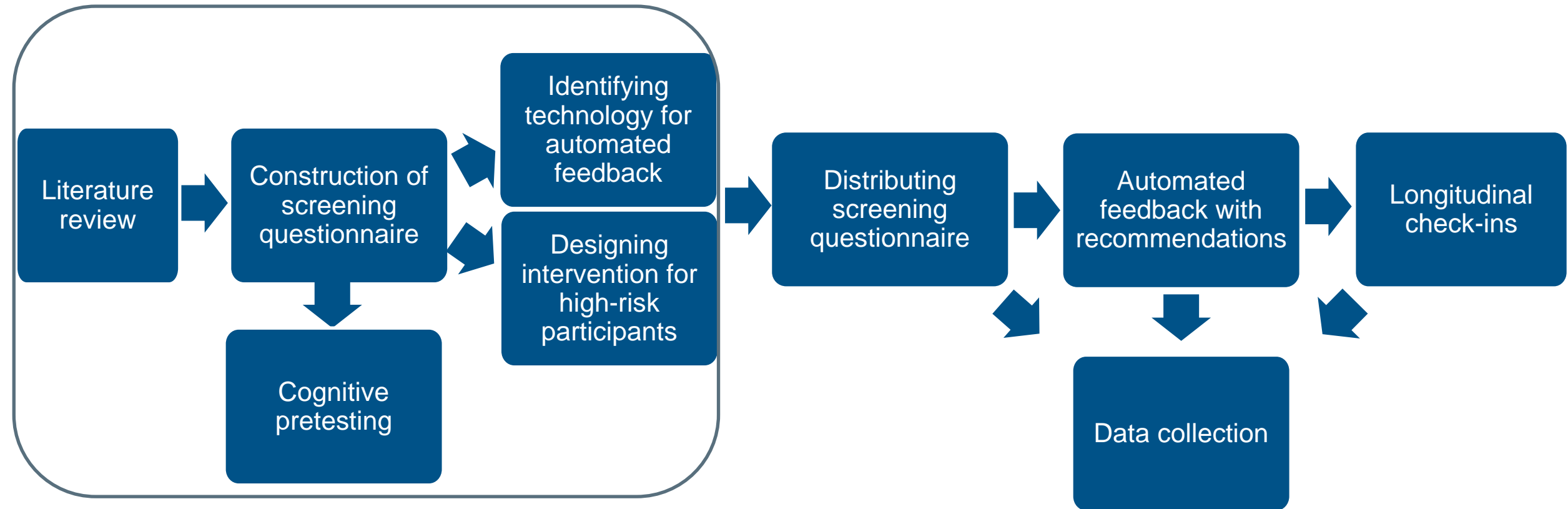
Individual skills, behaviors, and attitudes that contribute to physical, emotional, and professional well-being.



MUSC Resiliency Program



A Telehealth Approach to Mitigating ICU HCW Distress



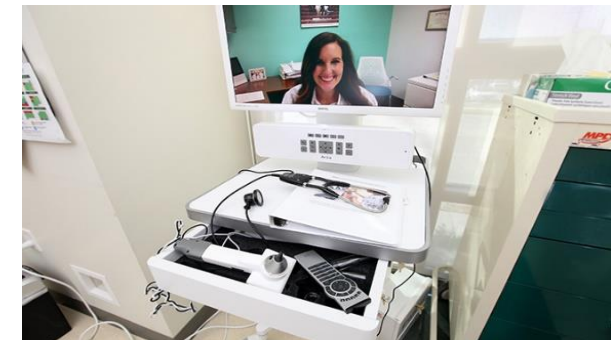
Domain	Tool	Number of Questions	Duration of Administration	Score Range
Sleep disturbance	PROMIS	8	Last 7 days	8-40
Depression	PHQ-9	9	Last 2 weeks	0-27
Anxiety	GAD-7	7	Last 2 weeks	0-21
PTSD	PCL5	8	Last 30 days	0-80
Resiliency	CD-RISC-10	10	Last 30 days	0-40
Alcohol Use	AUDIT-C	3	Last 1 year	0-12
Burnout	OBI ¹⁷	16	N/A	16-64
Total Question Number		61		

