IMPROVING PEDIATRIC HEALTH OUTCOMES IN WASHINGTON STATE

IN ASTHMA, MEDICAL HOME AND OBESITY

JUNE 2009

Washington State Department of Social & Health Services

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Acumentra HEALTH

Washington State Medical Home Leadership Network

CHI Child Health Institute University of Washington

Acknowledgements

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

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EXECUTIVE SUMMARY

This report presents the pediatric results of a learning collaborative in Washington State established to improve the quality and effectiveness of prevention, treatment and management of chronic health conditions. The Washington State Collaborative to Improve Health (WSC) was conducted between January 2008 and June 2009 in partnership with the Washington State Department of Health. This work was funded through the Washington State Department of Social and Health Services' (DSHS) Health and Recovery Services Administration (HRSA) as an optional activity under the 1997 Balanced Budget Act (BBA) regulations for Medicaid managed care. DSHS HRSA contracted with Acumentra Health, to conduct the learning collaborative for the pediatric medical practices.

The WSC used a learning collaborative model to disseminate best practices in five pediatric and adult chronic conditions: pediatric and adult asthma; pediatric obesity prevention and management; implementation of a medical home in a pediatric clinic; adult hypertension; and adult diabetes. The purpose of this report is to identify outcomes and lessons in the pediatric tracks. Learning collaboratives are effective ways for medical practices to work together to implement practice improvements. The model has a proven track record in Washington with the Department of Health's five years experience with the Washington State Diabetes and Cardiovascular Disease Collaboratives and the three Children's Health Improvement Collaboratives.

Acumentra Health contracted with the University of Washington's Child Health Institute (CHI) and NBV Consulting to staff the pediatric tracks of the Collaborative. The Department of Health (DOH) staffed internally the two adult tracks. Together, these agencies partnered with five Medicaid Managed Care plans and 31 medical practices to conduct a quality improvement project with each practice selecting one of the five clinical tracks. There were 14 pediatric clinics that completed the collaborative in the three pediatric tracks. Some of the improvements in measures seen in each track are as follows:

Asthma: The greatest improvement is seen in the measure looking at the percentage of patients with persistent, not well controlled or poorly controlled asthma being prescribed an inhaled corticosteroid (ICS) – 30 percent at baseline and 85 percent at the end of the project. The assessment of asthma severity in the patients in the participating medical practices increased from 21 percent to 61 percent. Great gains were also seen in the clinical processes measures for severity classification, rising from 21 percent to 61 percent; for the evaluation of environmental triggers, improving from 63 percent to 87 percent; and for the assessment of level of asthma control, improving from 9 percent to 56 percent.

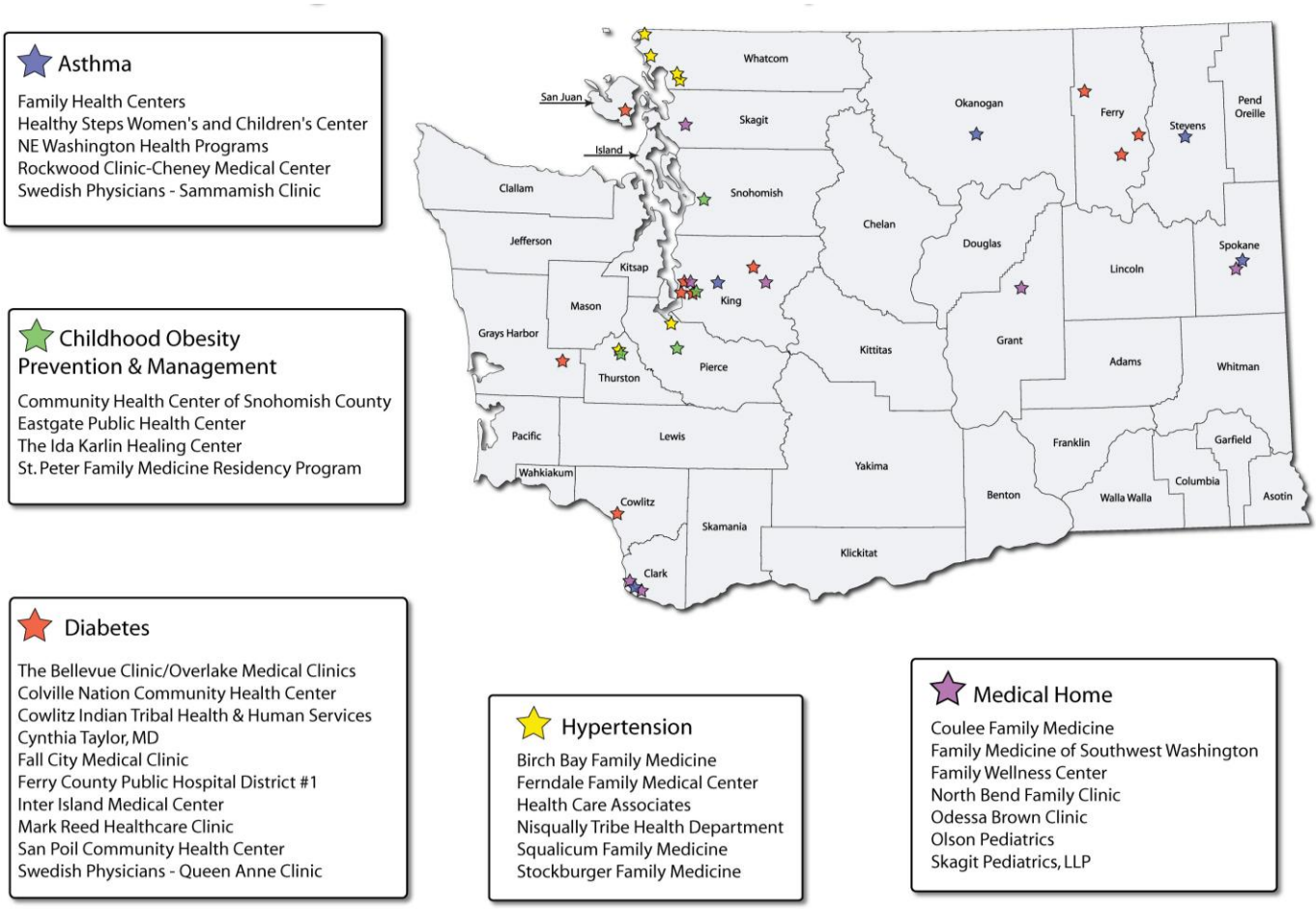
Medical Home: As a group, the medical practices focusing on implementation of a medical home demonstrated an increase in their measurement of patients with a chronic illness management visit in the last 12 months, from 8 percent to 44 percent. The percent of patients with a parental report of pre-visit contact to discuss visit content increased from 0 percent to 36 percent. The number of patients with a parental report of sufficient time with provider and understandable health advice increased from 1 percent to 25 percent.

Obesity: The medical practices in the obesity management and prevention track saw some minor improvement in increases in their collection of body mass index (BMI) data and weight classification, from 94 percent to 99 percent of their pilot population. The medical practices delivered healthy lifestyle messages to patients at a high level, increasing from 0 percent to 7 percent of patients. They documented current self-management goals in 31 percent of patients, up from 25 percent at baseline. These numbers were significantly lower than the last

collaborative. The primary reason is the use of the rolling year data to collect the measures. Further discussion of this appears in the summary section (page 31) of this document.

The WSC demonstrates that medical practices can accomplish substantial improvements in both quality and effectiveness of preventive and chronic care services delivered to Medicaid children. Working together, Collaborative staff provided skilled project management and coaching, and clinical faculty shared track specific expertise to successfully lead teams to produce impressive increases in clinical indicators.

Clinic Participation by County



INTRODUCTION

Purpose
The WSC represents the fourth round of a dynamic ongoing partnership to disseminate evidence-based best practices and successful learning collaborative approaches in pediatric health care in Washington State. In the first two years, the improvements in the delivery of preventive services were addressed, specifically children's developmental screening and oral health. In the third year, the collaborative expanded its focus to include asthma, ADHD and obesity prevention. The expanded collaborative aimed to improve the quality of both preventive and chronic care of Medicaid children enrolled in Healthy Options, Washington's Medicaid managed care program.

The fourteen pediatric focused practices participating in WSC came from 11 counties in Washington State. The managed care health plans participating included Community Health Plan, Group Health Cooperative of Puget Sound, Molina Healthcare of Washington, Regence BlueShield, and Columbia United Providers. Each clinic chose one of the five (three pediatric) clinical tracks as their focus for the learning sessions. The health plans met via conference calls, assisted with recruiting medical practices to join the collaborative and worked directly with medical clinics to offer support for their participation. The project was staffed by physicians, quality improvement (QI) specialists, and project assistants from QI Partners, associated with the National Initiative for Children's Healthcare Quality (NICHQ), the Child Health Initiative (CHI), and NVB Consulting.

The WSC was similar to the first three pediatric collaboratives. It offered three interactive full-day learning sessions on May 15, 2008; November 5, 2008; and May 5, 2009 where medical practices learned the Chronic Care Model[1], the Model for Improvement[2], and how to apply rapid-cycle QI principles to individual projects. In addition, each learning session provided specific training about evidence-based guidelines and best practices for their chosen track. Monthly conference calls were held in non-learning session months and site visits were conducted with each medical practice with their specific coach. There were a couple of differences in the approach for this round. Coaching was much more intensive with each team having the same coach throughout the process who attended three site visits with each team. Additionally, incentive monies were given for completing specific tasks along the way.

Goals
The goal of the WSC was to improve care in participating clinical sites by implementing an approach that would maximize the quality of life for children with asthma, obesity or those living with special conditions that would most benefit from a medical home. As with previous collaboratives, WSC used QI methods to improve the delivery of care and outcomes for patients. Using a comprehensive, integrated set of evidence-based or best practice changes, the recommended clinical improvements aimed to strengthen the effectiveness of Medicaid managed care plans as systems are established to assure the delivery of preventive care for common chronic conditions, and avoidable hospitalizations and emergency room visits are reduced.

Structured as a focused healthcare improvement collaborative, 18 pediatric and family practices that provide services to Medicaid covered children throughout Washington State participated (14 completed) in the project from January 2008 to June 2009. (See Appendix A for a list of participating teams). The content of the learning sessions included guiding participants to set aims or goals for their project, establishing measures for evaluating success, and identifying changes to improve care and meet the required process measures. (See the agendas for the three Learning Sessions in Appendix F.) Participants received instruction in the Chronic Care Model and the Plan, Do, Study, Act (PDSA) cycles of change, and methods for implementing, evaluating and sustaining change.

[1] Wagner EH. Chronic disease management: What will it take to improve care for chronic illness? *Effective Clinical Practice*. 1998;1(1):2-4.
[2] Associates in Process Improvement

Specifically, teams were asked to:

- Test and measure practice innovations for a defined group of patients.
- Share their experiences to accelerate learning among all participating teams.
- Spread the resulting best practices throughout their systems.

In achieving these goals, teams aimed to improve patient outcomes, facilitate effective care delivery, and increase community resource connections. These changes were achieved by implementing a model of chronic illness care that involves practices in assuring the delivery of evidence-based clinical care and strong support for patient and family self-management. Additionally, WSC faculty and staff supported practices in developing systems to monitor their own performance.

Secondary goals included 1) promoting opportunities for collaboration among key stakeholders to make the most of healthcare dollars, 2) providing a basic understanding of QI principles and the implementation of the Chronic Care Model, and 3) facilitating clinics' improvements in patient outcomes, care delivery processes, and linkages to community resources.

Methods

For this 18-month project, WSC faculty and staff used the Breakthrough Series™ approach developed by the Institute for Healthcare Improvement, which includes: pre-work, three learning sessions and three action periods, regular data and team reporting, monthly conference calls, and site visits. In order to improve clinical outcomes, medical practices implemented an improved system of care consistent with the Chronic Care Model/Care Model for Child Health[3] using rapid-cycle tests of change as defined in the Model for Improvement. WSC faculty and staff supported practices in their efforts.

Participating Practices:

- Identified a Practice Team (three to four people) that included a senior leader, system leader, clinical champion, day-to-day leader, and additional administrative staff.
- Engaged parents and patients in the improvement process as appropriate.
- Performed pre-work activities prior to each Learning Session.
- Connected the goals of the Collaborative to a strategic initiative in the organization.
- Sent team members to participate in each Learning Session.
- Provided resources to support the team in meeting Collaborative goals and expectations.
- Performed tests of changes that led to implementation of new practices, and reported on changes to share with other Collaborative teams.
- Made well-defined measurements and shared data with other collaborative teams monthly.
- Populated a chronic disease registry (electronic database or paper version) of patients designed to facilitate planned, population-based care.
- Participated in monthly conference calls.
- Participated in Collaborative listserv, which required an email address and internet access.

Collaborative Leadership Team:

- Provided evidence-based information on subject matter and ideas for application of that subject matter.
- Taught, promoted and reinforced the Chronic Care Model, the Model for Improvement, as well as other concepts and methods for improvement and change, throughout the project.
- Provided communication strategies to keep sites connected to the leadership team and to other practice teams throughout the Collaborative.
- Offered coaching to Collaborative teams.
- Ensured that the Collaborative was well planned and run while being responsive to participant needs.

[3] Wagner, EH.

PROJECT BACKGROUND AND RATIONALE

Asthma

Although death from asthma is uncommon, Washington State bears a heavy burden of economic and personal costs related to the disease. Washington's asthma prevalence is among the highest in the nation. Nine percent of adults in Washington have asthma, and 7 percent to 9 percent of middle/high school-aged children have asthma[4]. One in 10 households with children of any age has a child with asthma[5].

About 48,000 adults with asthma make at least one emergency department visit each year in Washington, and more than 5,000 people are hospitalized for asthma. Children under 5 years of age are the most likely to be hospitalized. Direct medical costs for asthma in Washington are about $240 million each year, with an additional $160 million in lost work productivity[6].

Having asthma reduces quality of life, limits activities, and is associated with depression and suicidal thoughts among young people. Asthma results in missed school days for youth, and those with more severe symptoms are less likely to have high academic achievement than youth with few symptoms or those without asthma[7].

Locally and nationally, medical practices are not often organized to provide care using a population-based, data-informed, guideline-supported approach. Providers have little time for patient education and often do not counsel patients about self-management and trigger reduction. They also often lack information about the home, social and physical environments, as they see patients only in clinical settings.

Disease Management Recommendations

In August 2007, the National Heart, Lung, and Blood Institute released the *Expert Panel Report-3: Guidelines for the Diagnosis and Management of Asthma (EPR-3)*[8]. Major changes in the new guidelines include a new focus on distinguishing between severity and control, and the importance of monitoring asthma control; a new focus on impairment and risk as the two key domains of severity and control; modifications in the steps to long-term asthma management; new emphasis on patient education and consideration of environmental and comorbidity factors; and modification to treatment of asthma exacerbations. The key clinical activities of the new guidelines fall under four essential components of care:

1. Assessment and Monitoring:
   - Assess asthma severity to initiate therapy.
   - Assess asthma control to monitor and adjust therapy.
   - Schedule follow-up care.
2. Education:
   - Provide self-management education.
   - Develop a written asthma action plan in partnership with the patient.
   - Integrate education into all points of care where health professionals interact with patients.
3. Control Environmental Factors and Comorbid Conditions:
   - Recommend measures to control exposures to allergens and pollutants or irritants that make asthma worse.
   - Treat comorbid conditions.
4. Medications:
   - Select medication and delivery devices to meet patient's needs and circumstances.

[4] Washington State Department of Health. Behavioral Risk Factors Surveillance System (BRFSS), 2006

[5] Washington State Healthy Youth Survey,2006

[6] Ibid

[7] Washington State Department of Health. *The Burden of Asthma in Washington State, 2005*

[8] http://www.nhlbi.nih.gov/

Opportunities to Improve Care
The mission of this Collaborative is twofold: to reduce visits to the emergency department or hospitalization related to asthma exacerbations, and increase the number of symptom-free days for adults and children with asthma. Based on recommendations from the *EPR-3*, this can be achieved by careful assessment of asthma severity; regular monitoring of symptom control; patient empowerment through culturally relevant education and shared decision making; and consideration of patients' individual environmental factors.

