

# Improving Systems to Promote Guideline-Based Asthma Care

**A**sthma is a chronic respiratory disease that requires ongoing self-management in order to control asthma symptoms and prevent exacerbations. Poorly controlled asthma leads to increased emergency department visits, hospitalizations, and a lower quality of life. According to the most recent data available, many Vermonters with asthma (40%) report that their asthma is not well controlled.<sup>1</sup>

The National Heart, Lung, and Blood Institute (NHLBI) *Guidelines for the Diagnosis and Management of Asthma*<sup>2</sup> provide evidence-based best practices for diagnosing, managing, and controlling asthma. By practicing guideline-based asthma care, providers can help patients better control their asthma.

## Quality Improvement in Asthma Care

To promote guideline-based asthma care in primary care settings, the Vermont Department of Health's (VDH) Asthma Program partnered with the Vermont Blueprint for Health to implement the Vermont Asthma Learning Collaborative (VALC).



The goal of this quality improvement (QI) initiative is to reduce the burden of asthma in Vermont by improving diagnosis, management, and control of asthma. Quality improvement strategies involve a systematic approach to enhance the effectiveness and efficiency of health care delivery processes and health outcomes.<sup>3</sup>

Implementing change and sustaining improvement can

be challenging. Modeled after the Institute for Healthcare Improvement's The Breakthrough Series,<sup>4</sup> the VALC promotes continuous QI and systems change within primary care practices' administrative workflows and clinical processes to support guideline-based asthma care.

The VALC helps practices conduct Plan-Do-Study-Act (PDSA) cycles. Practices identify opportunities for improving processes and systems, develop and implement strategies for change, collect and analyze data to study the impact of the changes, and act based on what is learned.

**1 in 10**

*Vermonters have asthma<sup>1</sup>*

**4 in 10**

*Vermonters with asthma do not have their asthma under control<sup>1</sup>*

**1 in 2**

*U.S. children with asthma miss at least 1 day of school each year because of asthma<sup>5</sup>*

**1 in 3**

*U.S. adults with asthma miss at least 1 day of work each year because of asthma<sup>5</sup>*

## Well Controlled Asthma:

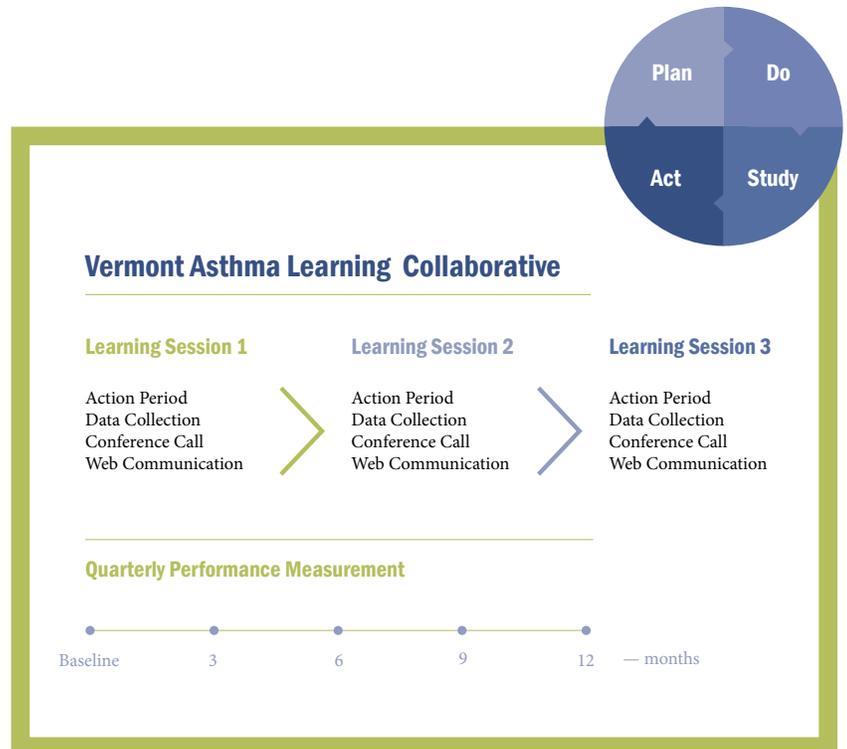
- **Reduces health care costs**
- **Reduces school and work absenteeism**
- **Improves quality of life**