Buysse, et.al *Sleep*, June 2010; Kroenke K, et.al *J Gen Intern Med*, 2001; Spitzer RL et.al . *Arch Intern Med*. 2006; Blevins, C, et.al, *Journal of Traumatic Stress*, 2015; Connor, et.al, *Depression Anxiety*, 2003; Bush K, et.al, *Arch Internal Med*, 1998; Demerouti, et.al, *J Appl Psychol*, 2001



Technology Considerations (KISS)

- REDCap
- Institutional email listservs
- Twilio
- Video conferencing



Overall Timeline



- Initial Screen
 - Contact information
 - 61 screening questions
 - 6 demographic questions
- Real-time response scoring (back-end analytics in REDCap)
 - Pre-specified thresholds → response
 - Option to request meeting with resiliency counselor 1:1
- Weekly Check-ins with
 - 6 screening questions
 - Self help tips and video



Full Screener (Employee e-mail via REDCap)

MUSC Healthcare Worker Wellness Screener

Scoring summary	
Risk calculation1	<input type="text" value="0"/>
Risk calculation2	<input type="text" value="2"/>
Your struggles are real and valid for a healthcare provider. Results from your scores indicate that it may be challenging to manage these struggles on your own. We strongly recommend that you set up a time to meet with our MUSC Resiliency Clinician.	<input type="button" value="Yes"/> <input type="button" value="No"/>
Would you like to set up a time to meet with MUSC Resiliency Clinician?	<input type="button" value="reset"/>
PROMIS: It appears that you are experiencing severe problems with sleep. Sleep difficulties can impact our lives in a variety of ways, including our physical health, psychological wellbeing, job performance, and patient care.	
PHQ-9: Your scores suggest you may be experiencing moderate to severe depression, which may be interfering with your ability to function.	
GAD-7: Based on your scores, you may be experiencing moderate to severe anxiety, which may be interfering in your ability to function.	

PCL-5: Your scores indicate that you may be experiencing a **clinically significant** level of posttraumatic stress disorder, or PTSD. You are not alone. Higher scores on from this screener are associated with the presence of PTSD but are not a substitute for diagnosis by a trained clinician.

OBI: Your scores suggest you may be feeling burnout in your current position at work. Sometimes when people experience burnout, they disengage in work-related activities or feel exhausted from responsibilities. Burnout is associated with adverse patient outcomes, increased risk of anxiety, depression, and PTSD.

What is your discipline?

Do you work in shifts?

What is your age group?

What is your Gender?