Medical Home

Being a "medical home" means a commitment to a practice approach that emphasizes coordination of care needs, working with community partners, and collaboration with and support for children and their families. This approach is important for all children and is especially beneficial for children with special health care needs (CSHCN). Children with SHCN are *at risk for* or *have* chronic physical, developmental, behavioral, or emotional conditions. In the U.S., 12.5 million children require health and related services of a type or amount beyond that required by children in general[9,10,11]. Families, primary care physicians (PCPs) and community agencies are challenged by the coordination and funding issues associated with providing evidence-based, comprehensive, coordinated care. Medical home initiatives regionally and nationally have identified approaches that primary care practices can reasonably integrate into their practice routines. This has resulted in improved care provision, greater satisfaction of families and PCPs and, increasingly, greater cost savings and reimbursement for care provision.

Summary medical home results:
Healthier children and families

- CSHCN receiving care within a medical home have less delayed care, less problems getting care, fewer unmet health needs, and fewer unmet needs for family support services[12].
- Parents of CSHCN report improved care delivery, a decrease in hospitalizations, and a decrease in the number of missed work days [13].

Reduced health care costs

- Children who receive care in a medical home are half as likely to visit an emergency room or be hospitalized.

Health care access through health insurance is not enough to avoid acute care and treatment costs. Other issues such as quality of care and the relationship with a primary care provider also influence the use and cost of health care services.[14]

There is a need for early identification of developmental problems, autism being only one high-priority example, and for diagnosis and management of chronic childhood-onset health problems. Earlier diagnosis allows for improved patient and family education, better disease management and prevention of secondary problems/disability. For children with developmental issues, there are greater developmental gains with less chance of secondary problems when early intervention begins soon after diagnosis.

Early intervention reduces the need for special education and other services later in life. In Washington State, 7,900 children received birth-to-three early intervention services from October 1, 2005 – September 30, 2006. In the same period, 3,689 children transitioned out of early

[9] Neff et al., 2002
[10] Newacheck et al., 1998
[11] Stein & Silver, 2002
[12] Strickland B et al. "Access To The Medical Home: Results Of The National Survey Of Children With Special Health Care Needs." *Pediatrics* 113(5):1485-1492, 2004.
[13] Palfrey J et al. "The Pediatric Alliance For Coordinated Care: Evaluation Of A Medical Home Model." *Pediatrics* 113(5):1507-1516, 2004
[14] Starfield B, Shi L. "The Medical Home, Access to Care and Insurance: A Review of the Evidence." *Pediatrics* 113(5):1493-1498.

intervention services. Of these 3,689 children, 858 or 23.2% no longer needed special education services.

The burden is particularly acute in the CSHCN population both in terms of increasing numbers and costs. Children with SHCN comprise about 18% of children in the US yet account for 80 percent of pediatric health care expenses. The number of CSHCN has grown by 30 percent over the past two decades largely due to 1) improved diagnosis and early identification, 2) better access to specialized care, and 3) enhanced survival in prematurity, birth defects, and chronic illnesses such as childhood cancers and cystic fibrosis.[15]

Physicians, nurse practitioners and other PCPs are core participants in the care of CSHCN. Families and children need community-based care, despite the involvement of specialists and perhaps distantly located medical centers. In order to optimize care, the role of the PCP must be clear and (s)he must have tools and personnel to provide the kind of coordinated, comprehensive services that families need, recognizing the pressures of time and productivity. There are ways to gather the information needed during a child's visit in order to provide high-quality care. The primary care team needs to know these methods and to know that time spent coordinating services and meeting with community resources is productive and will not harm their financial sustainability.[16]

Difficulties in communication and coordination also affect community-based professionals in schools, early intervention programs, and mental health agencies, especially in determining how best to communicate with the health care provider. Many providers indicate challenges with communication about the services that they offer and responsiveness from PCPs about their service plans. Additionally, there are multiple funding sources which support the varying care coordination efforts of diverse community agencies. The resulting "silo" effect prevents the most efficient use of limited financial resources for a need highlighted by families and practitioners alike.

Management Recommendations

The medical home approach is a QI strategy that provides the organizing principles for caring for children *with* or *at risk of* special health care needs. The American Academy of Pediatrics (AAP) describes key characteristics of the primary care medical home as accessible, continuous, comprehensive, family-centered, coordinated, compassionate, and culturally effective care.

A consensus statement on medical home principles was developed and jointly endorsed by the AAP and a number of other groups highlighting the following critical pediatric medical home principles:

- **Family-centered partnership**: Trusting, collaborative, working partnership with families, respecting their diversity and recognizing that they are the constant in a child's life.
- **Community-based system:** Family centered- coordinated network designed to promote the healthy development and well being of children and their families.
- **Transitions**: Provision of high-quality, developmentally appropriate, health care services that continue uninterrupted as the individual moves along, and within, systems of services from adolescence to adulthood.
- **Value**: A high performance health care system requires appropriate financing to support and sustain medical homes that promote system-wide quality care with optimal health outcomes, family satisfaction, and cost efficiency.

Opportunities to Improve Care

During the course of the Collaborative we learned that a focus on: clinical care coordination/previsit planning (including previsit contact with patients and medical summary/discharge patient information); increased opportunities for communication with patients (via phone calls, surveys, involving patients with the care team, longer schedule patient visit); concentrated adherence to a registry system (for planning, patient reminders and follow-up); and linking to community resources

[15] Committee on Children with Disabilities of the American Academy of Pediatrics, 1999
[16] Ibid

(schools, local health departments etc) were all associated with improvement and overall satisfaction. In addition, the respectful and thoughtful planning that each team demonstrated was also key in helping teams to identify appropriate and successful changes in their practices.

Obesity Prevention and Management

Among children and adolescents, the Centers for Disease Control and Prevention (CDC) and the American Medical Association (AMA) defines obesity for adolescents and children as being equal to or above the 95th percentile for BMI based on the National Center for Health Statistics growth charts from the early 1970s. The CDC defines being overweight as being between the 85th and 95th percentile of these norms. The use of the same growth charts over time has made it possible to observe the increase in obesity among adolescents. From the early 1970s through 2002, the percent of US children who were obese (BMIs greater than the 95th percentile) tripled; the percent who had BMIs greater than the 99th percentile quadrupled[17].
As with all areas of the country, obesity is becoming more common in Washington State. In 2006, 60 percent (± 1percent) of Washington adults were overweight. Of that group, 24 percent (±1 percent) were obese. Nationally, the rate of increase slowed slightly after 2001, but in Washington, rates continued to rise at the same pace from 1993-2006. The national Healthy People 2010 goal is to decrease the age-adjusted prevalence of obesity to 15 percent in adults ages 20 and older. Given the current trend, Washington will not meet this goal.

Obesity rates among children over the past several decades are not readily available in Washington. Recent data from the 2006 Washington Healthy Youth Survey (HYS), based on self-reported heights and weights, found that 11 percent (±1 percent) of Washington adolescents in grade 10 were obese and 14 percent (±2 percent) were overweight. Washington State data from the National Survey of Children's Health concurred in finding that 10 percent (±3 percent) of youth ages 12-17 were obese in 2003[18].

The Institute of Medicine's report for preventing childhood obesity describes factors contributing to the increasing rates of obesity among children. These factors include fewer opportunities for physical activity, fewer meals eaten at home, media and marketing that target children with food advertisements, increased portion sizes, and increased amount of time in sedentary activities, including watching television and using computers[19]. Other factors, such as fetal weight gain[20], parental obesity[21], and the age at which a child's "adiposity rebound" begins[22], also contribute to overweight and obesity among children. Barriers to the clinical treatment of obesity include the lack of treatment protocols, lack of time for counseling families, reimbursement structures, and commitment of primary care PCPs for affected patients[23].

Obesity in the pediatric population is associated with significant health problems. Cardiovascular health (hypercholesterolemia, dyslipidemia, and hypertension)[24,25,26], changes in the endocrine

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[17] Freedman, D. S ., Khan, L. K ., Serdula, M. K ., Ogden, C. L ., & Dietz, W. H . (2006). Racial and ethnic differences in secular trends for childhood BMI, weight, and height. *Obesity, 14*(2), 301-308

[18] CDC National Center for Health Statistics, State and Local Area Integrated Telephone Survey, 2003 National Survey of Children's Health. Data retrieved August 30, 2006. Prepared by Washington State Department of Health Chronic Disease Prevention Unit, September 2006.http://www.cdc.gov/nchs/about/major/slaits/nsch.htm

[19] Koplan, J. P., Liverman, C. T., & Kraak, V. A. (Eds.). (2005). *Preventing Childhood Obesity: Health in the Balance.* Washington, DC: The National Academies Press

[20] Power, C., & Jefferis, B. J. (2002). Fetal environment and subsequent obesity: a study of maternal smoking. *International Journal of Epidemiology, 31*(2), 413-419

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[22] Dietz, W. H. (2000). Adiposity rebound: reality or epiphenomenon? *The Lancet, 356,* 2027-2028

[23] National Heart Lung and Blood Institute. (2005). Working Group Report on Competencies for Overweight and Obesity Identification, Prevention, and Treatment. Retrieved November 3, 2006 from http://www.nhlbi.nih.gov/meetings/workshops/overweight/report.htm

[24] Gidding SS, Bao W, Srinivasan SR, Berenson GW. Effects of secular trends in obesity on coronary risk factors in children: the Bogalusa Heart Study. *J Pediatr.*1995; 127 :868 –874

system (hyperinsulinemia, insulin resistance, impaired glucose tolerance, type 2 diabetes mellitus and menstrual irregularity)[27,28,29] and mental health factors(depression and low self-esteem)[30,31] are common medical problems in obese children. Overweight and obesity in youth is an important early risk factor for much of adult morbidity and mortality[32,33]. Therefore, prevention and early recognition are imperative.

Prevention and Management Recommendations

The AMA Expert Committee recommends specific guidelines for the assessment, prevention, and treatment of child and adolescent overweight and obesity[34]. Prevention recommendations include:

- Healthcare providers counsel children and families about dietary intake. Specifically, to limit the consumption of sugar-sweetened beverages and encourage intake of fruits and vegetables, eat a diet rich in calcium and high in fiber.
- Discuss opportunities for moderate to vigorous physical activity up to 60 minutes per day. Limit television and other screen time to 1 or 2 hours per day and remove the television and computer screens from a child's primary sleeping area.
- Counsel pediatric patients and families on healthy eating behaviors such as eating a daily breakfast, limit dining out and fast food consumption, decrease portion size and encourage family meals.

The Expert Committee also offers recommendations and techniques for all healthcare professionals and organizations to advocate for policies and environmental changes that increase physical activity and improve nutrition in schools, communities and in the clinical setting. The committee encourages healthcare professionals to support efforts to preserve and enhance parks as areas for physical activity, inform local development initiatives regarding the inclusion of walking and bicycle paths, and promote families' use of local physical activity options by making information and suggestions about physical activity alternatives available in doctors' offices[35].

Opportunities to Improve Care

Focusing on prevention and management of childhood obesity to prevent adult obesity is an upstream approach, but given the difficulty of losing and maintaining weight loss, obesity prevention in children and teens offers the best hope for halting and reversing increases in obesity. Reversing trends in obesity requires individual and family behavior change and the elimination of societal and environmental barriers to healthy lifestyle choices. During the course of the Collaborative, we learned motivational interviewing techniques to provide innovative ways of beginning – and continuing - the dialogue about weight with children and families which is a crucial first step in improving care. Additionally, following the Expert Committee Recommendations (Dec 2007 Supplemental Issue of Pediatrics) for lab testing and BMI %ile tracking, connecting with community programs to support families, and use of a patient registry system are ways to improve care for children with overweight or obesity issues.

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[25] Clarke WR, Woolson RF, Lauer RM. Changes in ponderosity and blood pressure in childhood: the Muscatine Study. *Am J Epidemiol.*1986; 124 :195 –206

[26] Johnson AL, Cornoni JC, Cassel JC, Tyroler HA, Heyden S, Hames CG. Influence of race, sex and weight on blood pressure behavior in young adults. *Am J Cardiol.*1975; 35 :523 –530

[27] Morrison JA, Laskerzewski PM, Rauh JL, et al. Lipids, lipoproteins, and sexual maturation during adolescence: the Princeton Maturation Study. *Metabolism.*1979; 28 :641 –649

[28] Shinha R, Fisch G, Teague B, et al. Prevalence of impaired glucose tolerance among children and adolescents with marked obesity. *N Engl J Med.*2002; 346 :802 –810

[29] Richards GE, Cavallo A, Meyer WJ III, et al. Obesity, acanthosis nigricans, insulin resistance, and hyperandrogenemia: pediatric perspective and natural history. *J Pediatr.*1985; 107 :893 –897

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[31] Davison KK, Birch LL. Weight status, parent reaction, and self-concept in five-year-old girls. *Pediatrics.*2001; 107 :46 –53

[32] Freedman DS, Dietz WH, Srinivasan SR, Berenson GS. The relation of overweight to cardiovascular risk factors among children and adolescents: the Bogalusa heart study. *Pediatrics.*1999; 103 :1175 –1182

[33] Must A, Jacques PF, Dallal GE, Bajema CJ, Dietz WH. Long-term morbidity and mortality of overweight adolescents. A follow-up of the Harvard Growth Study of 1922 to 1935. *N Engl J Med.*1992; 327 :1350 –1355

[34] American Medical Association *Expert Committee Recommendations on the Assessment, Prevention, and Treatment of Child and Adolescent Overweight and Obesity*, June 2007.

[35] Ibid.

EVALUATION METHODS AND MEASURES

Inherent in the Breakthrough Series Model, measurement is used at both the clinical level and collaborative level to track overall progress and efforts of the individual teams, as well as the aggregate data of all teams combined.

Clinical Measurement
Teams were asked to report measures monthly. Required measures for each track are included in this section. (See Appendix C for a list of optional measures.) There were 7 or 8 outcome and process measures for each track based on a pilot population of 50 to 200 patients. A patient registry was used to pull these data using a rolling year process. For example, data for September 2008 was a retrospective look at the pilot population for September 1, 2007 to August 31, 2008.

Monthly reports were reviewed by coaches and the project epidemiologist to assess whether or not the changes teams were making in clinical practice resulted in measurable improvements. Ideally, improvements in care would be reflected in the project's core measures. Coaches provided teams with email or verbal feedback depending on the nature of the comments. Three site visits per clinic provided another opportunity for discussing and analyzing the monthly report results with the team members face-to-face. (See Appendix B for samples of all data collection tools.)

Teams were asked to submit reports on the 15th of each month via email. The reports reflected the activities of the previous month and included these three specific pieces of information:

Narrative Report
WSC staff asked teams to report on changes that had occurred during the prior month. Monthly reporting allowed coaches to track progress and to identify opportunities to provide feedback to the clinic teams. With this tool teams reported the following:

- Goals for each measure.
- A tally of each PDSA including what component of the CCM it affects and the status of the test.
- Successes, barriers and lessons learned.
- A team self assessment scoring tool.
- One sample PDSA worksheet.

Data Report
With this Excel spreadsheet tool, teams reported monthly numerator and denominator figures for each measure which automatically created run charts. To collect these data, teams identified a pilot population based on track-specific criteria from which monthly measures were calculated. For all topics the ideal/recommended pilot population was 50-200 patients. Smaller pilot populations were acceptable but it was recommended not to exceed 200 patients.

The intent was that the pilot population be identified prior to Learning Session 1 and remain the same throughout the Collaborative. For these purposes, the pilot population was defined as patients who at the time of registry set up met the following criteria:

- **ASTHMA** – Children and youth 2 years and over + asthma ICD9 code + visited clinic at least one time since January 1, 2007.
- **MEDICAL HOME** – Children and Youth with special health care needs ages 0-18 years of age.
- **OBESITY** – Children and youth 2-18 years + visited clinic in past year (or 2 years) for well child visit.

Prior to the first learning session, teams collected baseline data on their pilot populations.

Plan, Do, Study, Act (PDSA) Cycle
WSC staff asked teams to share an example of one of the PDSA cycles that they had worked on during the prior month.

Required Measures for each track

Table 1. Required Measures for Asthma Management
Patients = Patients in pilot population

Denominator = Number of patients in the pilot population (as defined on page 14), unless noted otherwise in the middle boxes below.

