## Background
Burnout is a multidimensional experience that affects physician well-being, patient care, and safety. Mindfulness is “the quality of being fully present and attentive in the moment during everyday activities.” Studies demonstrate that mindfulness curricula and mindfulness-based stress reduction techniques reduce physician burnout, improve well-being, and increase empathy.

## Goal(s) of the Curriculum
A needs assessment identified a very high rate of burnout in the Boston Combined Residency Program, as well as very high acceptability of a curriculum designed to address this issue.

Our goal was to increase resident awareness and practice of mindfulness as a way to prevent or decrease burnout and improve resident wellness.

## Program Objectives
1. Design, implement, and evaluate a new mindfulness curriculum
2. Increase knowledge surrounding mindfulness and its effect on burnout and patient care
3. Improve resident wellness

### Resident/Fellow Learning Objectives
Participants will:
1. Be able to define mindfulness
2. Report a positive attitude towards mindfulness
3. Feel confident discussing mindfulness
4. Demonstrate awareness about evidence behind mindfulness practice
5. Understand the relationship between mindfulness and burnout
6. Use mindfulness techniques more in their daily lives
7. Report decreased rates of burnout

### Educational Strategies/Activities
1. Five resident-led sessions consisting of a mindfulness exercise followed by discussion of the applicability of mindfulness practice in workplace settings. Most sessions were held during dedicated teaching time.
2. Supplemental educational materials sent to residents, providing data supporting mindfulness practice to mitigate the effects of burnout and additional resources for personal mindfulness practice.
3. Two optional evening sessions delivered to residents who were on night float or unable to attend daytime teaching.

### Learner Assessment
Voluntary pre- and post-intervention surveys were administered. There were 60 and 49 responses, respectively.

More residents could define mindfulness (56% vs 44%, P<0.0001) and reported that they would use mindfulness to prevent burnout (71% vs 63%, p<0.02) after the intervention.

<table>
<thead>
<tr>
<th>Would use Mindfulness to Prevent Burnout</th>
<th>p-value</th>
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<tbody>
<tr>
<td>Yes</td>
<td>Unsure</td>
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<tr>
<td>All</td>
<td>72 (69%)</td>
</tr>
<tr>
<td>Pre-Curriculum (60)</td>
<td>28 (52%)</td>
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<tr>
<td>Post-Curriculum (49)</td>
<td>44 (91%)</td>
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### Program Evaluation
We assessed our curriculum utilizing quantitative pre- and post-intervention surveys specifically addressing our objectives as well as qualitative narrative evaluation after each session. Chi-square tests were conducted to make bivariate analyses. We are conducting ongoing analysis of the qualitative data.

### Implementation
The curriculum was designed and implemented by 2 residents with active mindfulness practices with support from current chief residents, a program director, and a faculty member, none of whom had prior experience in mindfulness practice. See back for curricular outline.

The most important barrier to implementation was a lack of curricular time for the intervention.

### Lessons Learned
1. A mindfulness curriculum is a feasible intervention to potentially prevent and decrease burnout in a large pediatrics residency program.
2. Increasing awareness and knowledge about mindfulness practice is possible with a short-term intervention.
3. Lack of curricular time is a major barrier to a burnout reduction curriculum.
### Curricular Schedule - Boston Combined Residency in Pediatrics Mindfulness Week

<table>
<thead>
<tr>
<th>Day 1: “Buy in”/Data blitz</th>
<th>Day 2: Mindfulness for sleep and relaxation</th>
<th>Day 3: Mindfulness of acceptance and frustration</th>
<th>Day 4: Mindfulness of focus</th>
<th>Day 5: Mindfulness in everyday activities</th>
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<tbody>
<tr>
<td>12:00-12:25 Social lunch and pre-intervention survey</td>
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<td>12:40-12:50 HeadSpace 10-min meditation</td>
<td>12:25-12:30 Introduction to Nadhabrama – humming meditation focused on physical release of stress. Highlight that this can be uncomfortable and different, but as residents we are often in situations that require our acceptance and consideration.</td>
<td>12:35-12:50 Nadhabrama modified meditation (10 minutes humming, 5 minutes silent sitting)</td>
<td>12:25-12:30 Introduction to “Leaves on a stream” – guided meditation for maintaining focus in light of distractions. Highlight that the day-to-day is often fraught with distracting situations and that this meditation can help one be more focused on task completion, including patient interviews and interactions.</td>
<td>12:30-12:45 Mindful coloring</td>
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<td>12:50-1:00 Think-Pair-Share activity with word cloud survey</td>
<td>12:50-1:00 Body scan</td>
<td>12:50-1:00 Think-Pair-Share</td>
<td>12:35-12:50 “Leaves on a stream” recording led by Dr. Luoma</td>
<td>12:45-12:55 Think-Pair-Share</td>
</tr>
<tr>
<td>What can I do to be mindful today? Download the HeadSpace app and take the 10-day challenge.</td>
<td>What can I do to be mindful today? Email body scan to residents and encourage them to utilize it at bedtime. Consider using a self-directed body scan while sitting at the computer.</td>
<td>What can I do to be mindful today? Take your left hand and hold it in front of you palm up. With the index index finger of your right hand, trace the fingers of your left hand. Move up and down your fingers from thumb to pinkie and back. Each time you move distally, take a long slow inhale. Each time you move proximally take a long slow exhale. Focus on the sensation of the finger and the deep breaths. You’ve just taken 10 mindful breaths.</td>
<td>What can I do to be mindful today? Email the “Leaves on a stream” meditation. Consider utilizing the technique of observing your thoughts when you are feeling overwhelmed at work. Take one task, focus on it. Allow other thoughts to pass in front of you but do not pay attention to them. Accept them and tell yourself, “I will return to that thought once I complete this task.”</td>
<td>What can I do to be mindful today? Remember the feeling you had while you were focused on a single important task. Try to utilize that technique at one moment in the day. Consider using it while preparing a discharge summary, writing an H&amp;P, or requesting a consult.</td>
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<td>12:55-1:00 Post-intervention survey completion</td>
<td>12:50-1:00 Think-Pair-Share</td>
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<td>12:50-1:00 Post-intervention survey completion</td>
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Do you think your residency would be interested in piloting a longitudinal mindfulness curriculum in first year residents to prevent burnout as part of a multi-center trial? Please email Colin.Sox@bmc.org with your inquiries.