

# Quality Improvement 101

The simple yet powerful tools of quality improvement (QI) provide the framework that the Vermont Child Health Improvement Program (VCHIP) and our partners use to improve the health outcomes of women, children, youth, and families in Vermont and nationally. In hospitals, medical offices, and schools, QI techniques have proven to be highly effective in motivating, testing, and sustaining changes that result in improved health care processes and health outcomes. VCHIP works with health care professionals to identify **small tests of change** and supports continuous improvement activities, called plan-do-study-act (PDSA) cycles. The PDSA framework is then used to analyze existing processes and support improvement and redesign. To ensure success, it is critical to set **clear and focused goals** that identify system constraints and to **build a team** with enthusiasm, knowledge of their organization, and a willingness to make change. Once the team is assembled, a topic-specific QI activity is initiated by answering three critical questions:

1. What are we trying to accomplish?
2. How will we know that a change is an improvement?
3. What changes can we make that will result in improvement?<sup>1</sup>

Answering these questions helps clarify aims, establish measures, and identify the changes that are most likely to result in improvement. But how does it work in real life...?

## QI: A REAL-LIFE EXAMPLE

In 2009, VCHIP, in collaboration with our partners<sup>2</sup>, initiated a QI project to promote guideline-based developmental care in the medical home by providing routine surveillance, recommended developmental and autism screening, and connection to evaluation and intervention services for children with a concern or developmental delay. As an additional incentive for participation, this project also met the new requirements from the American Board of Pediatrics for Part 4 Maintenance of Certification. Forty teams from pediatric and family practices began work with VCHIP quality improvement facilitators to undertake six clear and focused goals.



## PDSA

Once you're ready to test the changes, the Plan-Do-Study-Act (PDSA) cycle provides a guide for change initiatives in complex, real-world settings. You plan the change, test it, observe how it affects your system, and act on what you've learned.

**“With support and encouragement from VCHIP, we were able to make changes in our office systems so that recommended developmental screening became a routine part of our well child visits. Participating in this project has really helped us improve the quality of care we provide to our patients!”**

NURSE, Southern Vermont Practice

Those six goal include:

1. 95% of children less than 3 years of age receive developmental surveillance at all well child visits;
2. 95% of children receive a documented developmental screening using a validated tool at the 9, 18, and 24 (or 30) month well child visits;
3. 95% of children receive a documented autism screening at the 18 and 24 month visits;
4. 90% of children identified with a concern or developmental delay receive a documented follow-up plan (observation, recheck in office, or referral);
5. 90% of families indicate their concerns about learning, development and behavior were addressed; and
6. 90% of families receive social-emotional screening (depression, domestic violence, smoking, substance abuse) at least one time during the 0-6 month well child visits.

## RESULTS AND IMPACT

Small tests of change were implemented in each participating practice. Plotting the QI data dynamically on a run chart shows the effect of the change over time and links the changes back to the overall goals of the project. The run charts show significant improvement in documented monthly screening.

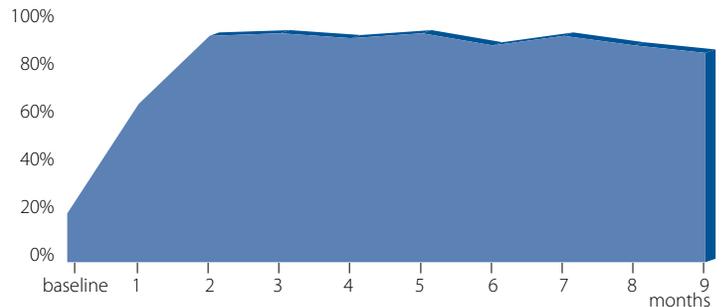
## LEARNING STRATEGIES

This project illustrates many of the strategies VCHIP employs across different projects to ensure improvement initiatives succeed. In the Developmental Screening Project, VCHIP broke goals down to test small, clearly defined changes; assembled creative and committed practice-based teams; and used run charts to monitor progress. Teams collaborated across practices to share learning about successes and challenges. Two day-long, statewide Learning Sessions were held and collaborative conference calls took place bimonthly. Finally, it was an integral part of the QI process to build and support one-on-one connections between health care practitioners and community members so that teams knew their referral resources and how to access them. To learn more, watch participating doctors talk about this developmental screening project at [www.vchip.org](http://www.vchip.org).

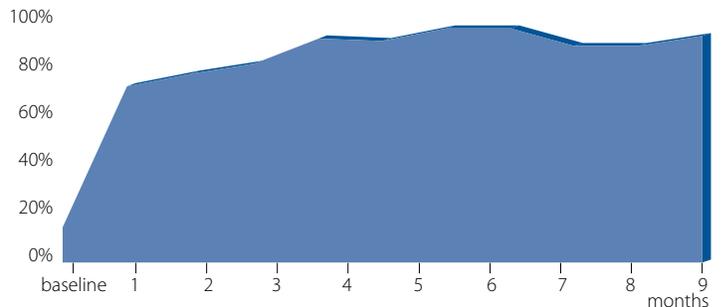
## MAINTENANCE OF CERTIFICATION

Being able to demonstrate participation in quality improvement initiatives is a critical component of American Board of Pediatrics Maintenance of Certification (MOC) requirements. VCHIP is able to offer opportunities for pediatricians to meet this requirement through current and future projects. Please call for more information about VCHIP QI projects with MOC certification.

Proportion of Age-Appropriate Developmental Screening Completed



Proportion of Age-Appropriate Autism Screening Completed



## REFERENCES

1. Langley G, Nolan K, Nolan T, Norman C, Provost L. *The Improvement Guide: A Practical Approach to Enhancing Organizational Performance*. San Francisco: Jossey-Bass Publishers, 1996.
2. Project partners include the Vermont Agency of Human Services (and its Departments for Children and Families, Health, and Vermont Health Access); the American Academy of Pediatrics, Vermont Chapter; the Vermont Academy of Family Physicians; and the Child and Adolescent Health Measurement Initiative.