MEASURE	STATISTIC *	TYPE OF MEASURE
ED visits for asthma	*Numerator:* Number of patients who have had a visit to an ED for asthma in the past three months	Outcome
Level of control	*Numerator:* Number of patients who are well controlled † among those with persistent asthma † *Denominator*: Number of patients with persistent asthma †	Outcome
Initial or revised severity classification	*Numerator:* Number of patients who have a documented level of severity †	Process
Current level of control	*Numerator:* Number of patients who have a documented level of control †	Process
Appropriate treatment with anti-inflammatory medication	*Numerator:* Number of patients with persistent asthma † or who have not well controlled or poorly controlled asthma † that are prescribed an ICS at that visit *Denominator*: Number of patients with persistent asthma † or who have not well controlled or poorly controlled asthma at that visit †	Process
Evaluation/control of environmental triggers	*Numerator:* Number of patients with persistent asthma † ever evaluated for environmental triggers (dust mites, cats, dogs, molds/fungi, cockroaches, rodents, irritants e.g. environmental tobacco smoke, chemicals) either by history of exposure and/or by allergy testing *Denominator*: Number of patients with persistent asthma †	Process
Written asthma management plan	*Numerator:* Number of patients with persistent asthma † who have a current written asthma management plan *Denominator*: Number of patients with persistent asthma †	Process

*Numerator divided by denominator, then multiplied by 100, equals the percent of patients meeting the measure requirements.

† Control and severity of asthma defined using EPR-3 classification

Table 2. Required Measures for Medical Home Management

Patients = Patients in pilot population
For all measures (except Chronic Illness Management and Well Child Visit) use data from most recent visit or service (with data recorded) in past year.
Denominator = Number of patients in the pilot population (as defined on page 14), unless noted otherwise in the middle boxes below.

MEASURE	STATISTIC *	TYPE OF MEASURE
Percentage of CYSHCN patients with an ER visit in last three months	*Numerator*: Number of CYSHCN patients with an ER visit in the last three months	Outcome
Percentage of CYSHCN patients admitted to hospital during last three months with an unplanned hospitalization	*Numerator:* Number of CYSHCN patients admitted to hospital during the last three months with an unplanned hospitalization	Outcome
Percentage of CYSHCN patients with a parental report of sufficient time allowed with the physician/nurse and explanation of health advice that both the parent and child can understand	*Numerator*: Number of CYSHCN patients with a parental report of sufficient time with physician/nurse and explanation of health advice that both the parent and child can understand	Process
Percentage of CYSHCN patients with a chronic illness management visit in last 12 months	*Numerator*: Number of CYSCHN patients with a chronic illness management visit in the last 12 months	Process
Percentage of CYSHCN patients with a parental report of help with specialty care referral	*Numerator*: Number of CYSHCN patients with a parental report of help with specialty care referral	Process
Percentage of CYSHCN patients with a parental report of contact before visit to discuss upcoming visit content (call, email or snail mail by care coordinator)	*Numerator*: Number of CYSHCN patients with a parental report of contact before visit to discuss upcoming visit content (call, email or snail mail by care coordinator)	Process
Percentage of CYSHCN patients with a well-child visit in the last 24 months	*Numerator:* Number of CYSHCN patients with a well-child visit in the last 24 months	Balancing

*Numerator divided by denominator, then multiplied by 100, equals the percent of patients meeting the measure requirements.

Table 3. Required Measures for Obesity Management
Patients = Patients in pilot population
Denominator = Number of patients in the pilot population (as defined on page 14), unless noted otherwise in the middle boxes below.

WEIGHT CLASSIFICATION:

- Underweight: <5th BMI%ile
- Healthy weight: 5th–84th BMI%ile
- Overweight: 85th–94th BMI%ile
- Obese: 95th–98th BMI%ile
- ≥99th BMI%ile (These patients are referred to as 'over the 99th percentile' not as morbidly obese.)

MEASURE	STATISTIC *	TYPE OF MEASURE
Percent overweight	*Numerator*: Number of children with a BMI 85th–94th %ile at last well child visit	Outcome
Percent obese	*Numerator*: Number of children with a BMI 95th–98th %ile at last well child visit	Outcome
Percent ≥99th %ile	*Numerator*: Number of children with a BMI ≥99th %ile at last well child visit	Outcome
BMI%ile and weight classification	*Numerator*: Number of children with a BMI%ile and documented weight classification at last well child visit	Process
Healthy lifestyle messages	*Numerator*: Number of children/families who received healthy lifestyle messages (breastfeeding, eating breakfast, more meals at home or with family, fruits/vegetables, TV reduction, 1 hour PA, limit sweet drinks) at last well child visit	Process
Current self management goal	*Numerator*: Number of children with a BMI ≥85th %ile with a documented self management goal or readiness to change evaluated at last well child visit or overweight follow-up visit *Denominator*: Number of children with a BMI ≥85th %ile at last well child visit or overweight follow-up visit	Process
Referral	*Numerator:* Number of children with a BMI ≥85th %ile with a documented referral to at least 1 of the following: nutrition, physical activity or healthy lifestyle program, mental health provider or sub-specialist at last well child visit or overweight follow-up visit *Denominator*: Number of children with a BMI ≥85th %ile at last well child visit or overweight follow-up visit	Process
Overweight follow-up visit	*Numerator:* Number of children with a BMI ≥85th %ile with an overweight follow-up visit planned within 4 weeks of being classified as overweight, obese or ≥99th %ile or with a documented high readiness to change at last well child visit *Denominator*: Number of children with a BMI ≥85th %ile at last well child visit	Process

* Numerator divided by denominator, then multiplied by 100, equals the percent of patients meeting the measure requirements.

Collaborative Effectiveness Measures
In addition to the monthly reports and measures, WSC staff tracked information about how the teams were participating and the degree to which they were making improvements. Collaborative effectiveness measures included information such as how many teams participated in the monthly conference calls and how many submitted all monthly data and reports. Runchart results of these measures are shown below.

Additionally, coaches would use the assessment scale below to determine how well the teams advanced toward sustained improvements. Ideally, teams would reach a 3.5 to 4.0 by the end of a Collaborative; however, factors such as the use of rolling year data as opposed to monthly data and seasonal variation in some of the outcome measures can impact improvements. At the project's inception, teams were ranked between a 1.0 and 2.0 on the scoring rubric. By the end of the work, the aggregate score was 3.4 indicating that the teams had accomplished some improvement in the measures they reported.

Table 4. Assessment Scale for Collaborative Participation

Assessment Scale	*Definition*
0.5 - Intent to Participate	Team has signed up to participate in the collaborative
1.0 - Forming team	Team has been formed; target population identified; aim determined, information gathering, and baseline measurement begun.
1.5 - Planning for the project has begun	The team has studied the change framework/care model for the collaborative. Team is meeting, discussions are occurring. The team's aim and measures are consistent with the charter for the collaborative.
2.0 - Activity, but no changes	Initial plans for the project have been made. Team actively engaged in development, information gathering, data collection, and discussions, but no changes have been tested.
2.5 - Changes tested, but no improvement	Changes are being tested in more than one of the components of the change package/care model, but no improvement in measures has been noted. Data on key measures are reported and tests are connected to the change package.
3.0 - Modest improvement	Initial test cycles have been completed and implementation begun for more than one component of the change package/care model. Evidence of moderate improvement in process measures from the monthly report.
3.5 - Improvement	Some improvement in outcome measures noted, process measures continuing to improve, PDSA test cycles on many of the components of the change package/care model have been completed, changes implemented for several components of the change package/care model.
4.0 - Significant improvement	Most components of the change package/care model related to the team's aim are implemented for the population of focus/area of the organization. There is evidence of breakthrough improvement in outcome measures, with the team at least halfway toward accomplishing all of their goals. Plans for spread, consistent with the team's aim, are in place.
4.5 - Sustainable improvement	All relevant components of the change package/care model have been implemented. Sustained improvement in outcomes measures, all of the team's goals have been achieved, and spread to a larger population/area of the organization has begun.
5.0 - Outstanding sustainable results	All goals of the team's aims have been accomplished; outcome measures are at best practice levels, and spread to another patient population or area of the organization is underway.
Notes: ▪ Assessments are progressive, e.g. all elements of a 3 must be satisfied before considering a 4 assessment ▪ Evidence for assessments must be documented in the team's monthly report or from storyboard information at learning sessions ▪ Except in special circumstances, once the team achieved a score, that score is maintained (or improved) throughout the collaborative (i.e.,. their score cannot decrease)	

Figures 1-6 show that the medical practices participating in WSC were very engaged in the process. We see that they made progress from the beginning to the end of the project. The numbers were very high for monthly reporting in the first couple of months (potentially due to having a coach working with each practice) and remained at 70 percent to 80 percent throughout for numerical data reporting. This is above average for most collaboratives and indicates engagement in the project.

Figure 1. Percent of Teams Submitting Pilot Run Charts

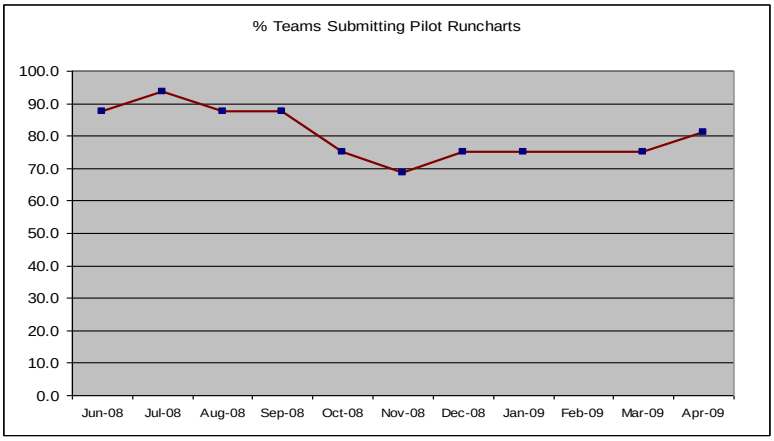


Figure 2. Percent of Teams Submitting Narrative Reports

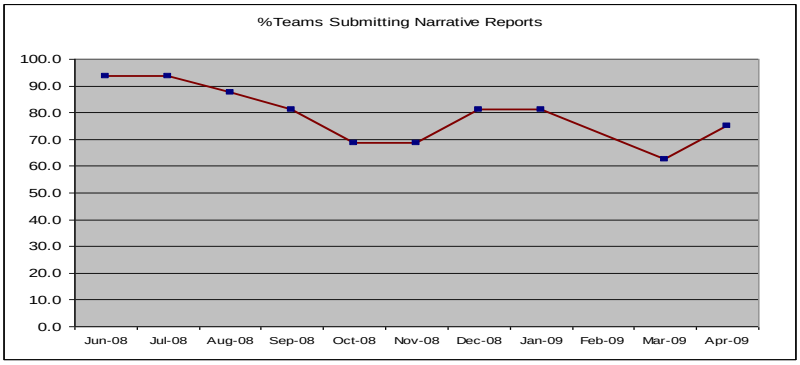


Figure 3. Percent of Teams Submitting a PDSA with Each Narrative Report

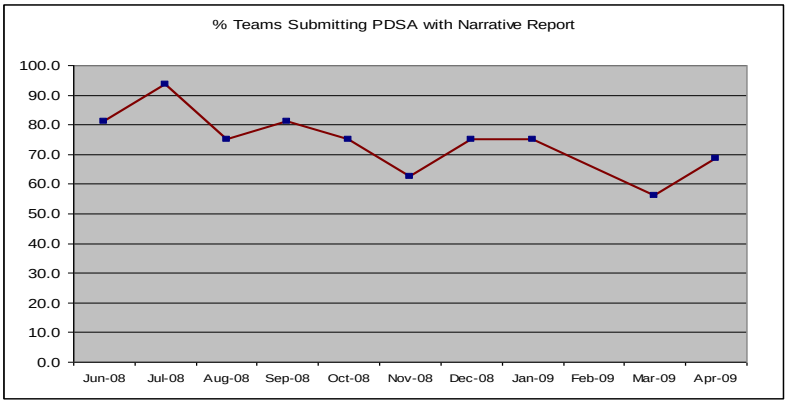


Figure 4. Percent of Teams Submitting All Population Run Charts

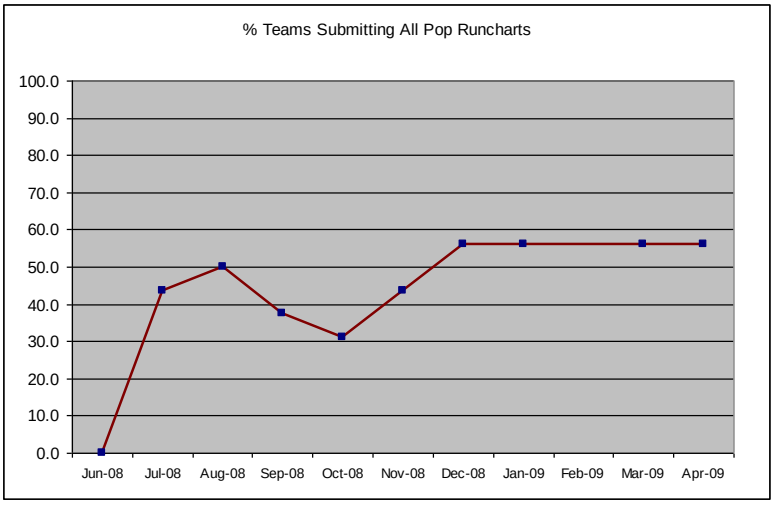


Figure 5. Average Assessments Scores by Month

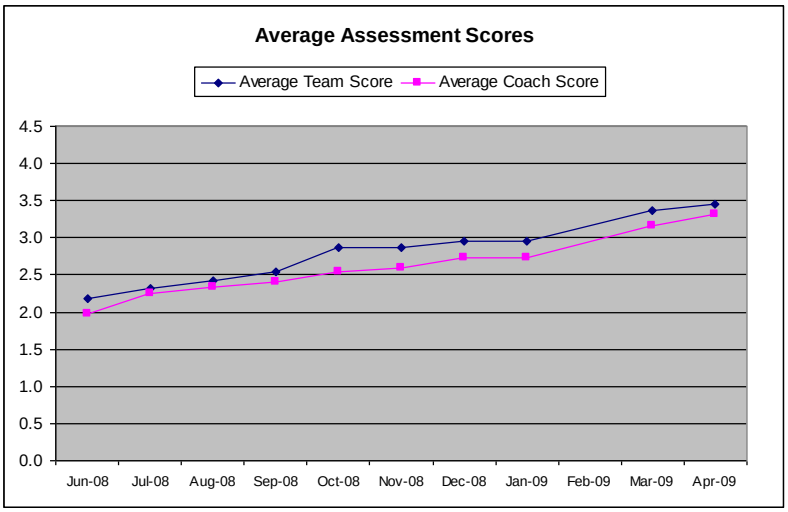
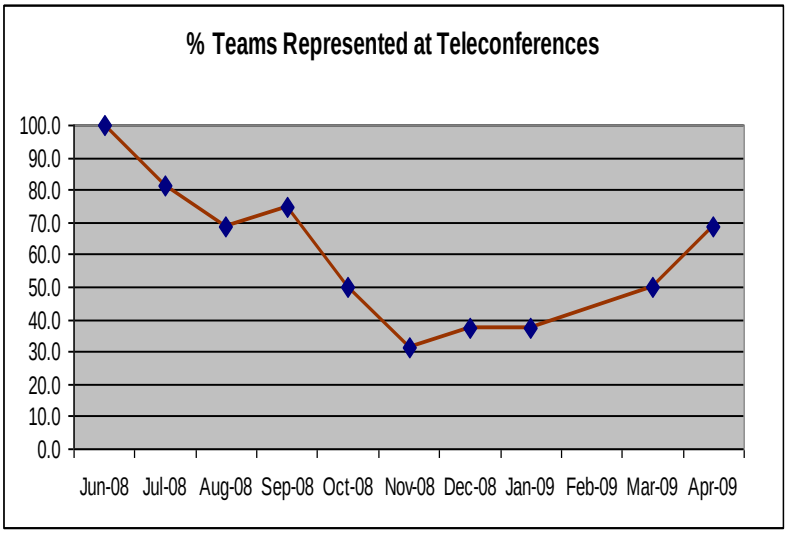