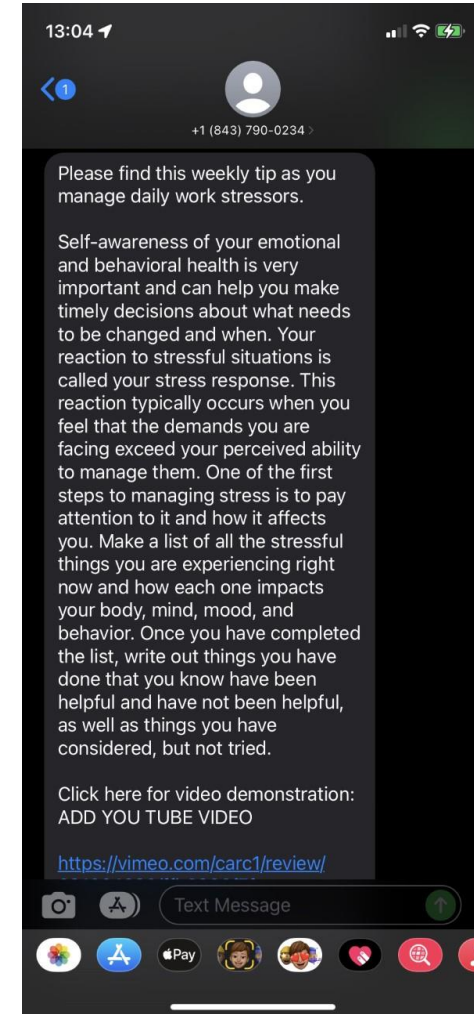
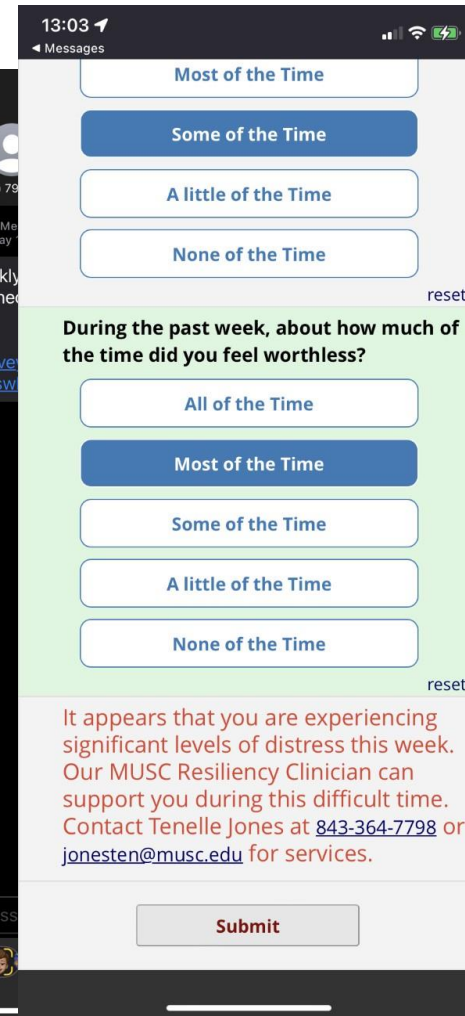
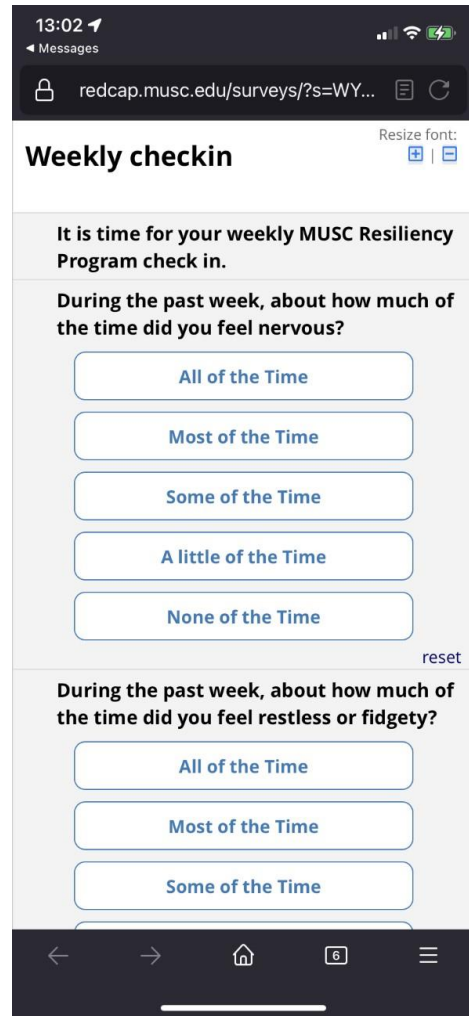
Are you of Hispanic or Latino ethnicity?

What is your race? Please check all that apply.

- American Indian or Alaskan Native
- Asian
- Black or African American
- Native Hawaiian or Other Pacific Islander
- White

