If You Can’t Breathe, You Can’t Function
Integrating Cardiopulmonary and Postural Control Strategies in the Pediatric and Adult Populations

Presented by Mary Massery, P.T., D.P.T., D.Sc., and Faculty

March 17 – 19, 2017

Ruth and Tristram C. Colket, Jr. Translational Research Building at Children’s Hospital of Philadelphia

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Course Overview

This course will challenge the practitioner to make a paradigm shift: connecting breathing mechanics and postural control with management of trunk pressures. Through her model of postural control (Soda Pop Can Model), the speaker will link breathing mechanics with motor and physiologic behaviors (a multisystem perspective). She will present novel research demonstrating the role of vocal folds as postural stabilizers, extending the concept of “core stability” from the vocal folds on the top of the trunk to the pelvic floor on the bottom. Numerous interventions will be presented that use positioning and ventilatory strategies to optimize motor performance. Neuromotor breathing retraining techniques and manual assistive cough techniques will be the focus of treatment labs. Multiple patient cases will be presented throughout the course. The emphasis of the course will be on developing practical, quick clinical solutions for pediatric and adult patients in all practice settings.

Course Objectives

At the conclusion of Day One, participants should be able to:

1. Describe how trunk pressures link breathing and postural control using the Soda Pop Can Model
2. Describe the multiple, simultaneous roles of the diaphragm as related to breathing, postural control, gastroesophageal reflux, constipation and venous return
3. Demonstrate the role of the vocal folds in normal postural stability responses (balance) and make the case for using speaking valves for patients with tracheostomies
4. Contrast normal infant chest wall development to those with impaired breathing mechanics
5. Position patients for optimal physiological and biomechanical support of breathing with simple equipment (towels, pillows, etc.)
6. Use a ventilatory strategy algorithm presented in class to optimally match breathing with movements from bed mobility to athletic endeavors

At the conclusion of Days Two and Three, participants should be able to:

7. Perform a multisystem (physical and physiologic) evaluation of motor impairments
8. Identify the variations of “normal” breathing patterns and discuss the efficiencies/inefficiencies for individual patient conditions
9. Evaluate need for and demonstrate appropriate neuromotor retraining techniques for patients with ineffective breathing/postural control strategies (health or participation deficits)
10. Participate in a live patient demonstration (if a patient is available) and suggest possible evaluation and treatment ideas based on the course material
11. Design a targeted airway clearance program using the principles of mobilization, expectoration and oral management
12. Demonstrate airway clearance techniques, with a heavy emphasis on manual assistive cough techniques, and apply an airway clearance algorithm to specific patients
13. Identify thoracic cage/spine restrictions as they pertain to breathing mechanics and postural control (a very brief introduction to musculoskeletal issues)
14. Evaluate need for, and demonstrate, neuromotor retraining techniques to improve breath support for voicing
15. Suggest means for incorporating the course material into therapy activities in your clinical setting immediately

General Information

The conference will be held at Children’s Hospital of Philadelphia in the Ruth and Tristram Colket, Jr. Translational Research Building, March 17 – 19, 2017. The registration fee includes meals, drinks and snacks during the hours of the conference, parking and course material.

Services for Persons with Disabilities

Participation by all individuals is encouraged. If arrangements are required for an individual with special needs to attend this meeting, please contact the CME Department at 215-590-5263 at least two weeks in advance so that we may provide better service to you during the conference.

Registration Information

Registration fee is $625. Late registration (after Feb. 17, 2017) is $675. Course is limited to 50 participants, so register early! To register go to: chop.cloud-cme.com.

Cancellation and Refund Policy

Children’s Hospital of Philadelphia reserves the right to cancel or postpone any course due to any unforeseen circumstances. In the event of cancellation or postponement, Children’s Hospital of Philadelphia will
refund any registration fees, less a service charge, but is not responsible for any related costs, charges or expenses to participants, including cancellation charges assessed by airlines/travel agencies. In order to process refunds for course withdrawals, cancellations must be received in writing by March 1, 2017. No refunds will be issued thereafter. Refunds will be issued for the amount of registration minus a $40 service charge.

Hotel Information
Rooms have been reserved at reduced rates at the Sheraton University City. The Sheraton is located in the heart of the University of Pennsylvania’s bustling campus. The Sheraton has convenient access to Center City Philadelphia, Amtrak’s 30th Street Station, I-76 and Philadelphia International Airport. The special rate for a single or double occupancy room is $172 plus a 15.5 percent room tax. Participants are required to make their own reservations by calling the Sheraton directly at 888-627-7071. Please mention the name of the conference when making your reservations. This special room rate will be available until Monday, Feb. 13, 2017. After that date, reservations will be accepted based on space and rate availability.