Figure 6. Percent of Teams Participating in Monthly Conference Calls



CLINICAL RESULTS

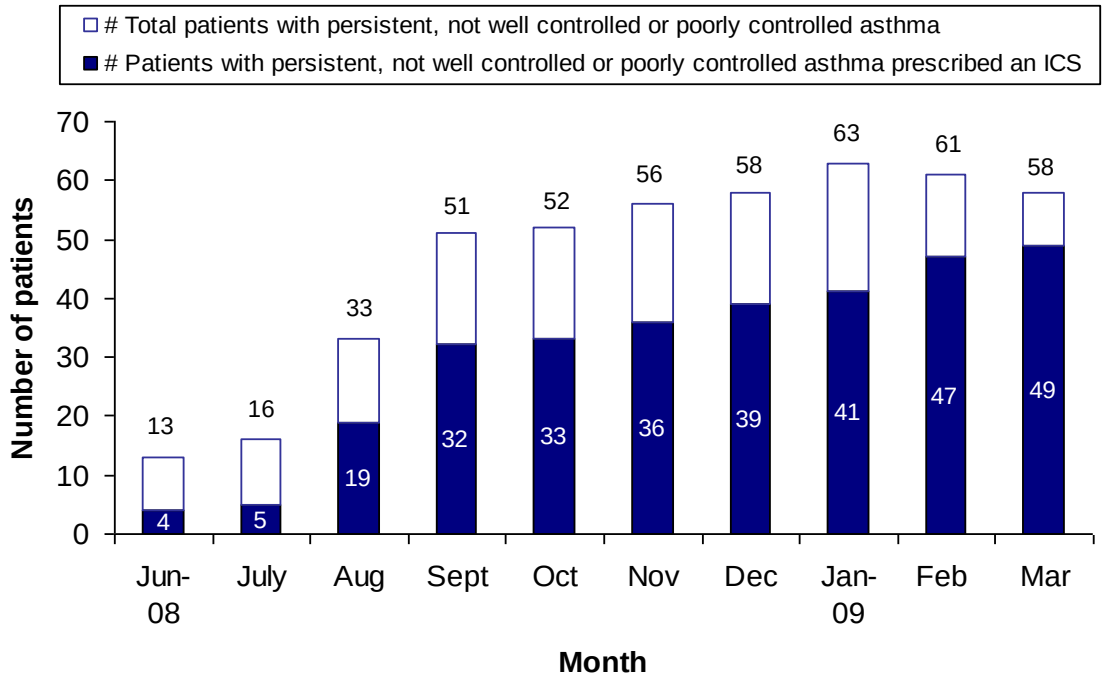
Improving health outcomes for patients with chronic illness or from restructuring prevention strategies is difficult in the short term. Seeing improved results in data reports often doesn't happen for all measures during the course of the collaborative but does occur if the work continues once the collaborative has ended. As an example, a team who participated three years ago in an obesity prevention and management track recently contacted faculty to share this update:

> *"Based on research done on the work we are doing here, we are making a 'subtle but statistically significant' impact on lowering BMI's! Two-thirds of patients in our overweight/obesity registry are now making improvements. Additionally, we have a growing community coalition here with various groups working on school foods, community gardens, walking clubs, cooking classes, etc."*

Clinics taking part in the WSC have laid a solid groundwork for future improvements in overall clinical outcome measures. Aggregate data for each measured are discussed below.

Pediatric and Adult Asthma Measures: Aggregate Data
The Asthma Collaborative was a successful training experience for the four practices completing the year-long effort, and for those delivering the training. In primary care one of the main tasks for high quality asthma care is to decide correctly which asthma patients should be taking daily controller therapy in addition to a bronchodilator as needed. According to the asthma guidelines, patients need controller therapy if they have either persistent or uncontrolled asthma, which is determined by a careful assessment of symptom frequency, lung function (via spirometry), and history of recent asthma hospitalization and emergency care. Significant increases were seen in the documentation of asthma severity (21 percent to 61 percent) and asthma control (9 percent to 56 percent). Evaluation for environmental asthma triggers increased from 63 percent to 87 percent over the course of the collaborative. Finally, the percent of patients receiving appropriate controller therapy increased from 30 percent to 85 percent, arguably the most clinically meaningful change made by participating practices, and the direct result of appropriate assessment.

Figure 7. Asthma Measure -Percent of Patients with Persistent, Not Well Controlled or Poorly Controlled Asthma Prescribed an Inhaled Corticosteroid (ICS)



Percent	30	32	58	63	64	64	67	65	77	85

Table 5. Asthma Measures: Clinic Data

	ED visits for asthma in past 3 mos		Persistent asthma that is well controlled		Assessment of level of asthma severity		Assessment of level of asthma control		Persistent, not well controlled or poorly controlled asthma prescribed an inhaled corticosteroid (ICS)		Patients with persistent asthma evaluated for environmental triggers		Patients with persistent asthma with a current asthma management plan	
	Baseline	*Final Report*	*Baseline*	*Final Report*	*Baseline*	*Final Report*	*Baseline*	*Final Report*	*Baseline*	*Final Report*	*Baseline*	*Final Report*	*Baseline*	*Final Report*
Family Health Centers	0%	2% 1/49	0%	36% 4/11	0%	59% 29/49	0%	57% 28/49	0%	100% 11/11	0%	82% 9/11	0%	82% 9/11
Healthy Steps	5% 3/58	12% 7/58	50% 1/2	80% 12/15	5% 3/58	50% 29/58	5% 3/58	52% 30/58	0%	100% 17/17	50% 1/2	87% 13/15	50% 1/2	87% 13/15
Swedish Physicians	5% 1/20	4% 1/27	27% 3/11	76% 13/17	90% 18/20	78% 21/27	50% 10/20	78% 21/27	NA	88% 15/17	73% 8/11	100% 17/17	9% 1/11	0%
North East Washington Health Programs	0%	2% 1/50	9% 1/11	29% 9/31	43% 12/28	74% 37/50	4% 1/28	54% 27/50	36% 4/11	70% 23/33	55% 6/11	84% 26/31	73% 8/11	65% 20/31

Table 6. Aggregate Data - Asthma measures

Measure	Baseline June 2008	March 2009
ED visits for asthma in past 3 mos	3% (3/108)	7% (8/107)
Persistent asthma that is well controlled	50% (1/2)	58% (14/24)
Assessment of level of asthma severity	21% (33/156)	61% (112/184)
Assessment of level of asthma control	9% (14/156)	56% (102/184)
Persistent, not well controlled or poorly controlled asthma prescribed an inhaled corticosteroid (ICS)	30% (4/13)	85% (49/58)
Patients with persistent asthma evaluated for environmental triggers	63% (15/24)	87% (63/72)
Patients with persistent asthma with a current asthma management plan	42% (10/24)	57% (41/72)

Asthma Chairs' Analysis

"Team members learned about the key differences in the 2007 EPR-3 Asthma Guidelines, the importance of environmental exposures, and the scientific evidence in support of reducing such exposures. All teams reported increased use of structured encounter forms and use of other patient supports such as written asthma action plans and peak flow meters. All teams also reported the routine use of limited allergy skin testing (focused on airborne allergens commonly associated with asthma) and office-based spirometry. At the learning sessions, teams participated in hands-on learning labs for both of these procedures, as well as a hands-on "gizmos and gadgets" session to learn and practice the finer points of equipment use. Spirometry training was further supplemented by the distribution of the Spirometry Fundamentals CD-ROM tutorial to teams, and the opportunity to participate in Spirometry 360, an interactive online course that coincided with the learning collaborative.

Conference calls between learning sessions covered a wide variety of topics including case-based practice, use of written asthma action plans, and brief negotiation skills. An asthma list serve was used as an organizational tool but did not receive much use beyond announcements of upcoming events.

By all accounts the coaching visits helped practices to surmount barriers and to catalyze change. Practice teams remained highly engaged throughout the collaborative year, despite adverse circumstances including the announced impending closure of one of the practices at the final learning session. Having delivered well over a dozen asthma learning collaboratives in my career, this one stood out as the most successful in terms of significant and sustainable changes made by all practices. The overall dedication to improving care was inspiring."

- Drs. Jim Stout and Jim Krieger

Medical Home Measures: Aggregate Data

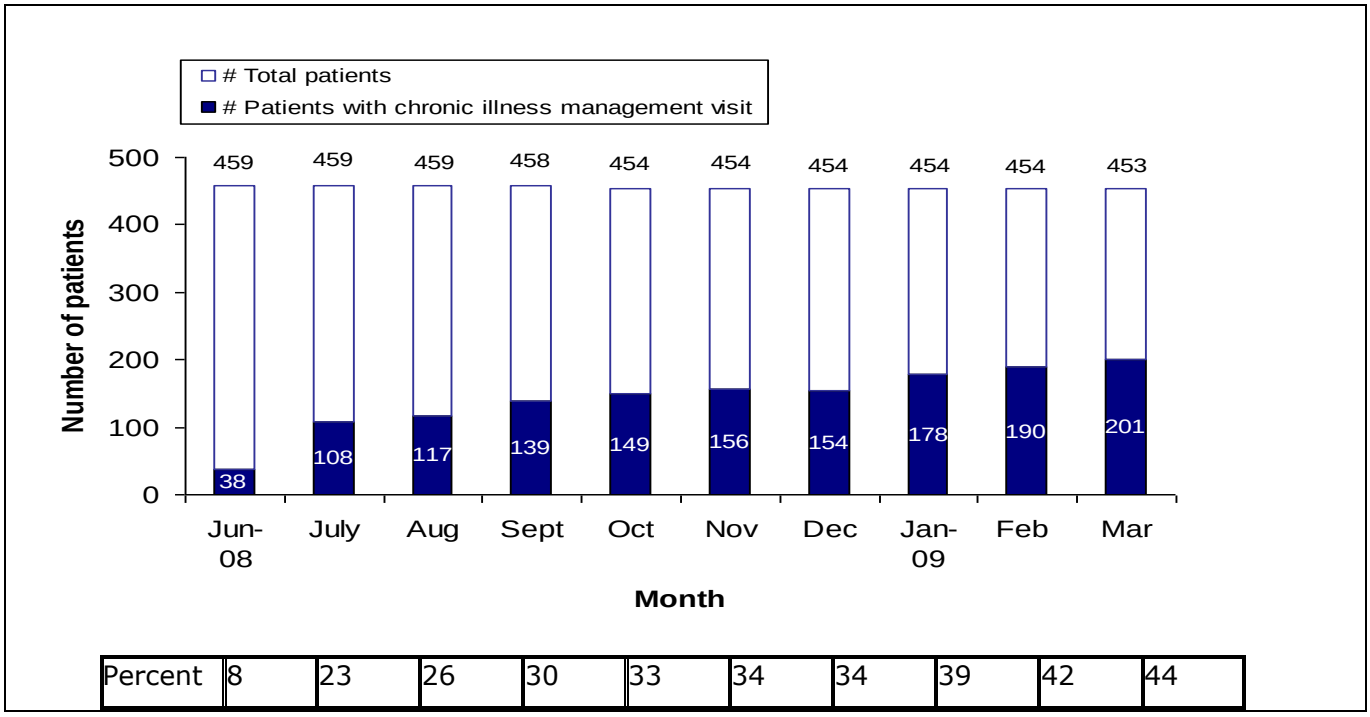
In the Medical Home track the most important learning involved the concept of planned chronic care visits. There was strong improvement in the number of planned chronic care visits provided to patients and families (8 percent to 44 percent. When teams were able to complete a pre-visit contact with the family to clarify issues and develop a complete picture of the current needs of the patients, the visit with the family and patient was highly effective and efficient for everyone - the health care provider and the patient and the family. This pre-visit contact also led to higher satisfaction for the families for the responsible physicians and/or an Advanced Registered Nurse Practitioner (ARNP).

The measurement techniques evolved and improved over the relatively short course of the learning collaborative. Although it appears that the percent of ER visits (4 percent to 16 percent) and unplanned hospitalizations (0 percent to 7 percent) increased as the efforts progressed, we feel this reflected consistently improving data collection methods and some seasonal variation.

The data collection of parental report measures was a challenge. Some clinics tried to collect the parental report data via a parent survey while other clinics used their medical assistants to interview parents and collect data. Teams were not able to collect this data on a consistent basis. One issue was population survey fatigue. In addition the data was collected without anonymity, which creates biases. Later the data was collected anonymously but that had its own challenges with getting patients to fill out the surveys.

Well child visits in the last 24 months increased (50 percent to 64 percent). But overall, a period of collection of data over 2 years will give more accurate data for this and other outcome measures.

Figure 8. Medical Home Measure - Percent of Patients with a Chronic Illness Management Visit in Last 12 Months



Percent	8	23	26	30	33	34	34	39	42	44

Table 7. Medical Home Measures: Clinic Data

	Patients with ED visit in last 3 mos		Patients with an unplanned hospitalization in last 3 mos		Patients with parental report of sufficient time with provider and understandable health advice		Patients with a chronic illness management visit in last 12 mos		Patients with parental report of help with specialty care referral		Patients with a parental report of pre-visit contact to discuss visit content		Patients with a well child visit in last 24 mos	
	Baseline	*Final Report*	*Baseline*	*Final Report*	*Baseline*	*Final Report*	*Baseline*	*Final Report*	*Baseline*	*Final Report*	*Baseline*	*Final Report*	*Baseline*	*Final Report*
Odessa Brown	0%	23% 29/124	0%	14% 17/124	0%	2% 2/124	0%	30% 37/124	0%	0%	0%	2% 3/124	61% 76/124	57% 71/124
Tolt/North Bend	2% 2/94	5% 5/94	0%	0%	2% 2/94	30% 28/94	2% 2/94	6% 6/94	3% 3/94	10% 9/94	1% 1/94%	21% 20/94	48% 45/94	53% 50/94
Family Med of SW WA	9% 8/89	1% 1/89	1% 1/89	1% 1/89	0%	0%	0%	83% 74/89	21% 19/89	22% 20/89	0%	0%	29% 26/89	75% 67/89
Skagit Pediatrics	1% 1/85	11% 9/85	0%	4% 3/85	0%	28% 24/85	4% 3/85	42% 36/85	0%	33% 28/85	0%	14% 12/85	47% 40/85	59% 50/85
Olson Pediatrics	12% 8/67	52% 32/61	0%	7% 4/61	0%	16% 10/61	49% 33/67	82% 50/61	46% 31/67	48% 29/61	0%	97% 59/61	64% 43/67	95% 58/61
Coulee Family Medicine	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

*NA=indicates data for this measure was not submitted this month (of note: *not all teams collected Baseline data*)

Table 8. Aggregate Data - Medical Home Measures

Measure	Baseline June 2008	March 2009
Patients with ED visit in last 3 mos	4% (19/459)	16% (75/453)
Patients with an unplanned hospitalization in last 3 mos	0	7% (26/359)
Patients with parental report of sufficient time with provider and understandable health advice	1% (2/246)	25% (60/241)
Patients with a chronic illness management visit in last 12 mos	8% (38/459)	44% (201/453)
Patients with parental report of help with specialty care referral	16% (52/335)	26% (85/329)
Patients with a parental report of pre-visit contact to discuss visit content	0	36% (87/241)
Patients with a well child visit in last 24 mos	50% (229/459)	64% (289/453)

Medical Home Chairs' Analysis

"The Medical Home collaborative was an excellent learning experience in the development of data collection systems, establishing and/or refining registries, determining outcome measures for both a systems level and a practice level, and grappling with a methodology to distribute a family survey anonymously to measure the practice's implementation of the Medical Home concept.

The collaborative participants represented both family medicine and pediatric practices interested in expanding their 'medical homeness.' A few teams struggled to define their pilot population. The range of identified pilot populations was broad - from children with asthma or ADHD to those with complex chronic disease. This spectrum of pilot populations made interpretation of a number of the outcomes at the track level difficult. Individual practices made significant improvements for their pilot populations in a number of measures – improved communication in the health care visit, greater family satisfaction, and much better provision of chronic illness management visits.

Patient/family satisfaction information turned out to be difficult to gather because of the need to receive that information in a way that allowed the family to be assured the results were anonymous. There were concerns especially relating to the questions determining degree of patient satisfaction and whether the need for assistance with specialty care coordination was met.

Staff satisfaction increased at most of the sites as a result of the Medical Home work. Teams found the initial work frustrating but once they got a focus their work teams got very excited at the impact of what they did and felt like it made a real difference in the care they provided to children and families. The Collaborative also accelerated improvement in care for those who participated and led to real difference in caring for kids. Teams took the QI/improvement process and used it to make changes beyond that of the Collaborative work."

