The Coherence Experience: HonorHealth (Arizona)’s Journey with Techniques for Personal Balance

John A. Pope, MD MPH
CMO, HonorHealth Scottsdale Shea Medical Center
December 13, 2016
Objectives

• Learn techniques to transform stress and increase coherence and resilience
• Understand applications to help teams communicate better, improve patient experience, quality, and safety
• Hear the results achieved at HonorHealth in improving employee health and well being
About HonorHealth (Arizona)

- Serving 1.6 million people (Phoenix/Scottsdale)
- **Mission** – to improve the health and well-being of those we serve
- Five acute care hospitals (sixth developing)—all acute-care hospitals are Magnet accredited
- 11,000+ employees (top ten employer in state)–with over 3400 nurses
About HonorHealth (Arizona)

- 3000+ employed and aligned physicians
  - HonorHealth Medical Group (PCPs, specialists)
  - Innovation Care Partners (ACO): 60K+ lives
  - NOAH Clinics (FQHC-LA) and community services
- Residency programs
- Key service lines include primary care, cancer, cardiovascular, orthopedics, neurosciences, emergency/trauma, women’s and children’s, imaging, and surgery
- Research including over 180 clinical trials
The HeartMath System is Used by:

- Hospitals and Health Professionals
- Businesses
- Police, Fire, Corrections
- Schools, Universities, Nonprofits
- Professional Athletes/Olympic Teams
- Military, Special Forces
Resilience
Resilience

The capacity to prepare for, recover from and adapt in the face of stress, challenge or adversity.

You can learn to build your resilience capacity and sustain your energy.
Basically, we are “energy systems” that expend and renew energy.
Domains of Resilience

**Physical**
- Physical flexibility
- Endurance
- Strength

**Emotional**
- Emotional flexibility
- Positive outlook
- Self-regulation

**Mental**
- Mental flexibility
- Attention span
- Ability to focus
- Incorporate multiple points of view

**Spiritual**
- Spiritual flexibility
- Commitment to values
- Tolerance of others’ values and beliefs
Energy Balance

Constant energy expenditures without the balance of adequate rest and recovery lead to burnout, errors, health challenges and diminished performance.
Depleting and Renewing Emotions
Depleting Emotions

Emotions such as fear, frustration, impatience and anger have a toxic feeling and cause the release of stress hormones. This often results in:

• Reduced muscle mass
• Brain-cell death
• Impaired memory
• Accelerated aging
• Impaired mental function
• Diminished performance
Renewing Emotions

Emotions and attitudes such as care, courage, tolerance and appreciation create neurochemicals that regenerate your system and offset energy drain, resulting in:

• Increased longevity
• Increased resilience to adversity
• Improved memory
• Improved problem-solving
• Increased intuition and creativity
• Improved job performance and achievement
Intelligent Energy Management

Resilience, optimal performance, fulfillment and health are grounded in the intelligent management of energy expenditures and the ability to renew energy.
Self-Awareness

One of the most important steps in being able to stop energy drains and increase resilience is to identify unnecessary energy expenditures.
Heart-Focused Breathing™ Technique

An Intelligent Energy Self-Regulation Technique
Heart-Focused Breathing

• Heart-Focused Breathing is a powerful and effective tool for self-regulation.

• It’s the first step in shifting to a more coherent state – you are alert and calm at the same time.

• It can help you maintain your composure in challenging situations.
Heart-Focused Breathing™ Technique

Focus your attention in the area of the heart. Imagine your breath is flowing in and out of your heart or chest area, breathing a little slower and deeper than usual.

_Suggestion: Inhale 5 seconds, exhale 5 seconds (or whatever rhythm is comfortable)._ 

_Quick Step: Heart-Focused Breathing_
The Physiology of Coherence and Optimal Functioning
Coherence

An optimal state in which the heart, mind and emotions are aligned and in sync.