## The Vermont Asthma Learning Collaborative

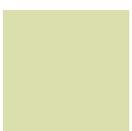
The VALC provides a forum for providers and practice staff to share experiences, problems, and solutions that support asthma diagnosis, management, control, and patient education.

Learning collaboratives apply a team approach to implement best practices through a series of learning sessions and action periods over a course of 6 - 18 months. Learning collaboratives emphasize: 1) experiential learning, 2) small tests of change (or PDSA cycles), and 3) the use of data to inform decision-making. During 2011 - 2013, two 6 month long VALCs were conducted that involved three in-person learning sessions, ongoing data collection, and telephone-based discussions.



## VALC Supports for Practices and Participants

- **Practice Facilitators:** Primary care practices that participate in the VALC receive dedicated support by a Vermont Blueprint for Health Practice Facilitator who offers technical assistance in quality improvement and systems change, including the data collection and performance measurement requirements of the VALC.
- **Basecamp®:** VALC participants have access to Basecamp®, a web-based project management system that offers practices an online communication forum to share data, research, and ideas throughout the learning collaborative and beyond.
- **Asthma Education Tools and Resources:** The VALC offers participating practices tools and resources, such as spacers and asthma education materials, to help providers and staff deliver comprehensive asthma education to their asthma patients.



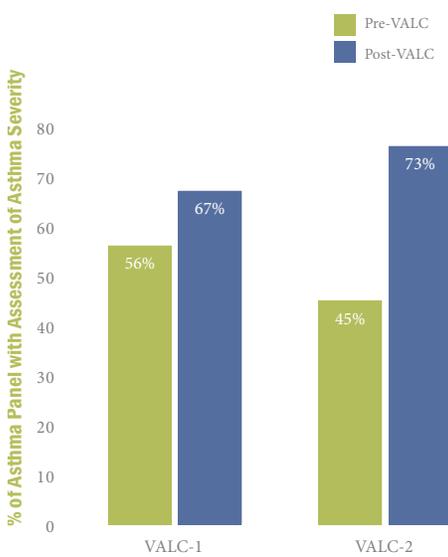
## Impact of the VALC on Asthma Care

The first VALC (VALC-1) implemented in 2012 was held in Burlington, Vermont and included six primary care practices. A second VALC (VALC-2) followed in Rutland, Vermont involving nine primary care practices. The VALC effectively engaged participating practices in a shared learning environment and increased their capacity to provide guideline-based asthma care.

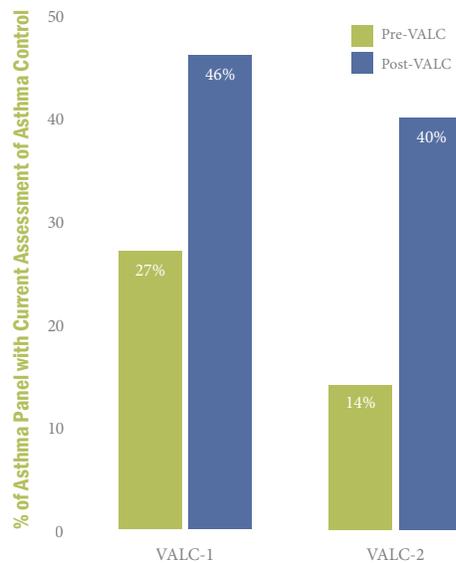
Over the course of 6 months, participating practices demonstrated increases in adherence to guideline-based asthma care, including assessment of asthma severity, assessment of asthma control, development of Asthma Action Plans, and the administration of spirometry (VALC-1 did not monitor the administration of spirometry).