- Drs. Chris Olson and Kathy TeKolste

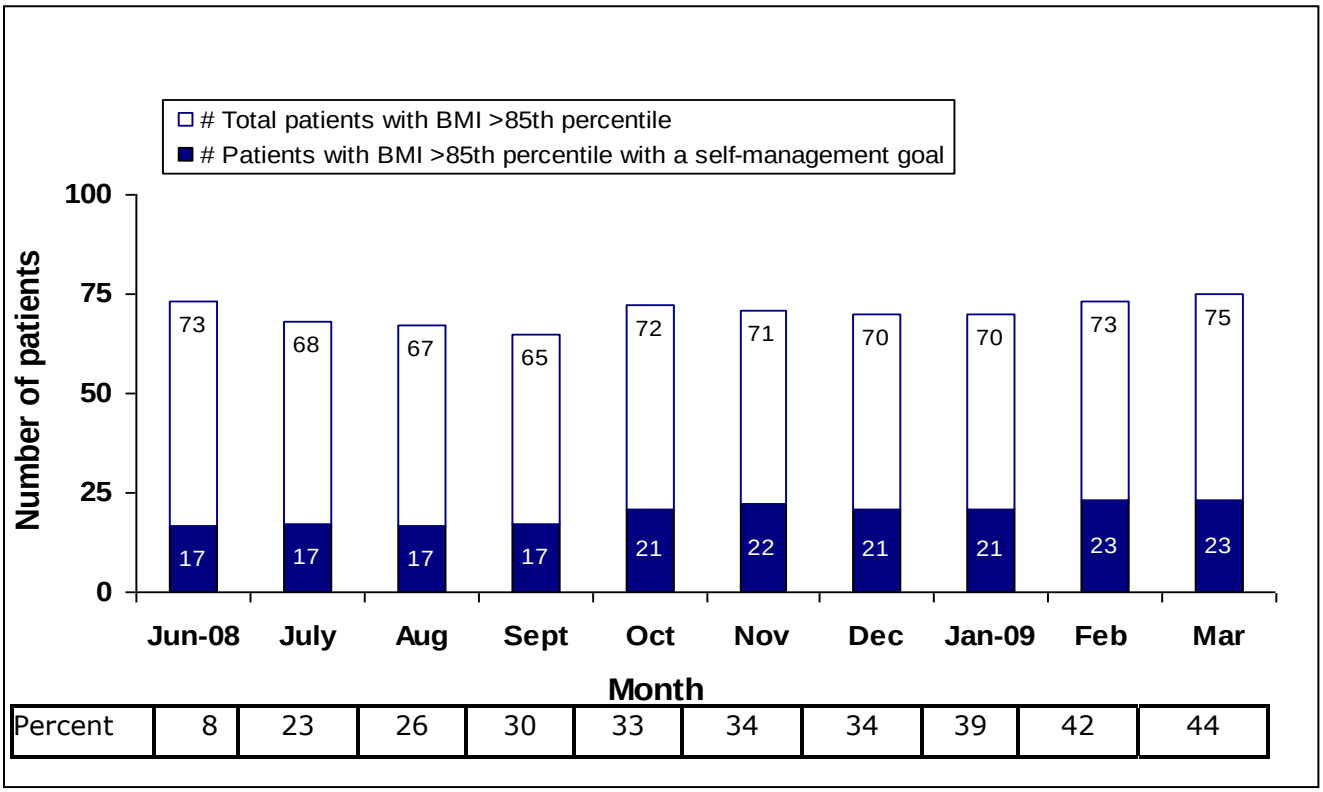
Obesity Measures: Aggregate Data

Nearly all of the obesity measures remained relatively stable over the course of the collaborative. This occurred because the measurement period was too brief to adequately capture the expected changes and rolling year data (as opposed to monthly data) was used. The documentation of BMI and BMI classification increased to 99 percent by the end of the collaborative, however this measure started at 94 percent due to the use of registry or electronic medical record systems that do automatic calculations. This is much higher than the national average for providers. One area that had a slight increase is the use of self-management goals with patients and families. The self-management goal rose from 25 percent to 31 percent over the course of the collaborative.

Though the measures were relatively stable, anecdotal stories about children and families directly impacted by this work were shared by the clinics. They included:

- Clinics using some sort of visual display (such as showing the sugar content for various candies and sodas with actual sugar packets or creating informational bulletin boards) generated many more conversations with patients and families about the issues of overweight and obesity.
- Consistent messaging with patients and families over a period of time seemed to make having the difficult 'weight' conversation easier with patients and families.
- Some families took on the obesity issues as a 'family issue' and improvements were seen in several family members.
- Families chose to treat fast food as an occasional treat option as opposed to a standard meal.
- Providers heard appreciation from parents for addressing the weight issue instead of the somewhat expected defensiveness.

Figure 9. Obesity Prevention Measure – Percent of Patients with a Self Management Goal at Last Well Child Visit



Percent	8	23	26	30	33	34	34	39	42	44

Table 9. Obesity Prevention Measures: Clinic Data

	Patients with a BMI 85-94%tile at last well child visit		Patients with a BMI 95-98 percentile at last well child visit		Patients with a BMI ≥99 percentile at last well child visit		Patients with a BMI percentile and documented weight classification at last well child visit		Patients who received healthy lifestyle messages at last well child visit		Patients with a BMI ≥85 percentile with a self management goal at last well child visit or overweight follow-up visit		Patients with a BMI ≥85 percentile with a specialist referral at last well child visit or overweight followup visit		Patients with a BMI ≥85 percentile with an overweight followup visit scheduled within 4 weeks of weight classification at last well child visit	
	Baseline	*Final Report*	*Baseline*	*Final Report*	*Baseline*	*Final Report*	*Baseline*	*Final Report*	*Baseline*	*Final Report*	*Baseline*	*Final Report*	*Baseline*	*Final Report*	*Baseline*	*Final Report*
Ida Karlin	17% 34/199	20% 40/199	11% 22/199	10% 19/199	5% 9/199	6% 11/199	98% 195/199	99% 197/199	0%	32% 64/199	0%	0%	0%	27% 19/70	0%	27% 19/70
Eastgate Public Health	14% 29/200	15% 30/200	13% 27/200	14% 29/200	8% 17/200	8% 16/200	100% 200/200	100% 200/200	0%	3% 7/200	23% 17/73	31% 23/75	0%	0%	15% 11/73	16% 12/75
St Peter's Fx Med Residency Program	23% 24/105	24% 24/101	4% 4/105	3% 3/101	36% 38/105	38% 38/101	99% 104/105	100% 101/101	0%	7% 7/101	3% 2/66	18% 12/65	0%	6% 4/65	0%	7% 3/65
Comm Health Center of Sno. County	19% 30/162	22% 34/158	9% 14/162	13% 20/158	6% 10/162	5% 8/158	82% 133/162	97% 154/158	0%	11% 17/158	0%	0%	0%	10% 7/68	0%	15% 10/68

Table 10. Aggregate Data - Obesity prevention measures

Measure	Baseline June 2008	March 2009
Patients with a BMI 85-94%tile at last well child visit	18% (85/467)	19% (89/459)
Patients with a BMI 96-98 percentile at last well child visit	10% (47/467)	12% (54/459)
Patients with a BMI ≥99 percentile at last well child visit	14% (66/467)	15% (67/459)
Patients with a BMI percentile and weight classification at last well child visit	94% (437/467)	99% (454/459)
Patients who received healthy lifestyle messages at last well child visit	0	7% (23/360)
Patients with a BMI ≥85 percentile with a self management goal at last well child visit or overweight follow-up visit	25% (17/73)	31% (23/75)
Patients with a BMI ≥85 percentile with a specialist referral at last well child visit or overweight follow-up visit	0	8% (5/64)
Patients with a BMI ≥85 percentile with an overweight follow-up visit scheduled within 4 weeks of weight classification at last well child visit	8% (11/139)	11% (15/141)

Obesity Chairs' Analysis

"The rates of obesity seen in the Collaborative clinics were higher than in national statistics. Nationally, rates of overweight are about 16 percent to 17 percent for youth 6 to19 years of age. In our populations, approximately 24 percent to 28 percent of patients were obese and 17 percent to 19 percent were overweight. Therefore, our assessment and management objectives were targeting approximately 40 percent of the clinics' patient populations in addition to prevention messages at all well child visits. By the end of the collaborative, clinics were measuring BMI percentile almost 100 percent of the time. This contrasts with current literature where many clinical sites are measuring BMI approximately 40 percent of the time. In addition, teams provided tremendous support to families with self-management skills (self-management goals, written management plans) with an increase in self-management support from 25 percent to 31 percent. Clinics teams mentioned examples such as: an entire family losing weight and exercising together after a consultation with the pediatrician; a family who reduced fast-food meals to once every two weeks instead of several times weekly; twenty families from one site signing up for the Strong Kids Strong Families program at the YMCA. These small changes are what will lead to long- term change with good support."

- Dr. Lenna Liu and Alicia Dixon-Docter

LESSONS LEARNED

This Collaborative provided WSC staff – from the University of Washington, Department of Health, and NVB Consulting – the opportunity to jointly run this five-track project. This was a learning opportunity for all as each organization had unique experiences in running collaboratives. The sharing of leadership responsibilities at times was difficult but the outcome was ultimately positive for the participating teams.

In this iteration of collaborative work in Washington State, a much greater emphasis was placed on the use of practice coaches and site visits for each team. The coaching part of this collaborative was instrumental in helping to better understand the barriers and definitions of success in clinics. The site visits were beneficial and provided coaches the opportunity to teach teams, support improvement efforts, and share learning from other sites with greater depth and focus than during group learning sessions. To facilitate the coaching process for this deeper and broader approach, coaches were trained prior to initial team contact. With expertise from the MacColl Institute at Group Health Cooperative, coaches and other support staff convened for a one day training to prepare for supporting teams through pre-work, site visits, learning session preparation, registry implementation, and other issues as they arose.

Coaches conducted prework calls and did initial site visits prior to the first learning session. Additional site visits occurred between learning session 1 and 2, and 2 and 3. These activities were invaluable for the WSC staff in understanding the teams' needs and issues. Progression and improvement were identified more easily and with more clarity during the second two visits. Teams responded well to the coaching and generally felt it was a beneficial addition to the overall collaborative process. In a survey specific to the use of practice coaches, 61 percent of respondents said that having a coach *definitely* helped them feel more connected to the work of the collaborative. Some specific comments include:

- *"We really appreciated all of the work that our coach did for us."*
- *"The coaching was wonderful -- thanks so much for all that you did."*
- *"Our coach was just great. Really good combination of cheerleader, teacher, motivator."*

Additionally, 79 percent of respondents felt that the coaching increased their motivation to make some of the changes called for by the Chronic Care Model, 55 percent felt that coaching ensured comprehension and accountability after learning sessions, and 58 percent thought that the discussions during site visits were *very helpful*. (See complete survey results in Appendix D.)

In addition to the initial site visit and pre-work call, a webinar and an in-person meeting were conducted prior to learning session 1 to teach the Model for Improvement and the Chronic Care Model. This was done to save time at the first learning session and to ground teams in the key parts of their improvement work. Teams chose which session to attend. Each of the meetings was an improvement over the last collaborative when a conference call with available slide sets was used to teach the models. Staff and faculty commented at the end of the first learning session that teams seemed more engaged and less confused during the team planning time than they had witnessed before.

Additionally, staff simplified the form normally used at Learning Session 1 for team planning. Based on several years – and collaboratives – experience, there is usually much confusion during this first session. Some of this confusion has been about the form teams were asked to use. (See Appendix E.)

Another change in WSC was the use of newsletters to convey information to teams about how other teams and other tracks were proceeding and succeeding in the work. This was used instead of having each team send their monthly reports to all other teams in their track. There was very little feedback on the newsletters as beneficial or not, but there was some appreciation mentioned for not inundating teams with all the monthly reports. Another hybrid solution might be considered for the next round of work.

Teams found many aspects of the learning sessions useful/positive. Participants' comments ranged from benefiting from specific things they were taught to what they learned from the plenary-invited guest speakers. Some of the themes identified from the evaluation comments in response to the question "What did you like most about this meeting?":

- Teams benefited from the specific skills they were taught at the learning sessions such as how to do skin testing.
- The opportunity to learn from, and collaborate with, other teams was inspiring and helpful.
- The learning sessions were great – content, speakers, organization and atmosphere!

A highlight of the Learning Sessions was the health disparities presentation.
We were flooded with positive comments – themes identified from many of the comments included:

- Dr. Danielson was a great speaker – excellent presentation/discussion and felt real and important.
- The presentation was inspiring, relevant and Dr. Danielson shared many helpful and new ideas.

At the Learning Session, teams were asked if they were seeing changes in their clinics due to this work. Themes from team member comments included:

- Improved standards and standardization of care for example consistently delivery of care to the NHLBI guidelines.
- Teams saw changes in their clinics by implementing new tools and practices.
- The Collaborative has helped teams to be more motivated, focused, organized and proactive around a condition (improved population based care).

Finally, themes from a number of the open-ended comments:

- The coaching was extremely useful throughout the process
- Teams felt a huge benefit and improvement from their work and had fun and learned much
- Many changes were seen with an anticipation of continued change
- Doing this improvement work within the context of a collaborative was motivating and inspirational
- Two-day learning sessions would be preferable for sharing time with other clinics, viewing storyboards and processing information from the different presentations

SUMMARY AND RECOMMENDATIONS

In the final analysis, this was a wonderful opportunity for the teams and the staff/faculty. Having the opportunity to be much more hands-on with the teams via the strong coaching component allowed for a connection with the work not experienced in previous collaboratives of this size. Pooling several organizations and a number of staff and sharing resources and management of the whole process was a great learning opportunity for all involved. Each person and organization had to compromise to some degree on how to run this collaborative and had to let go of the 'this is how it is done' mentality. Though challenging at times, the overall Collaborative benefitted from the plethora of experience and expertise.

Overall, the WSC experience shows that medical practices can accomplish improvements in both quality and effectiveness of preventive and chronic care services delivered to Medicaid children. Providing skilled project management and making clinical faculty readily available to medical practices yielded increases in the project's clinical indicators. The staff offers the following recommendations for future work of this nature.

Dual Management
To run this Collaborative for all five tracks – both pediatric and adult conditions – staff from two prior collaborative teams were convened and were asked to run the project together. Given a dual focus of pediatrics and adult medicine, this meant two project directors, two improvement advisors, and two staff support teams. On the one hand, this was a group with a collective, rich level of experience; idea generation was plentiful. On the other hand, without the right level of preparation for sharing management of the project, issues arose. To succeed in another project with a similar set-up, WSC staff recommend that team building for all staff occur prior to the work beginning. Clarification of roles and responsibilities should be made at the onset, and a system of checks and balances should be in place to monitor progress.

Coaching
Coaching was an important factor of WSC and was in general quite successful. This one-on-one connection to the teams, additional individualized support, and the cross learning the site visits supplied had a big impact on the success of WSC. With four primary coaches, there was great opportunity for learning both from teams and from other coaches. Regular calls helped facilitate this. The cost of coaching is the only issue that became apparent. Good coaching is time consuming and will in the long run be difficult to support on a broad scale unless alternative ways of funding it are found. Consider partnering with health plans or other stakeholder groups to provide the coaching would be one option to pursue.

Incentives
The partnership with DOH and the addition of some resources allowed for financial incentives to be available to the teams. This was positive for those teams required to travel to learning sessions and those with financial constraints. The one recommendation for use of incentives is to make sure up front that the goals are clear and potentially attainable by all teams. Prior to the third learning session, it was clear that the final two incentives were not going to be met by many teams due to the way the measures were initially set up by WSC staff and faculty. The use of rolling year data (previously described) instead of monthly data penalized the obesity and medical home tracks unnecessarily.

The other issue with using incentives was the need for a complicated and arduous process of contracting with each clinic as the monies came through DOH. Complicated invoicing and tracking of progress toward meeting incentives was time consuming for all involved. In the future, if systems could be set up to make this process easier it would be an improvement.

Measurement
In the process of setting up measures and data collection strategies for WSC, it was decided that all teams in all tracks would collect data in the same way. Ultimately, this did not work well for the

Obesity and Medical Home tracks. Collecting rolling year data with well child visits as the unit of analysis meant that many of the children in the pilot population would not be seen during the collaborative period.