Physiologically, the immune, hormonal and nervous systems function in a state of energetic coordination.
**Sympathetic**

- Dilate bronchioles
- Stop secretion
- Secrete adrenaline
- Speed up heartbeat
- Decrease secretion

**Parasympathetic**

- Constrict bronchioles
- Stop secretion
- Secrete saliva
- Slow down heartbeat
- Increase secretion

*Spinal cord*

*Sympathetic ganglion chain*

*Parasympathetic*

*Adrenal gland*

*Stomach*

*Bladder*
Heart-Brain Communication

- The heart has its own complex nervous system: the “heart brain.”
- The heart sends far more information to the brain than the brain sends to the heart.
- Signals from the heart especially affect the brain centers involved in strategic thinking, reaction times and self-regulation.
Heart Rate Variability (HRV)

- 0.859 sec. (70 BPM)
- 0.793 sec. (76 BPM)
- 0.726 sec. (83 BPM)

2.5 seconds of heart beat data
Heart Rhythm Patterns Emerge
Emotions and Heart Rhythms

**Incoherence:** Impairs performance, amplifies energy drain

**Coherence:** Promotes optimal performance, builds resilience
Heart Rate Variability Indicators

• We have the most HRV when we are young and it steadily declines as we age.

• Below-normal HRV for your age is a strong and independent predictor of future health problems, including all-cause mortality.

• HRV is an important indicator of psychological resiliency and ability to handle stress.

• Higher levels of HRV are associated with superior mental performance on tasks requiring executive functions.
Heart Rhythms Directly Affect Physical and Mental Performance

Heart signals affect the brain centers involved in decision making, reaction times, social awareness and the ability to self-regulate.
Coherence Practice – Outcomes

• Enhances ability to maintain composure during challenges
• Improves family and social harmony
• Reduces fatigue and exhaustion
• Promotes the body’s natural regenerative processes
• Improves coordination and reaction times
• Enhances ability to think clearly and find better solutions
• Improves ability to learn and achieve higher test scores
• Increases access to intuitive intelligence
Depletion to Renewal
Depletion to Renewal Grid
ANS Activation

Depleting Emotions

Anger
Annoyed
Frustration
Anxious

Depressed, sad
Tired, burned out
Discouraged
Bored

Renewing Emotions

Happy
Appreciative
Excited
Success

Content
Peaceful
Satisfied
Compassion

Sympathetic – High Heart Rate

Parasympathetic – Low Heart Rate
Relaxation

Hormonal System
Quick Coherence® Technique
An Intelligent Energy Self-Regulation Technique
Emotions and Feelings that Create Coherence

- Courage, Honor, Dignity
- Confidence
- Appreciation, Gratitude
- Kindness
- Care, Love
- Compassion
- Tolerance, Patience
- Enthusiasm, Joy
Quick Coherence® Technique

Step 1:

Focus your attention in the area of the heart. Imagine your breath is flowing in and out of your heart or chest area, breathing a little slower and deeper than usual.

*Suggestion: Inhale 5 seconds, exhale 5 seconds (or whatever rhythm is comfortable).*
Quick Coherence Technique

Step 2:

Make a sincere attempt to experience a regenerative feeling such as appreciation or care for someone or something in your life.

_Suggestion: Try to re-experience the feeling you have for someone you love, a pet, a special place, an accomplishment, etc., or focus on a feeling of calm or ease._
Quick Coherence® Quick Steps

1. Heart-Focused Breathing
2. Activate a positive or renewing feeling
Other Applications: Coherence Techniques

1. Techniques to “ease” through the day
2. Prep for events, meetings and critical conversations/communications
3. Techniques to improve communication(coherent communication)
4. Longer coherence practice to increase energy, transform stress, sleep better, and have more energy
Use and Benefits

- Employee wellness and work life balance/ transitions
  - Physical and emotional wellness
  - Includes focus on sleep and effects of over care
  - Includes executives, management, direct healthcare providers, and service/ support departments
- Improved communication and team relationships
  - Emotional or critical discussions/ meetings
- Patient experience, quality, safety
- Focused unit, department, service line specific training (hot spots)
- New employee orientation
- Discussing use with patients
Employee Results

• Personal and Organization Assessment Survey – a 80 question scientifically validated and normed pre and post assessment tool that measures physical stress symptoms, psychological health, resilience, emotional competencies, organizational climate and work performance.