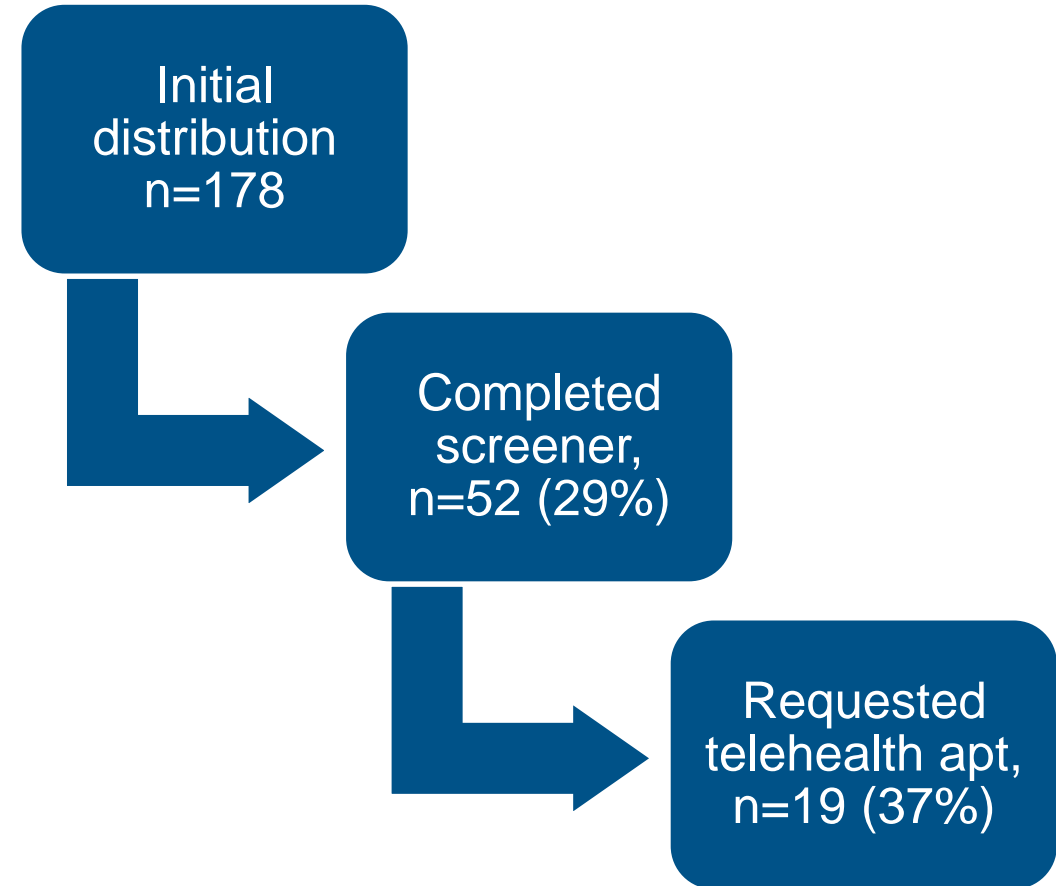


Weekly Check-Ins (Text to Cell via Twilio)



Initial Program Uptake

- Pilot population: ICU RNs, RTs, PCTs, PCCM Faculty and Fellows, Anesthesia CCM Faculty and Fellows, Internal Medicine Residents



Initial Screener Prevalence Data

Domain	Tool	Clinical Significance Threshold	Mean Score	Median Score	Respondents Above Threshold (%)
Sleep disturbance	PROMIS (n =50)	25	22.5	24	38
Depression	PHQ-9 (n=48)	5	5.35	5	38
Anxiety	GAD-7 (n=49)	5	5.14	4	33
PTSD	PCL5 (n=46)	31	12.43	7.5	11
Resiliency	CD-RISC-10 (n= 46)	32	30.37	30	50
Alcohol Use	AUDIT-C (n=38)	3	11.32	3	60
Burnout	OBI (Disengagement) (n=45)	2.1	2.17	2.13	55
Burnout	OBI (Exhaustion) (n=45)	2.25	2.57	2.63	58



Qualitative Input

- Structured Interviews with seven HCWs who completed the screening
- Feedback:
 - Found screening to be helpful to foster self-insight and connection to resources
 - Longer screening too frequent
 - Weekly screeners could be tailored to baseline results
 - Coping tips texts too long, just provide video link
 - Coping tips could be tailored
 - Choice to opt out of coping tips



Revised Overall Timeline



- Initial Screen
 - Contact information
 - 61 screening questions
 - 6 demographic questions
- Real-time response scoring (back-end analytics in REDCap)
 - Pre-specified thresholds → response
 - Option to request meeting with resiliency counselor 1:1
- Weekly Check-ins with Coping Tips (option to opt out)
 - Screening questions programmed to be tailored to baseline results
 - Self help tips and video



Next Steps

- Roll-out in 7 pilot ICU Units
- Roll-out in ICUs of a Rural Hospital setting

- Develop more coping tip video series to be tailored to baseline screening
- Gather input from broader ICU HCW population
- Launch 3.0 Version
- Roll-out to entire enterprise