Shared pediatric/adult focus

The combination of two larger projects into one "'collabopalooza" was good on some levels as previously mentioned. However, WSC staff found that there were enough areas where the approach to care is different that this combination also led to some difficulties for the project as a whole. Given the cost of this work and the need for a broader reach, joined projects make sense, but as with the incentives and dual management, more work should be done at the onset to ensure success down the road.

APPENDIX A

Clinics, team members, clinic descriptions, and percentage range of Medicaid patients

***Note**: Shaded teams dropped out during the project. The main reasons for teams dropping out of collaborative work are: lack of needed resources to do the work, implementation of an EMR or other large project, or significant staff changes. Teams are generally made up of a physician and a Medical Assistant or Registered Nurse, as well as an administrator or other support staff member.*

Clinic Name	General Description	Percentage range of Children *enrolled in Medicaid Managed Care**
Swedish Physicians West Seattle	**ASTHMA TEAM** This is an urban clinic (West Seattle) with a very diverse population. It is part of a hospital-owned network of primary care clinics, with a total of 20 staff members (medical, clinical and support). The majority of their 19,467 patients are children. *(Swedish also had a team in the adult Diabetes track)*	10%
Family Health Centers	**ASTHMA TEAM** This is a rural clinic located in Okanogan County, WA. There are 6 providers and a total of 20 staff members (medical, clinical and support). Twenty-six to 50% of their patients are children.	41-60%
Healthy Steps Women's & Children's Center	**ASTHMA TEAM** This is a suburban clinic located in Vancouver, WA with 27 staff members (medical, clinical and support). Fifty-one to 75% of their patients are children.	81-100%
Lakeshore Clinic PLLC	**ASTHMA TEAM** This is a suburban (Bothell, WA) family practice clinic with 18 providers. Of the 50,000 patients, roughly 3,100 are children. *This team dropped out shortly after signing up.*	n/a
North Bend Family Clinic	**MEDICAL HOME TEAM** This is a rural family practice clinic with 20 staff members (medical, clinical and support). Ten to 25% of the patients are children. All patients are members of the Snoqualmie Nation.	41-60%
Coulee Family Medicine	**MEDICAL HOME TEAM** This is a very rural family practice clinic located near the borders of 4 counties and a reservation. There are 24 staff members (medical, clinical and support). Twenty-six to 50% of their patients are children**.**	21-40%
Odessa Brown Children's Clinic	**MEDICAL HOME TEAM** This is an urban Seattle pediatric clinic with 24 staff members (medical, clinical and support). OBCC is a part of Seattle Children's.	81-100%
Family Medicine of SW Washington	**MEDICAL HOME TEAM** This is a suburban family practice clinic located in Vancouver, WA with 79 staff members (medical, clinical and support). Less than 1/3 of the patients at this clinic are children.	41-60%

***** Some teams indicate a specific numerical percentage for Medicaid covered patients; others indicate a range.

Olson Pediatrics	**MEDICAL HOME TEAM** This is an urban (Spokane, WA) pediatric clinic with 15 staff members (medical, clinical and support).	61-80%
Skagit Pediatrics	**MEDICAL HOME TEAM** This is a pediatric clinic serving both rural and suburban clients in Skagit County, WA. There are 31 staff members (medical, clinical and support). All their clients are children.	21-40%
Family Wellness Center	**MEDICAL HOME TEAM** This is a suburban family practice clinic located in Vancouver, WA with 31 staff members (medical, clinical and support). Less than 1/3 of the patients at this clinic are children.	0-20%
Pediatrics for You	**MEDICAL HOME TEAM** This is a semi-urban pediatric clinic (Richland, WA). It is a new practice as of 2007. This team dropped out shortly after signing up.	n/a
Eastgate Public Health Center	**OBESITY TEAM** This is a small suburban King County family practice clinic with 6 providers and a total of 33 staff members (medical, clinical and support). About 26-50% of their patients are children.	81-100%
Ida Karlin Pediatrics	**OBESITY TEAM** This is a small, private, rural clinic in Puyallup, WA with a total of 14 staff members (medical, clinical and support). The majority of their 3,705 patients are children. Additionally, half of their patients are primarily Spanish-speaking; they have a multi-lingual staff to serve this population.	49%
St. Peter Family Medicine Residency Program	**OBESITY TEAM** This is a suburban (Olympia, WA) family practice clinic with a total of 10 full-time providers. This clinic sees approximately 7,200 patients, 35% of which are children.	47%
Community Health Center of Snohomish County	**OBESITY TEAM** This is an urban (Everett, WA) family practice clinic with a total of 203 staff members, 16 of whom are providers. This clinic has over 18,000 patients; half of them are children.	59%
Pediatric Associates of Spokane	**OBESITY TEAM** This is an urban (Spokane, WA) pediatric clinic with a total of 8 providers. This team dropped out shortly after signing up.	n/a

APPENDIX B

Monthly Reporting Forms

SENIOR LEADER MONTHLY REPORT – ASTHMA TRACK

WASHINGTON STATE COLLABORATIVE TO IMPROVE HEALTH

CLINIC NAME:

REPORTING MONTH:

DATE:

KEY CONTACT NAME:

EMAIL:

Clinical Track: ☒ **Asthma**

Aim Statement:

Current pilot population:

Total # of patients (pilot + non-pilot patients) entered into the registry or tagged in EHR:

Below are the descriptions of the measures. Insert your 3 month goal for each measure. You will increase (stretch) each goal as you improve.

Measure	Description	Goal
ED visits for asthma	Percentage of patients who have had a visit to an ED for asthma in the past three months	
Level of control	Percentage of patients who are well controlled among those with persistent asthma	
Initial or revised severity classification	Percentage of patients who have a documented level of severity of asthma	
Current level of control	Percentage of patients who have a documented level of control of asthma	
Appropriate treatment with anti-inflammatory medication	Percentage of patients with persistent asthma or who have not well controlled or poorly controlled asthma that are prescribed an ICS at that visit	
Evaluation/control of environmental triggers	Percentage of patients with persistent asthma ever evaluated for environmental triggers (dust mites, cats, dogs, molds/fungi, cockroaches, rodents, irritants e.g. environmental tobacco smoke, chemicals) either by history of exposure and/or by allergy testing	
Written asthma management plan	Percentage of patients with persistent asthma who have a current written asthma management plan	

SENIOR LEADER MONTHLY REPORT – MEDICAL HOME TRACK

WASHINGTON STATE COLLABORATIVE TO IMPROVE HEALTH

CLINIC NAME:

REPORTING MONTH:

DATE:

KEY CONTACT NAME:

EMAIL:

Clinical Track: ☒ **Medical Home**

Aim Statement:

Current pilot population (in registry or tagged in EHR):

Total # of patients (pilot + non-pilot patients) entered into the registry or tagged in EHR:

Below are the descriptions of the measures. Insert your 3 month goal for each measure. You will increase (stretch) each goal as you improve.

Measure	Description	Goal
ER visit in last three months	Percentage of CYSHCN patients with an ER visit in the last three months	
Unplanned hospitalization in last three months	Percentage of CYSHCN patients admitted to hospital during the last three months with an unplanned hospitalization	
Sufficient time with physician /nurse and understandable health advice	Percentage of CYSHCN patients with a parental report of sufficient time with physician/nurse and explanation of health advice that both the parent and child can understand	
Chronic illness management visit in last 12 months	Percentage of CYSCHN patients with a chronic illness management visit in the last 12 months	
Help with specialty care referral	Percentage of CYSHCN patients with a parental report of help with specialty care referral	
Contact to discuss upcoming visit content	Percentage of CYSHCN patients with a parental report of contact before visit to discuss upcoming visit content (call, email or snail mail by care coordinator)	
Well-child visit in the last 24 months	Percentage of CYSHCN patients with a well-child visit in the last 24 months	

SENIOR LEADER MONTHLY REPORT – OBESITY TRACK

WASHINGTON STATE COLLABORATIVE TO IMPROVE HEALTH

CLINIC NAME:

REPORTING MONTH:

DATE:

KEY CONTACT NAME:

EMAIL:

Clinical Track: ☒**Obesity**

Aim Statement:

Current pilot population (in registry or tagged in EHR):

Total # of patients (pilot + non-pilot patients) entered into the registry or tagged in EHR:

Below are the descriptions of the measures. Insert your 3 month goal for each measure. You will increase (stretch) each goal as you improve.

Measure	Description	Goal
Percent overweight	Percentage of children with a BMI in the 85th–94th percentile at last well child visit	
Percent obese	Percentage of children with a BMI in the 95th–98th percentile at last well child visit	
Percent ≥99th percentile	Percentage of children with a BMI in the ≥99th percentile at last well child visit	
BMI percentile and weight classification	Percentage of children with a BMI percentile and documented weight classification at last well child visit	
Healthy lifestyle messages	Percentage of children/families who received healthy lifestyle messages (breastfeeding, eating breakfast, more meals at home or with family, fruits/vegetables, TV reduction, 1 hour PA, limit sweet drinks) at last well child visit	
Current self management goal	Percentage of children with a BMI ≥85th percentile with a documented self management goal or readiness to change evaluated at last well child visit or overweight follow-up visit	
Referral	Percentage of children with a BMI ≥85th percentile with a documented referral to at least 1 of the following: nutrition, physical activity or healthy lifestyle program, mental health provider or sub-specialist at last well child visit or overweight follow-up visit	
Overweight follow-up visit	Percentage of children with a BMI ≥85th percentile with an overweight follow-up visit scheduled within 4 weeks of being classified overweight, obese or ≥99th percentile at last well child visit	

The remainder of this form remains the same for all tracks

YOUR PDSA CYCLE & THE CHRONIC CARE MODEL (CCM) (ALL TRACKS)

BRIEF DESCRIPTION OF PDSA CYCLES (TESTS OF CHANGE)

Component of CCM (Column 1)

- Categorize each test by the appropriate component of the Care Model. (See left box at bottom of page)

Description of Change (Column 2)

- Describe PDSA cycles you are testing. DO NOT INCLUDE TASKS – *defined below
    - Include what change was tested, when the test was done, how many patients were involved, who in your system was involved, what the results were, and what the next action is.
    - Month to month there may be overlap, but you should update the column to reflect progress or changes that have occurred during the previous month.

Status of Test (Column 3)

- Select the appropriate status of the PDSA. (See right box at bottom of page for the 3 status options)

***TASK:** An activity that needs to be completed or something that needs to get done, i.e. find a sample Asthma Management Plan or print a list of asthma patients.*

***TEST:** Trying a change on a small scale to see if the change results in improvement. A test of change involves complete Plan-Do-Study-Act cycles, including a question and a prediction. (Collecting baseline data, meeting, brainstorming, and/or planning to change are not tests of change. These are examples of getting ready to test or planning to test.)*

COMPONENT OF THE CHRONIC CARE MODEL*	DESCRIPTION OF CHANGE	STATUS **

COLUMN 1*

Components of the Chronic Care Model

- Community resources and policies
- Healthcare organization
- Self-management support
- Delivery system design
- Decision support
- Clinical information system

COLUMN 3 **

- **Planning stage (Plan)** – teams choose an objective, predict what will happen if a certain change is made and why, as well as plan for how to test the change
- **Testing stage (Test)**– teams are focused on testing on a small scale, comparing results to predictions and the status quo and deciding whether to continue testing or to move into the implementation phase.
- **Implementation stage (Imp)** – Changes tested that have been adopted permanently. These changes are now part of the clinic routine.
  Leadership Team Comment: Implementation of changes is not anticipated during the first few months.

SUCCESSES, BARRIERS AND LESSONS LEARNED (ALL TRACKS)

(Feel free to use as much space as you need to answer the questions)

1. **How often did your team meet internally this month (mark with an X)?**
   1 2 3 or more

2. **What were your teams' successes this month?**

3. **Did your team encounter any barriers this month (mark with an X)? Yes No**

   - **If yes, please describe:**

   - **If yes, how do you plan to overcome them?**

4. **What is the one key or "aha" moment that your team had this month?**

5. **Is there anything else your team would like to report or you need help with?**

SELF-ASSESSMENT (ALL TRACKS)

Please check the box that best reflects the step of the assessment scale that your team believes they are on at the time of this report.

About this form:

- Assessments are progressive, e.g. all elements of a 3 must be satisfied before considering a 4 assessment.
- Evidence for assessments must be documented in the team's monthly report or from storyboard information at learning sessions.
- Except in special circumstances, once the team achieves a score, that score is maintained (or improved) throughout the collaborative (e.g. the score can not decrease)
- It is usual for teams to progress slowly. Teams most likely will not reach higher than 3.5 or 4 by end of the 13 month collaborative (we hope that you will see continued growth/improvement over time).

Please select one box	Assessment	Definition
☐	**0.5** - Intent to participate	Team has signed up to participate in the collaborative.
☐	**1.0** – Forming team	Team has been formed; target population identified; aim determined, information gathering, and baseline measurement begun.
☐	**1.5** – Planning for, the project has begun	The team has studied the change framework/care model for the collaborative. Team is meeting, discussions are occurring. The team's aim and measures are consistent with the charter for the collaborative.
☐	**2.0** – Activity, but no changes	Initial plans for the project have been made. Team actively engaged in development, information gathering, data collection, and discussions, but no changes have been tested.
☐	**2.5** – Changes tested, but no improvement	Changes are being tested in more than one of the components of the change package/care model, but no improvement in measures has been noted. Data on key measures are reported and tests are connected to the change package.
☐	**3.0** – Modest improvement	Initial test cycles have been completed and implementation begun for more than one component of the change package/care model. Evidence of moderate improvement in process measures from the monthly report.
☐	**3.5** – Improvement	Some improvement in outcome measures noted, process measures continuing to improve, PDSA test cycles on many of the components of the change package/care model have been completed, changes implemented for several components of the change package/care model.
☐	**4.0** – Significant improvement	Most components of the change package/care model related to the team's aim are implemented for the population of focus/area of the organization. There is evidence of breakthrough improvement in outcome measures, with the team at least halfway toward accomplishing all of their goals. Plans for spread, consistent with the team's aim, are in place.
☐	**4.5** – Sustainable change	All relevant components of the change package/care model have been implemented. Sustained improvement in outcomes measures, all of the team's goals have been achieved, and spread to a larger population/area of the organization has begun.
☐	**5.0** – Outstanding sustainable results	All goals of the team's aims have been accomplished; outcome measures are at best practice levels, and spread to another patient population or area of the organization is underway.

PDSA WORKSHEET (ALL TRACKS)

CYCLE INFORMATION

Date:

What you hope to accomplish with this change:

Plan

What are you testing? Who is conducting the test? Who are you testing the change on? When and where are you testing? What do you predict will happen? What data do you need to collect? Who will collect the data?

Do

What happened? List observations. Note problems.

Study

Summarize the data. What did you learn? Compare results to your predictions.

Act

Are you ready to implement the change or do you need to adjust your plan and do another test? What will the next cycle be?

PDSA Form
(All Tracks)

Team Name: _____

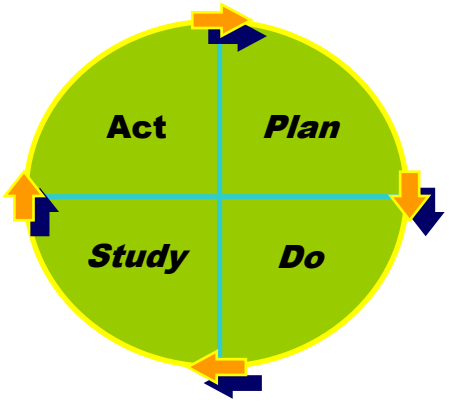
Model For Improvement

Date begun: _____

Date finished: _____

PLAN

Objective for this PDSA Cycle:



Questions

Predictions

Plan for change or test: Who, what, when, where

Plan for collection of data: who, what, when, where

DO

carry out the change or test; collect data; document problems and unexpected observations; and begin Data analysis

STUDY

complete analysis of data; Compare the data to predictions; summarize what was learned

ACT

What changes are to be made? Plan for the next cycle

APPENDIX C
Measures

Table 1. Optional Measures for Asthma Management

Measure	Statistic*	Type of Measure
Hospitalizations for asthma	*Numerator:* Number of patients who have had a hospitalization for asthma in the past three months	Outcome
Average lost school/daycare or work days	*Numerator:* Sum of the number of days in the past 30 days lost at school/daycare or work because of asthma Denominator: Number of patients with documented number of lost day care/school/work days due to asthma (even if that number is zero)	Outcome
Current self-management goal	*Numerator:* Number of patients with a "self management goal" documented at last visit OR "readiness to change" documented at last visit	Process
Exposure to environmental tobacco smoke (ETS)	*Numerator:* Number of patients with assessment and/or education regarding exposure to ETS	Process
Smoking in patients aged ≥12 years	*Numerator:* Number of patients aged ≥12 years with documented assessment and/or counseling for tobacco cessation Denominator: Number of patients aged ≥12 years	Process
Spirometry	*Numerator:* Number of patients aged ≥5 years who received spirometry in past year Denominator: Number of patients aged ≥5 years	Process
Influenza immunization annually	*Numerator:* Number of patients with a record of flu immunization in the past 12 months	Process
Identification of race/ethnicity and language preference	*Numerator:* Number of patients with race/ethnicity and language preference documented	Process

* Numerator divided by denominator, then multiplied by 100, equals the percent of patients meeting the measure requirements.