• HonorHealth Data collected from: 2009-2013
  • Employees surveyed before and six weeks after classes
  • 418 employees surveyed
  • Personal Results
  • Organizational results
Personal Results
Organizational Results

**POQA-R Normative Summary**

Scottsdale Healthcare Staff Workshops
2009 through 2013

- Substantially Above Average
- Above Average
- Average
- Below Average
- Substantially Below Average

Paired t-test significance:
* p < 0.05, ** p < 0.01, *** p < 0.001

ORGANIZATIONAL
<table>
<thead>
<tr>
<th>% of responses: often – always:</th>
<th>Pre</th>
<th>Post (6 weeks)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peaceful</td>
<td>28%</td>
<td>49%</td>
</tr>
<tr>
<td>Relaxed</td>
<td>24%</td>
<td>39%</td>
</tr>
<tr>
<td>Dynamic</td>
<td>30%</td>
<td>44%</td>
</tr>
<tr>
<td>Calm</td>
<td>33%</td>
<td>46%</td>
</tr>
<tr>
<td>Tired</td>
<td>44%</td>
<td>26%</td>
</tr>
<tr>
<td>Fatigued</td>
<td>42%</td>
<td>17%</td>
</tr>
<tr>
<td>Anxious</td>
<td>27%</td>
<td>15%</td>
</tr>
<tr>
<td>Annoyed</td>
<td>27%</td>
<td>11%</td>
</tr>
<tr>
<td>Angry</td>
<td>14%</td>
<td>6%</td>
</tr>
<tr>
<td>Worried</td>
<td>40%</td>
<td>19%</td>
</tr>
<tr>
<td>Uneasy</td>
<td>15%</td>
<td>7%</td>
</tr>
<tr>
<td>Depressed</td>
<td>9%</td>
<td>4%</td>
</tr>
<tr>
<td>It’s difficult to calm down after I’ve been upset</td>
<td>19%</td>
<td>10%</td>
</tr>
</tbody>
</table>

N = 418
### Stress Symptoms: % of responses: often – always:

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Pre</th>
<th>Post (6 weeks)</th>
</tr>
</thead>
<tbody>
<tr>
<td>My sleep is inadequate</td>
<td>40%</td>
<td>26%</td>
</tr>
<tr>
<td>Body aches (joint pain, backaches, etc.)</td>
<td>35%</td>
<td>19%</td>
</tr>
<tr>
<td>Muscle Tension</td>
<td>37%</td>
<td>20%</td>
</tr>
<tr>
<td>Headaches</td>
<td>14%</td>
<td>6%</td>
</tr>
<tr>
<td>Indigestion, heartburn or stomach upset</td>
<td>15%</td>
<td>9%</td>
</tr>
<tr>
<td>Rapid heartbeats</td>
<td>10%</td>
<td>3%</td>
</tr>
</tbody>
</table>
Thank You

John A. Pope, MD MPH
john.pope@honorhealth.com
480-323-3644
Appendix
Improvements in Mental & Emotional Well-Being

Before and six weeks after HeartMath Training

(N=5692)

Percentage of individuals responding often or always
Improvements in Physical Symptoms of Stress

Before and six weeks after taking the HeartMath Program

(N=5692)

Percentage of individuals responding often or always
Study Results

- **Blood Pressure in Hypertensive Employees (Hewlett-Packard)**
  *20% reduction* in diastolic and systolic blood pressure.

- **Diabetes (LifeScan)**
  *30% increase* in quality of life metrics; 1.1% reduction in HbA 1c.

- **Congestive Heart Failure (Stanford Hospital)**
  *Increased* functional capacity, reduced stress and depression.

- **Heart Arrhythmias (Kaiser Permanente)**
  *75%* of the patients had significantly fewer episodes of atrial fibrillation and *20%* were able to stop medication altogether.

- **Pain Reduction in Veterans (Dorn VA Hospital, SC)**
  *Reduced pain* and emotional distress, and limitations in activity.

- **Asthma (Robert Wood Johnson Medical School)**
  *Over 50%* of patients experienced a decrease in airway impedance, symptom severity and medication consumption.