

Promoting Universal Developmental Screening in Yakima County, WA:  
A Case Study of Cross-Sector Collaboration

Stephanie Orrico

A thesis  
submitted in partial fulfillment of the  
requirements for the degree of

Master of Public Health

University of Washington  
2012

Committee:

Marcia Williams

Katherine TeKolste

Program Authorized to Offer Degree:  
School of Public Health – Health Services

University of Washington  
**Abstract**

Promoting Universal Developmental Screening in Yakima County, WA:  
A Case Study of Cross-Sector Collaboration

Stephanie Orrico

Chair of the Supervisory Committee:  
Senior Lecturer, Marcia Williams., PhD  
Department of Epidemiology

**Objective:** Developmental screening of infants and young children increases early identification of developmental delay and disability and creates an opportunity to connect families with needed services. Ensuring screening for all children requires collaboration across the medical, educational, childcare and family resource sectors. This study examines the approach and activities of a collaborative community work group in Yakima County, WA, to create a system to improve access to developmental screening and related resources to all children in the county.

**Methods:** An array of child health and early learning professionals gathered in January 2010 to discuss developmental screening in the county. From this large group, a smaller work group, the Yakima County Developmental Screening Work Group, was formed in January 2011 and met regularly to formulate a county-wide plan for a universal developmental screening system. This case study examined the work of the Work Group through key informant interviews, review of meeting minutes and grant-related documents, and direct observation. The degree to which the group collaborated across sectors was evaluated using the framework of Collective Impact, a model for cross-sector collaboration.

**Results:** Within-group collaboration was marked by Work Group members' strong personal commitment to the goal of developmental screening, their ability to think at a systems level, and their belief in the "whole child" approach to child wellness. Collaboration between the Work Group and partner agencies involved four strategies: 1) visiting the partner's site, 2) customizing presentations about child development, 3)

listening to concerns, and 4) supporting partners' knowledge of their service population and their decisions regarding screening implementation activities. The Collective Impact framework indicated the Work Group's strengths in the areas of continuous communication and mutually-reinforcing activities. Backbone support and a shared measurement system were the most challenging components of the Collective Impact framework to fulfill.

**Conclusions:** Systems level thinking and a flexible approach towards supporting community partners as they implement screening in their settings were key strategies of the Yakima County Developmental Screening Work Group. Efforts to develop systems of universal developmental screening in other communities should prioritize funding for backbone support staff and shared measurement to ensure effective coordination and accountability among collaborating agencies.

## TABLE OF CONTENTS

	Page
List of Tables .....	ii
Background and Significance .....	1
Methods .....	6
Results .....	10
Discussion .....	19
Conclusions .....	22
References .....	23
Appendix A: Overview of Collective Impact Framework Components .....	26
Appendix B: Timeline of Critical Events .....	27

## LIST OF TABLES

Table Number	Page
1. Examples of Reviewed Documents .....	7
2. Collective Impact Framework Analysis .....	18

## **ACKNOWLEDGEMENTS**

The author wishes to express sincere appreciation to her committee members, Marcia Williams and Katherine TeKolste, for their enduring mentorship. Special thanks to Rebecca Timmen and Cathy Wasserman of the Washington State Department of Health for inspiring and supporting this study. Finally, many thanks to the members of the Yakima County Developmental Screening Work Group for allowing me to attend their meetings, gather their insights, and examine their work.

## **Background and Significance**

### **Universal Developmental Screening**

Universal developmental screening is a health services model in which all children, not simply those with known risk factors, are periodically screened for developmental concerns. Approximately one in six children in the United States is diagnosed with a developmental disability or disabling behavioral problem before the age of 18 (Centers for Disease Control and Prevention [CDC], 2005).

Early therapeutic services can significantly enhance a child's functioning and school experience (Karoly, Kilburn & Cannon, 2005). A recent report from the Early Childhood Outcomes Center indicated that children receiving early intervention services exhibited greater than expected growth in their social relationships, knowledge and skills, and self-help behaviors. These gains were seen in ~70% of children age birth to 3 and in 81% of children age 3 to 5 (Early Childhood Outcomes Center, 2012). Currently, half of all children with delays or disabilities are not identified before school entry and do not receive services at an early age (CDC, 2005).

Some developmental delays and disabilities are present at birth, while others arise during the early years of life due to life circumstances, such as poverty, abuse, or parental mental illness (Halfon, Uyeda, Inkelas, & Thomas, 2004). Genes determine the formation of brain circuitry, but a child's experiences influence how that circuitry takes shape. Children develop in a context of relationships that begins within their family, extends into their community, and is affected by broader social and economic resources. When a child's environment is not one of nurturing and stimulation, the impairments to learning, behavior and health can be life-long (Center on the Developing Child, 2007).

While socio-demographic risk factors may compromise a young child's development, protective factors such as early intervention, preschool, and parental literacy can mitigate their impact. A system that promotes the identification of at-risk families and supports caregivers with protective resources is gaining support in the child health promotion field (Halfon, Inkelas & Hockstein, 2000).

The American Academy of Pediatrics recommends the screening of young children at designated ages and endorses a list of validated screening tools (AAP, 2006). Screening tools recommended for this purpose typically rely on the screener's observations of the child or on information provided by the child's parents or caregivers. Clinicians, childcare providers and other trained professionals can use the information from these tools to quickly discern if a developmental problem may be present. If the screening results suggest a delay or concern, the child is either provided developmental activities and re-screened within 1-2 months or is referred to a specialist for more thorough testing. If no concern is detected, the child continues to receive screenings at regular intervals to ensure appropriate developmental progress. (American Academy of Pediatrics [AAP], 2006). With or without a documented delay, screenings and assessments create an opportunity for parents, caregivers and others to discuss the child's strengths and needs, and to promote the child's ongoing development (Kavanaugh, 2012)(TeKolste, 2010).