Table 2. Optional Measures for Medical Home Management

MEASURE	STATISTIC*	TYPE OF MEASURE
Percentage of CYSHCN patients with one or more missed school/day care days or missed parental work days due to child's illness in last three months	Numerator**:** Number of CYSHCN patients with one or more missed school/day care days or parental missed work days due to child's illness in last three months	Outcome
Percentage of CYSHCN patients with a parental report of care coordination for equipment or special services	Numerator**:** Number of CYSHCN patients with a parental report of care coordination for equipment or special services	Process

*Numerator divided by denominator, then multiplied by 100, equals the percent of the patients meeting the measure requirements.

APPENDIX D

WSC Coaching Survey 2008-09

Completed May 2009: Total submissions: 33

Note – some questions allowed multiple responses, so N will be more than 33.

What is your role at the clinic?

Numeric value	*Answer*	*Number*	*Percentage*
1	Physician/ARNP/Provider	15	45%
2	Nurse	1	3%
3	Medical Assistant/Physician Assistant	6	18%
4	Administrator/QI Specialist	10	30%
5	Front Desk	0	0%
6	Other Clinical	1	3%

Have you participated in a previous collaborative?

Numeric value	*Answer*	*Number*	*Percentage*
1	CHIC (Children's Health Improvement Collab.)	2	6%
2	WSC (Washington State Collab.)	13	39%
3	Federal (Bureau of Primary Health Care)	1	3%
4	Other:	18	55%

What were your expectations of the coach?

Numeric value	*Answer*	*Number*	*Percentage*
1	Facilitate	23	70%
2	Teach	16	48%
3	Mentor	27	82%
4	Other:	3	9%

Did your coach meet your expectations (per the previous question)?

Numeric value	*Answer*	*Number*	*Percentage*
1	Definitely	17	52%
2	Mostly	14	42%
3	Some of the time	3	9%

COMMENTS:

- "Nicole was a wonderful coach! She really inspired us to do this work and had great ideas whenever we had a problem."
- "Colette really went above and beyond."

Please indicate how you think the coach could have been more useful to your team.

Numeric value	*Answer*	*Number*	*Percentage*
1	Spent more time at the site visit	1	3%
2	Used a set agenda at site visits or on phone calls	4	12%
3	Had a different coach	0	0%
4	Had more frequent site visits	4	12%
5	Other:	26	79%

COMMENTS:
- "She was a well rounded and wonderful coach."
- "She did a great job."
- "Our coach could have used a set agenda at site visits or on phone calls."

Did coaching help you better understand the chronic care model and/or the PDSA process?

Numeric value	*Answer*	*Number*	*Percentage*
1	Definitely	15	45%
2	Mostly	12	36%
3	Some of the time	6	18%

COMMENTS:
- "She was so helpful in bringing us along in our understanding and application of the models."

Have you felt more supported in your work at the clinic due to coaching?

Numeric value	*Answer*	*Number*	*Percentage*
1	Definitely	14	42%
2	Mostly	11	33%
3	Some of the time	17	51%

COMMENTS:
- "Yes much more so than in previous collaboratives."
- "Yes - especially when we were getting bogged down with problems in our data collection and current computer system. He was very positive and cheerful, which HELPS A LOT!"

Did having a coach enable you to feel more engaged in the work of the Collaborative?

Numeric value	*Answer*	*Number*	*Percentage*
1	Definitely	20	61%
2	Mostly	10	30%
3	Some of the time	4	12%
4	Rarely	1	3%

COMMENTS:

- "The whole team should have talked with him individually more often - especially when different members were having specific problems. I think he could have given each person some useful and helpful hints."
- "Yes, Nicole always was able to help us keep going even when we felt stuck or got overwhelmed with the other day to day work that we must do."

Has coaching impacted the way your team works together?

Numeric value	*Answer*	*Number*	*Percentage*
1	Definitely	8	24%
2	Mostly	13	39%
3	Some of the time	10	30%
4	Rarely	2	6%
5	Never	0	0%

COMMENTS:

- "Most of us realize where the improvements need to be made."
- "Yes, she really helped us form a great working team."

Do you feel the site visits were valuable?

Numeric value	*Answer*	*Number*	*Percentage*
1	Definitely	16	48%
2	Mostly	13	39%
3	Some of the time	4	12%

COMMENTS:

- "I really appreciated his input, time, and cheery demeanor."
- "We really looked forward to each site visit with Nicole -- always so helpful."

How helpful were the discussions with the practice coach in the following scenarios:

In person at a site visit?

Numeric value	*Answer*	*Number*	*Percentage*
1	Extremely helpful	9	27%
2	Very helpful	19	58%
3	Somewhat helpful	5	15%

Via email?

Numeric value	*Answer*	*Number*	*Percentage*
1	Extremely helpful	8	24%
2	Very helpful	12	36%
3	Somewhat helpful	11	33%
4	Not very helpful	2	6%
5	Not helpful at all	0	0%

On the phone?

Numeric value	*Answer*	*Number*	*Percentage*
1	Extremely helpful	6	18%
2	Very helpful	11	33%
3	Somewhat helpful	11	33%
4	Not very helpful	3	9%
5	Not helpful at all	2	6%

At the Learning Sessions?

Numeric value	*Answer*	*Number*	*Percentage*
1	Extremely helpful	9	27%
2	Very helpful	19	58%
3	Somewhat helpful	5	15%

Imagine this project without the following aspects of coaching. Do you think it would have made a difference?

Coaching at site visits

Numeric value	*Answer*	*Number*	*Percentage*
1	yes	31	94%
2	no	3	6%

Coaching by email

Numeric value	*Answer*	*Number*	*Percentage*
1	yes	32	97%
2	no	1	3%

Direct teaching

Numeric value	*Answer*	*Number*	*Percentage*
1	yes	29	88%
2	no	4	12%

Support at the Learning Sessions

Numeric value	*Answer*	*Number*	*Percentage*
1	yes	31	94%
2	no	2	6%

Did you see changes in the following components of the Chronic Care Model at your clinic during this collaborative? (Please refer to your pre-work if you are unsure of the components of the CCM)

Self-management support

Numeric value	*Answer*	*Number*	*Percentage*
1	yes	31	94%
2	no	2	6%

Delivery system design

Numeric value	*Answer*	*Number*	*Percentage*
1	yes	33	100%
2	no	0	0%

Community resources

Numeric value	*Answer*	*Number*	*Percentage*
1	yes	22	67%
2	no	11	33%

Decision support

Numeric value	*Answer*	*Number*	*Percentage*
1	yes	29	88%
2	no	4	12%

Clinical information systems

Numeric value	*Answer*	*Number*	*Percentage*
1	yes	31	94%
2	no	2	6%

Health care organization

Numeric value	*Answer*	*Number*	*Percentage*
1	yes	26	79%
2	no	7	21%

What was most helpful about the coaching? Check all that apply.

Numeric value	*Answer*	*Number*	*Percentage*
1	Increased motivation to make some of the changes called for by the CCM	26	79%
2	More knowledge or specific information	26	79%
3	Skills	12	36%
4	Help solving problems	17	52%
5	Follow-up after a learning session to ensure comprehension and accountability	18	55%
6	Linking clinics to community resources	8	24%
7	Assisting with registry training to help troubleshoot problems	11	33%

COMMENTS:

- "Help applying the collaborative goals to the specifics of our clinic."

Please suggest changes or suggestions regarding the coaching methods employed by the coaches.

- "Reminder calls the day of the webinars and calls would have been helpful."
- "It would be nice if the coach shared things from each of his/her sites with the others."
- "A little more focus on using the PDSA cycle (for a newbie)."
- "I don't have any specific suggestions. Email notice of information and resources were excellent way to improve and mentor staff."
- "Nicole was great."
- "Probably talk with each team-member individually to find out what problems they are experiencing and what they need help with. Even a questionnaire to each team member would probably be helpful - at our meetings for our team, we were so rushed that we NEVER got to discuss the problem areas or what each member felt they needed help with. WE STILL HAVE NOT DONE IT."
- "More frequent site visits (3)."
- "Francisco was a good mix of business and humor."

Do you think part the coach's role is to help you attain the financial incentives outlined in the contract?

Numeric value	*Answer*	*Number*	*Percentage*
1	Yes	22	67%
2	No	9	27%
3	N/A	2	6%

COMMENTS:

- "They did help remind us of what we were eligible for."
- "This aspect could have been more active and clearer."
- "Kept me on task."
- "I think our goals were way too lofty. We needed someone to help us pick more reasonable goals."
- "They helped to figure out if we had, and nudged towards it."
- "Well, I don't know if it was or wasn't but what I do know is that if Francisco hadn't helped me along in this process I wouldn't have gotten past go and therefore would not have met any of the financial incentives. I didn't really realize how the incentives were tied to specific dates at first and he was very helpful in pushing us along to get the things done."

Was your team feel more motivated to participate in this collaborative because of the financial incentives outlined in the contract?

Numeric value	*Answer*	*Number*	*Percentage*
1	Yes	18	55%
2	No	12	36%
3	N/A	3	6%

COMMENTS:

- "The financial incentive did help motivate us to participate in the first place."
- "Our participation was quite costly and the incentives did not come close to offsetting the costs."
- "Not so much our team as the management was more willing to support our team because of the financial incentives."
- "It helped to justify the time our Health Educator spent on the paperwork."
- "We just did the work b/c we are part of the collaborative."
- "Well, the administration was definitely appreciative and motivated to join because of the financial assistance. But I think it was more than that as they are continuing the program that we started using these funds, even after the funds aren't coming in. I am realizing while compiling the time that was spent on WSC outside of what was reimbursed, that the time spent collecting data and going to the meetings really was more than we received as incentives. Probably because we are so far away. The mileage reimbursement is quite high! That said... the incentives seemed to be very key to moving the process along and gave the coaches some leverage to get us all moving:) The other huge motivator from the staff (nurses) point of view as well as administration was the educational conferences. They really seemed to want to make that available to us and the extra financial assistance was a bonus to them as they would have had to pay for it anyway, or go without."

Is there anything else you would like to add?

- "Having the incentives tied to *performance* or process makes sense, but the outcomes measures were really pretty unrealistic. If we hadn't met them, our practice would really have taken a big financial hit."
- "Great opportunity - thank you!"
- "Our diabetic patients have definitely benefited from our participation."
- "We never had phone contact for help on anything. I would like to participate again on another topic - but the rest of our staff feels burned out right now. It doesn't help that we did not reach all of the goals we had set. A VERY BIG problem with our entire project was the initial tests we were trying to improve had not been completed for a baseline on all our patient/participants - So, now that we have the lab tests completed on almost all (98%) of these patients, our test results are worse because we actually got our most NON-COMPLIANT patients to get their labs done! So, those patients dragged down our results immediately. But that also means that the initial numbers we had on labs were only for our COMPLIANT patients in the group. We probably should have just set out to get better compliance with testing rather than try to improve lab results on people who normally won't even get tested. Thank you for the opportunity to give feedback."
- "We really appreciated all of the work that our coach did for us."
- "The coaching was wonderful -- thanks so much for all that you did."
- "Our coach was just great. Really good combination of cheer leader, teacher, motivator."
- "Thanks for all your help and support. Francisco did a fabulous job. He is a good coach. One more thing I was impressed with is that he really knows how to figure the data. A sharp mathematical mind! That is I'm sure a big plus in his position!"
- "It would have been really nice was if we could have gotten CEU credits even though we weren't MD's."
- "I didn't feel our coach was very invested in the project. Involvement was pretty minimal."

APPENDIX E

Team Planning Form – LS1 & LS2

TEAM PLANNING FOR ACTION PERIOD ONE

I. CLINIC: _____

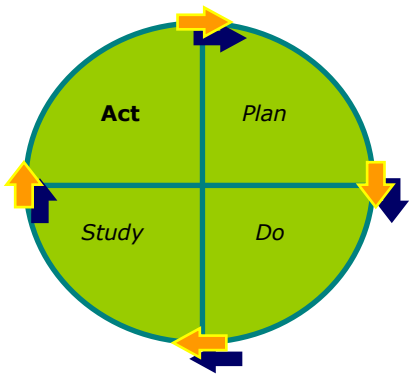
II. RECOMMENDED STANDARD OF CARE (SEE KEY CHANGES TABLE)?: _____

III. KEY CHANGE BEING TESTED (SEE KEY CHANGES TABLE)?:_____

IV. COMPONENTS OF THE PLANNED CARE MODEL IMPACTED (CHECK ALL THAT APPLY)?:

DELIVERY YSTEM DESIGN	CLINICAL INFORMATION SYSTEMS
COMMUNITY RESOURCES/POLICIES	DECISION SUPPORT
SELF-MANAGEMENT SUPPORT	HEALTH SYSTEM

V. PLAN for Cycle #1



WHAT ARE YOU TESTING?

WHO IS CONDUCTING THE TEST?

WHO ARE YOU TESTING THE CHANGE ON?

WHEN AND WHERE ARE YOU TESTING?

WHAT DO YOU PREDICT WILL HAPPEN?

WHAT DATA DO YOU NEED TO COLLECT?

WHO WILL COLLECT THE DATA?

VI. IDEAS FOR NEXT CYCLE(S) : _____

_____

_____

APPENDIX F
Learning Session Agendas

AGENDA

Learning Session 1: Thursday, May 15th, 2008

7:15 – 8:15	**Sign in and breakfast**	
8:15 – 9:15	**Welcome & Keynote** ▪ Outline the goals of the Collaborative and rally the troops ▪ Summarize the learning collaborative "movement" in Washington and nationally	*Jan Norman, RD, CDE* *Jim Stout, MD, MPH* *Rep. Larry Seaquist*
9:15 – 9:45	**Review of the Model for Improvement and Chronic Care Model** ▪ Describe the Breakthrough Series Collaborative Learning Model ▪ Present the Planned Care Model ▪ Present the Model for Improvement ▪ Finalize team Aim Statements (activity)	*Jim Stout, MD, MPH*
9:45 – 10:00	Break	
10:00 – 11:00	**Internal Team Building** ▪ Initiate team building ▪ Clarify skills, roles and responsibilities of each team member ▪ Identify gaps in how care is provided ▪ Enable teams to immediately begin change process	*Nicole Van Borkulo, MEd*
11:00 – 11:15	Transition to Breakouts	

* * * Asthma Afternoon * * *

11:15 – 12:15	**New Asthma Guidelines** Learner will be able to: ▪ Assess asthma severity and asthma control ▪ Identify new domains of impairment and risk ▪ Detail the six treatment steps and their relationship to severity and control, impairment and risk ▪ Provide evidence in support of a written asthma action plan and environmental mitigation	*Jim Stout, MD, MPH* *Jim Krieger, MD, MPH*
12:15 – 1:00	**LUNCH**	

1:00 – 1:45 **Asthma Case Studies** *Jim Stout, MD, MPH*
Jim Krieger, MD, MPH

- Apply new guideline principles using hypothetical cases
- Identify correct course of action based on impairment, risk, severity and control
- Clarify medication usages in the management of asthma through case studies

1:45 – 2:30 **Asthma Gadgets & Gizmos** *Genia Moncada*
Carol Crawford

- Demonstrate how common asthma medication delivery devices and peak flow meters work
- Give examples of how to assess whether patients are using the devices correctly
- Describe and illustrate how to teach patients correct use of devices.