## VALC Practice Performance Measures at Baseline and 6 Months

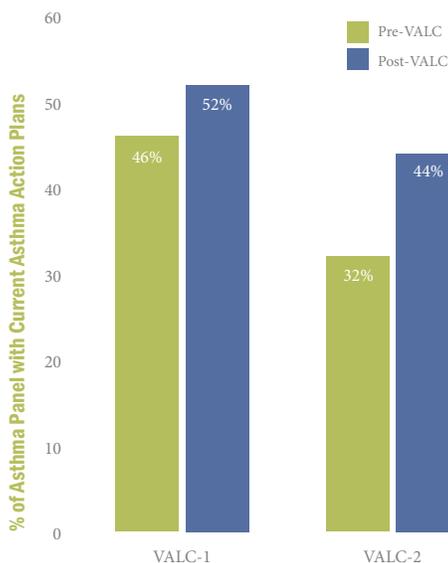
### Assessment of Asthma Severity



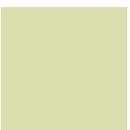
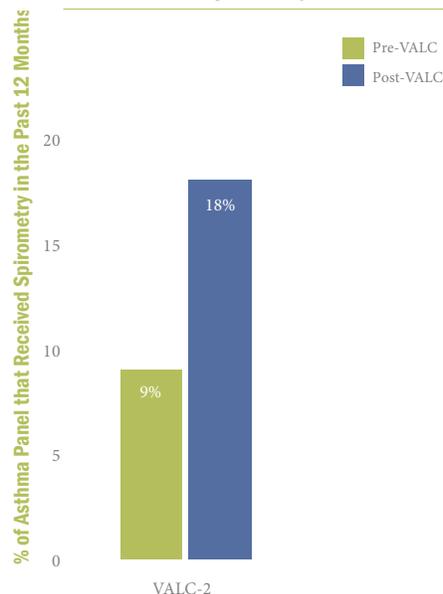
### Assessment of Asthma Control



### Development of Asthma Action Plans



### Administered Spirometry



## Participating in the VALC

Participating in the VALC assists practices in institutionalizing a commitment to quality improvement and guideline-based asthma care. Going forward, the VALC will transition to a web-based format and learning approach that offers increased flexibility and less time commitment for practices, and increased opportunity for data sharing. For more information on the VALC and upcoming learning collaborative opportunities, contact:

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**“Practice improvement is hard, but you have to start somewhere and seeing that others are struggling with the same issues was reassuring for practices”**

—Vermont Department of Health  
Chronic Disease Prevention Chief

- 1 Vermont Department of Health. The Burden of Asthma in Vermont. March 13, 2013. [http://healthvermont.gov/research/asthma/documents/asthma\\_burden\\_report.pdf](http://healthvermont.gov/research/asthma/documents/asthma_burden_report.pdf)
- 2 Expert Panel Report 3: Guidelines for the Diagnosis and Management of Asthma. National Heart, Lung, and Blood Institute. National Asthma Education and Prevention Program. 2007.
- 3 U.S. Department of Health and Human Services Health Resources and Services Administration. Quality Improvement. April 2011. <http://www.hrsa.gov/quality/toolbox/508pdfs/qualityimprovement.pdf>
- 4 The Breakthrough Series: IHI's Collaborative Model for Achieving Breakthrough Improvement. IHI Innovation Series white paper. Boston: Institute for Healthcare Improvement; 2003.
- 5 Center for Disease Control and Prevention. Asthma's Impact on the Nation. 2012. Factsheet. [http://www.cdc.gov/asthma/impacts\\_nation/asthmafactsheet.pdf](http://www.cdc.gov/asthma/impacts_nation/asthmafactsheet.pdf)

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