Occupational Therapy Accreditation
Children’s Hospital of Philadelphia is an approved provider of continuing education by the American Occupational Therapy Association Inc. 20.5 AOTA CEUs will be awarded to participants at the completion of the program. Assignment of AOTA CEUs does not imply endorsement of specific course content, products or clinical procedures by AOTA. Approved Provider Number: 4878 Appropriate for Beginner- and Intermediate-level Occupational Therapists.

Physical Therapy Accreditation
This course has been submitted for Pennsylvania and New Jersey approval.

Photo courtesy of the Philadelphia Convention and Visitors Bureau
### Friday, March 17

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>8 a.m.</td>
<td>Registration and Continental Breakfast</td>
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<tr>
<td>8:30 a.m.</td>
<td>Breathing and Posture: Part 1 – Pressure Control (Soda Pop Can Model)</td>
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<tr>
<td>10:30 a.m.</td>
<td>Break</td>
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<tr>
<td>10:45 a.m.</td>
<td>Breathing and Posture: Part 2 – The Diaphragm</td>
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<tr>
<td>Noon</td>
<td>Lunch</td>
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<tr>
<td>1 p.m.</td>
<td>Breathing and Posture: Part 3 – The Vocal Folds</td>
</tr>
<tr>
<td>2 p.m.</td>
<td>Normal and Abnormal Chest Wall Development and Function</td>
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<tr>
<td>2:30 p.m.</td>
<td>Break</td>
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<tr>
<td>2:45 p.m.</td>
<td>Mini-lab: What Can You Do in 90 Seconds or Less that Has a Profound and Lasting Effect? Positioning Strategies</td>
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<tr>
<td>4 p.m.</td>
<td>Mini-lab: Ventilatory Strategies: Integrating Breathing Strategies with Movement for Optimal Motor Performance</td>
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<tr>
<td>5:30 p.m.</td>
<td>Adjourn for the day</td>
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### Saturday, March 18

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>8 a.m.</td>
<td>Continental Breakfast</td>
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<tr>
<td>8:30 a.m.</td>
<td>Find the Problem: Pulmonary Assessment from a Multisystem Perspective</td>
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<tr>
<td>10 a.m.</td>
<td>Break</td>
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<tr>
<td>10:15 a.m.</td>
<td>Lab: Chest Assessment: Focus on Musculoskeletal Alignment and Breathing Patterns</td>
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<tr>
<td>Noon</td>
<td>Lunch</td>
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<tr>
<td>1 p.m.</td>
<td>Lab: Chest Assessment (continued)</td>
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<tr>
<td>1:30 p.m.</td>
<td>Lab: Facilitating Efficient Breathing Patterns and Building Endurance: Chest, Diaphragm and Symmetry Techniques (Neuromotor techniques)</td>
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<tr>
<td>2:30 p.m.</td>
<td>Break</td>
</tr>
<tr>
<td>2:45 p.m.</td>
<td>Lab: Facilitating Breathing Patterns (continued)</td>
</tr>
<tr>
<td>4:45 p.m.</td>
<td>Patient Demonstration (if possible)</td>
</tr>
<tr>
<td>5:30 p.m.</td>
<td>Adjourn for the day</td>
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Sunday, March 19

8 a.m.   Continental Breakfast

8:30 a.m.   Discussion: Recap Patient Demonstration

9 a.m.   Lecture: Airway Clearance — From Sherlock to Solution

10 a.m.   Break

10:15 a.m.   Lab: Airway Clearance — Focus on Manual Assistive Cough Techniques

Noon   Lunch

12:45 p.m.   Mini Lab: Brief Introduction to Restrictions of Thoracic Spine/Rib Cage That Impair Breathing Mechanics (or vice versa)

1:30 p.m.   Lab: Enhancing Breath Support for Phonation

2:30 p.m.   Lab: Group Problem Solving — Putting it All Together

3 p.m.   Conference Adjourns

Instructor

Mary Massery, P.T., D.P.T., D.Sc.

Dr. Massery is a physical therapist who received her B.S. in physical therapy from Northwestern University in 1977, her D.P.T. from the University of the Pacific in 2004 and her D.Sc. from Rocky Mountain University in 2011. Her publications and interests focus on linking motor behaviors to breathing and/or postural mechanics in both pediatric and adult patient populations. Dr. Massery maintains a physical therapy private practice in Chicago, specializing in breathing and postural dysfunction.

Faculty

Patricia West-Low, P.T., M.A., D.P.T., P.C.S.

Patricia (Trish) West-Low earned a BS in physical therapy from the University of Scranton in 1992, an advanced MS from New York University in 1998, a DPT from Seton Hall University in 2005, and her board certification as a Pediatric Clinical Specialist in 2008. Currently, West-Low is a full-time clinician at Children’s Specialized Hospital in Toms River, N.J. Since 2001, she has also been a teaching assistant at all levels of Mary Massery’s courses and began her Massery faculty apprenticeship in 2016.