2:30 – 3:00 **Clinical Needs Assessment for Future Asthma Topics** *Jim Stout, MD, MPH*
Jim Krieger, MD, MPH

- Identify primary areas of educational need for clinical teams
- Discuss strengths and weaknesses of current asthma care

* * * Medical Home Afternoon * * *

11:15 – 12:15 **General overview of Medical Home** *Chris Olson, MD, MPH*

- Outline the 7 elements of the medical home concept
- Describe methods to implement in a practice the medical home concept.
- Illustrate the benefits of the medical home concepts for providers and families

12:15 – 1:00 **LUNCH**

1:00 – 1:30 **Review Medical Home Tool Kit** *Katherine TeKolste, MD*

- Identify the 6 core areas that key changes should impact
- Describe at least 2 options for obtaining family responses on outcome measures relating to their child's visits.
- Identify four key changes for your clinic to consider for implementation.

1:30 – 2:00 **Integrating the Registry Into Patient Flow Use of the Medical Home Index** *Chris Olson, MD, MPH*

- Describe the use of a patient registry in a practice related to children with special health care needs.
- Present the benefits of a registry in quality improvement efforts in a practice.
- Describe the Medical Home Index for practices and the benefits in the development of quality improvement activities in a practice.

2:00 – 2:40 **Connecting with Community resources and the Medical Home Website**

Kate Orville, MPH
Donna Borgford-Parnell

- Identify three websites to access for further information on local community resources for children with special health care needs and their families.
- Describe the role of the Children with Special Health Care Needs nurse in the public health department and the Family Resources Coordinator.
- Name three ways to connect families to further information and support.

2:40 – 3:00 **Troubleshooting with Teams**

Chris Olson, MD, MPH
Katherine TeKolste, MD

- Describe the process in a practice to determine the challenges to implementation of a registry in a practice.
- Discuss the use of PDSA cycles in the improvement of work flow processes in a practice.
- Describe how a practice can connect with community resources in a community to improve the efforts of families to care for children with special health care needs.

* * * Obesity Afternoon * * *

11:15 – 12:15 **Childhood Obesity Prevention & Management Part I**

Lenna Liu, MD, MPH
Lily Koblenz, MD

- Support practices in a planned care model to prevent and manage childhood overweight and obesity.
- Identify tools to organize your clinic system to prevent and manage overweight and obesity.
- Summarize the latest expert recommendations on the prevention and management of childhood overweight and obesity.
- Illustrate the importance of advocacy in the context of childhood obesity.

12:15 – 1:00 **LUNCH**

1:00 – 2:00 **An Introduction to Motivational Interviewing in Three Exercises**

David Rosengren, PhD

- Provide an overview of key concepts on MI
- Demonstrate the differences between MI and non-MI styles
- Discuss the importance of Change Talk in motivation

2:00 – 3:00 **Childhood Obesity Prevention & Management Part II**

Alicia Dixon Docter, MS, RD, CD
Sandy Fick, RN

- Demonstrate toolkit for self-management support
- Describe concepts of nutrition self-regulation
- Illustrate food and nutrition counseling strategies
- Summarize the importance of community engagement in the prevention and treatment of childhood obesity

* * * RETURN TO MAIN AGENDA * * *

3:00 – 3:15	Break/ Transition to Full Group	
3:15 – 4:15	**Team Planning Session (PDSAs)** ▪ Analyze self assessment tools and change package to identify areas for change ▪ Use and apply the model for improvement and the chronic care model in improving systems of care ▪ Create 3 Plan Do Study Act Cycles to work on in practice setting	*Madlen Caplow, MPH* *Colette Rush, RN, BSN, CCM*
4:15 – 4:50	**External Team Building** ▪ Promote idea sharing across teams within the same clinical track ▪ Enable teams to quickly identify strategies to overcome barriers	*Francisco Arias-Reyes*
4:50 – 5:00	**Closing and Next Steps**	*Nicole Van Borkulo, MEd*

AGENDA

Learning Session 2 ~ Wednesday, November 5, 2008

7:15 – 8:00 **Sign in and breakfast**

8:00 – 8:15 **Welcome** *Jan Norman, RD, CDE*
Jim Stout, MD, MPH
- Outline the goals of the next stage of the Collaborative

8:15 – 9:00 **Small group activity** *Nicole Van Borkulo, MEd*
- Demonstrate progress within specific clinical tracks
- Analyze primary barriers to improving care
- Identify solutions to existing problems

9:00– 10:15 **Accelerating Improvement & PDSA Activity** *Madlen Caplow, MPH*
Nicole Van Borkulo, MEd
- Describe the difference between task, testing, implementation and spread
- Identify key approaches to accelerating clinical quality improvement
- Evaluate progress on changes within components of the Care Model
- Utilize PDSA cycles for learning and targeting change/improvement

10:15 – 10:30 **Break**

10:30 – 11:15 **Patient Centered Care/Medical Home** *Claire Trescott, MD*
- Develop greater understanding of this new model of primary care medicine
- Examine quality, cost and utilization of a Medical Home
- Summarize impact on creating sustainable primary care via a Medical Home

11:15 – 12:15 **Team Planning (PDSA's)**
- Identify key changes in additional components of the Planned Care Model
- Develop plan to test and implement cycles during Action Period Two
- Complete Planning Forms to assist individual teamwork after Learning Session

12:15 – 1:00 **WORKING LUNCH** *Team Coaches*
- **Continuation of Team Planning (PDSA's)**

* * * Asthma Afternoon * * *

***** For the next 90 minutes, teams will split up – half the group will go to the Spirometry Lab - - - The other half will go to the Skin Testing Lab *****

1:00 – 1:45 **Spirometry Lab (1/2 the Group)** *Jim Stout, MD, MPH*

- Determine proper coaching technique for forced expiratory maneuver
- Determine and evaluate the features of a good quality flow volume curve
- Interpretation for clinical use (obstruction vs. restriction, degree of severity)
- Demonstrate pre/post bronchodilator maneuver
- Application – illustrate putting spirometry into practice...billing codes, equipment, machine calibration

Skin Testing Lab (1/2 the group) *Jim Krieger, MD, MPH*

- Identify common allergic triggers associated with asthma approaches to allergy testing
- Analyze and assess common allergic triggers associated with asthma approaches to allergy testing Demonstrate skin testing techniques: intradermal testing vs. scratch testing
- Perform RAST testing: evaluate the benefits/limitations Perform, interpret results of the scratch test maneuver

1:45 – 2:30 *(SWITCH)* ***Spirometry Lab (1/2 the group)*** ***and*** ***Skin Testing Lab (1/2 the group)***

2:30 – 3:00 **Action Plans**

- Examine the evidence for proper use and content of an asthma action plan
- Demonstrate the different methods for their use (electronic vs. paper).

3:00 – 3:15 **BREAK**

3:15 – 4:00 **Revisit Team Planning (PDSAs)** *Team Coaches*
(Continued from 11:15am)

- Identify key changes in additional components of the Planned Care Model
- Develop plan to test and implement cycles during Action Period Two
- Complete Planning Forms to assist individual teamwork after Learning Session

4:00 – 4:45 **Open Discussion/Q&A with Faculty**

4:45 – 5:00 **Closing & Next Steps** *Francisco Arias-Reyes*

* * * Medical Home Afternoon * * *

1:00 – 1:15	**Team Presentations – *Care Coordination***	*Teams*
1:15 – 2:00	**Making the Medical Home Work: The Nuts And Bolts of a Medical Home in Primary Care** ▪ List the key skills that are needed for successful Medical Home Care ▪ List two tools that can be used to facilitate success in Medical Home Care ▪ List partners that can help make Medical Home care sustainable in primary care practice	*Jack Stephens, MD*
2:00 – 2:20	**Team Presentations – *Pre-visit Planning***	*Teams*
2:20 – 2:45	**Parent Perspective of Family Needs and Care Coordination** ▪ Assess the importance of the family as a unit in caring for a child with special needs. ▪ List 3 ways that physicians and their staff can support families of children with special needs. ▪ Describe strategies for strengthening the connection between families, community services, and the Medical Home.	*Amy Carlsen, RN*
2:45 – 3: 00	**Break**	
3:00 – 3:30	**Medical Home Questions & Answers** *Questions from today or bring issues/problems that you are working on in your practice*	*Jack Stephens, MD,* *Sean Stephens* *Jeeter Stephens* *Amy Carlsen, RN* *MH Faculty and Teams*
3:30 – 3:40	**Team Presentations – *Patient Survey***	*Teams*
3:40 – 415	**New Patient Survey** ▪ Discuss PDSA's and learnings to date	*Teams and Faculty*
4:15 – 4:45	**Revisit Team Planning (PDSAs)** ▪ Teams will stay in their track specific rooms	*Teams*
4:45 – 5:00	**Closing & Next Steps**	*Madlen Caplow, MPH*

* * * Obesity Afternoon * * *

1:00 – 1:50 **Team presentations** *All Obesity Teams*

Teams will:

- Describe their clinics in size, population served, unique characteristics
- Give examples of the PDSAs being run in the clinics
- Present two of the core measures that are part of the change package
- Summarize their next steps
- Propose an issue for faculty to address and discuss with the teams

1:50 – 3:00 **Community Panel Discussion**

Kaye Dickenson-Boldrey, YMCA
Kirsten Frandsen, Pierce Co PH
Sue Goodwin, Parks & Rec
Devon Love, Multicultural Health
Diana Vinh, Seattle King Co PH

Representatives from community organizations and public health will:

- Identify community-based efforts to address childhood obesity.
- Examine how healthcare providers and clinics can integrate work with community-based efforts.
- Build connections between community organizations and healthcare providers

3:00 – 3:15 Break

3:15 – 4:15 **Health Professional Advocacy for Obesity** *Scott Gee, MD*

- Outline for healthcare professionals how to advocate for the environmental and system-level changes (e.g. school health, built environment, reimbursement, etc.) needed to impact childhood obesity.
- Give examples of advocacy in California

4:15 – 4:45 **Revisit Team Planning (PDSAs)** *Team Coaches*
(Continued from 11:15am)

- Identify key changes in additional components of the Planned Care Model
- Develop plan to test and implement cycles during Action Period Two
- Complete Planning Forms to assist individual teamwork after Learning Session

4:45 – 5:00 **Closing & Next Steps** *Nicole Van Borukulo, MEd*

OUTCOMES CONGRESS AGENDA

Tuesday, May 5, 2009

7:00 – 8:00 **Registration, Posterboard Setup and Breakfast**

8:00 – 8:15 **Worlds Apart Series – 1st Vignette** *Nicole Van Borkulo, MEd*

- Examine the issues and challenges in caring for patients of varied cultural backgrounds.
- Identify differing perspectives, values and beliefs about health and illness that can lead to conflict between patients and providers.
- Develop an understanding of how discrimination and mistrust affect patients' interaction with providers and the healthcare system

8:15 – 8:30 **Welcome** *Jan Norman, RD, CDE*

- Outline the plan for the day

8:30 – 8:40 **Congratulations & Work Accomplished Overview** *Jim Stout, MD, MPH*

- Describe the long term nature of this work
- Summarize the 3 types of measurement (process, outcome, culture)

8:40 – 9:20 **Data Presentations by 3 Tracks** *Faculty & Coaches*
Asthma * Medical Home * Obesity

- Describe and interpret improvement in track-specific measures
- Describe improvements in clinic processes
- Identify barriers to improvement
- Define strategies to improve clinic processes and demonstrate an improvement in patient care

9:20– 9:35 **Worlds Apart Series – 2nd Vignette** *Nicole Van Borkulo, MEd*

- Examine the issues and challenges in caring for patients of varied cultural backgrounds.
- Identify differing perspectives, values and beliefs about health and illness that can lead to conflict between patients and providers.
- Develop an understanding of how discrimination and mistrust affect patients' interaction with providers and the healthcare system

9:35 – 9:50 **Break**

9:50 – 10:15 **Data Presentations by 2 Tracks** *Faculty & Coaches*

Diabetes * Hypertension

- Describe and interpret improvement in track-specific measures
- Describe improvements in clinic processes
- Identify barriers to improvement
- Define strategies to improve clinic processes and demonstrate an improvement in patient care

10:15 – 10:30 **Worlds Apart Series – 3rd Vignette** *Nicole Van Borkulo, MEd*

- Examine the issues and challenges in caring for patients of varied cultural backgrounds.
- Identify differing perspectives, values and beliefs about health and illness that can lead to conflict between patients and providers.
- Develop an understanding of how discrimination and mistrust affect patients' interaction with providers and the healthcare system

10:30 – 10:45 **Presentation on Health Disparities** *Ben Danielson, MD*

- Describe the various factors that contribute to disparate health outcomes
- Correlate health disparities with institutional, environmental and social influences
- Identify specific strategies for addressing disparities

10:45 – 12:00 **Facilitated Discussion on Health Disparities** *Ben Danielson, MD*

- Establish an environment for open and honest dialogue
- Identify specific clinical experiences and barriers in serving a heterogeneous patient population
- Elucidate strategies to support clinicians and staff in serving their entire patient population

12:00 – 12:15 **Break**

12:15 – 12:45 **WORKING LUNCH**

"To Boldly Go Where No One Has Gone Before" *Scott Schoengarth*

- Describe importance of team approach to achieve excellence in healthcare
- Explain importance of collaboration in sharing and adopting best practices
- Strategize plan for next steps on quality improvement work at your organizations
- Celebrate Team Successes

* * * Asthma Afternoon * * *

1:00 – 2:00 **Team Presentations** — *Teams*

- Identify clinical changes and measure improvement during course of collaborative
- Recognize patient and family impact of clinical changes
- Summarize continued improvement work post collaborative

2:00 – 2:30 **Expert Faculty Q & A** — *Jim Krieger, MD, MPH; Jim Stout, MD, MPH*

- Assess clinic understanding of key asthma care strategies
- Identify areas of care for further instruction
- Ascertain unmet needs of participating practices

2:30 – 2:45 **Break**

2:45 – 4:00 **Asthma Case Studies** — *Jim Krieger, MD, MPH; Jim Stout, MD, MPH*

- Evaluate differences in COPD vs. Asthma in adults
- Clarify the key components of severity classification in pediatric patients
- Identify and troubleshoot common issues in pediatric and adult asthma patients

* * * Medical Home Afternoon * * *

1:00 – 2:00 **Story Board Team Presentations** — *Teams*

- Identify clinical changes and measure improvement during course of collaborative
- Recognize patient and family impact of clinical changes
- Summarize continued improvement work post collaborative

2:30 – 2:45 **Break**

2:45 – 4:00 **Communication Training to Build Effective and Efficient Teams** — *Larry Mauksch, MEd*

This interactive presentation will include slides, a video, and team discussion/planning

- Identify patient communication skills that are associated with improved quality of care
- Give examples of patient communication skills that help manage time without compromising quality of care
- Construct teamwork communication strategies to enhance quality and efficiency of care

* * * Obesity Afternoon * * *

1:00 – 2:00 **Parenting for Weight Related Issues** *Kerri Boutelle, PhD*

- Define parent-child transmission of weight related behaviors
- Identify key behavioral parenting strategies to encourage and motivate children to improve their weight related behaviors, and learn how to teach these to your patients
- Identify a few key motivational interviewing strategies to use with parents of overweight children

2:00 – 3:00 **Cha-cha-cha-changes…Tough Conversations with Teens and Parents** *David Rosengren, PhD, MA*

- Describe the importance of change talk and listening to Motivational Interviewing
- Present strategies for establishing a treatment context
- Identify methods for starting a difficult conversations
- Produce ideas for meeting challenges in transitions

3:00 – 3:15 **Break**

3:15 – 4:00 **Team Presentations** *Teams*

- Identify clinical changes and measure improvement during course of collaborative
- Recognize patient and family impact of clinical changes
- Summarize continued improvement work post collaborative

* * * RETURN TO MAIN AGENDA * * *

4:00 – 4:15 **Transition back to large group/Break**

4:15 – 4:45 **What do President Obama, Governor Gregoire and You have in Common?** *Maxine Hayes, MD, MPH*

- Connect the similarities of the President's and Governor's health care agenda.
- Describe how population-based care addresses health disparities.
- Identify action steps to prepare your practice for the changes that will come with health reform.

4:45 **Adjourn**