The Individuals with Disabilities Education Act (IDEA) requires states to create a system for identifying children who may need services, such as speech or physical therapy, or support in the classroom. The states provide these services to children age

zero to three under Part C of the IDEA, and to children age 3-18 under Part B. While many physicians, visiting nurses, child care providers, and other health and educational professionals currently conduct developmental screenings, most communities lack a coordinated system to ensure that all children are *routinely* screened, referred for further evaluation if appropriate, and offered therapies and other services as necessary.

### **Washington State Initiatives**

In Washington State, fewer than one-half of students enter kindergarten with the necessary skills to fully benefit from the classroom environment (Pavelcheck--Kinder, 2005). The relationship between school readiness at kindergarten entry and subsequent school success and positive lifelong outcomes has been documented (Pavelcheck--ADD, 2005). Many programs in Washington State have promoted efforts to improve school readiness and healthy development for young children. The Department of Early Learning's (DEL) *Plan for the Early Learning System 2010-2020* set a five-year goal to ensure that all children from birth through third grade receive developmental, social, emotional and mental health screening, as well as any needed referral to early intervention services (DEL & Thrive by Five, 2010). The Children's Health Initiative has focused on increasing access to early preventive care through a medical home, helping children who lack insurance receive physical, mental, developmental, and oral health services (Children's Health Access Task Force, 2006). The *Washington State Birth to 3 Plan* included strategies to increase developmental screening, as the Department of Early Learning identified screening as a priority area for implementation starting in 2012 (DEL & Thrive by Five, 2010). In February 2010, Washington State participants in an *Act Early* summit sponsored by the Centers for Disease Control and Prevention (CDC), established the following goal: "All Washington State children will be screened at 9, 18, 24/30 months and at appropriate intervals for Early Head Start, Head Start, birth to three home visiting programs, foster care, early intervention, and for parent or provider concern" (TeKolste, 2010).

Many non-profit organizations and parent support programs are increasing their capacity for screening. The *Parents as Teachers* program, the *Nurse-Family Partnership* and other home visiting programs provide screening in the home for infants of new parents. The screeners for these programs are well trained to provide developmental screening and have a high standard for follow-up with families (Parent Trust, 2011)(Regents, 2011). Programs that focus on the needs of vulnerable children, such as foster care agencies and Medicaid, include developmental and behavioral screening in their case management protocols (Kenney & Pelletier, 2010).

Not all childhood programs and services must provide screening directly, but it is essential for each to be aware of the value of screening and be prepared to advise families on how to access a developmental screen. These agencies play an important role in drawing children into the screening system. Expanding and coordinating the efforts among organizations that provide screening and those who direct families to screening is vital to a universal screening system.

### **Development of Universal Screening in Yakima County, WA**

Professionals in Yakima County responded to under-identification of developmental disability and delay by forming a multi-sector team in order to pilot

outreach and systems-building activities with the intent to increase developmental screening in the county.

Located in the center of Washington State, Yakima County is a largely rural and agricultural area. While the majority of residents are white, the proportions of Hispanic and American Indian residents in Yakima County are three to four times greater than in the state at large. Approximately 38% of residents speak a language other than English in the home—which is two times greater than the statewide level (US Census, 2010).

Rates of early identification of delay or disability in young children in Yakima County are below the national average. In 2010, 2.82% of the nation's infants and toddlers were enrolled in early intervention services (U.S. Office of Special Education Programs, 2011). In spring of 2012, 2.0% of infants and toddlers in Washington State were receiving early intervention, while 1.7% of this age group received services in Yakima County (Early Support for Infants and Toddlers, 2012).

In 1997, an innovative model for child health care coordination was instituted in Yakima County, allowing a subset of medical and social service providers to integrate care delivery with a unified electronic record. This partnership of 34 agencies, known as “Children’s Village,” was one of the first facilities in the country to combine education, mental health, family support, medical, and dental services for children with disabilities. In January 2010, a small group of professionals from the medical, public health, childcare, and mental health sectors gathered to discuss promotion of universal developmental screening in Yakima County. A Community Access to Child Health (CATCH) planning grant awarded in March 2010 from the American Academy of Pediatrics (AAP) enabled this core group of health professionals to promote the improvement and expansion of developmental screening. The group’s objective was to evaluate the community’s knowledge and interest in developmental screening, as well as its willingness to participate in future efforts. Focus groups were conducted with local parents, caregivers and childcare providers. In December of 2010, a survey of all Yakima physicians collected information on current screening knowledge, attitudes, and practices. Screening tools were reviewed and the Ages and Stages Questionnaire-3 (ASQ-3) was selected as the preferred developmental screening tool (ASQ, 2010).

When the CATCH grant funding ended in December of 2010, the professionals determined that an on-going work group was necessary to plan and implement next steps. This group, the Yakima County Developmental Screening Work Group, hereafter referred to as the “Work Group,” began meeting monthly in January 2011 to assess its resources and to define its scope and goals. A core group of 12 individuals attended the monthly meetings consistently, while another 10 professionals attended less frequently. Pediatricians, early intervention clinicians, clinic managers, and advocates for the “medical home” model represented the medical perspective. Professionals from the local educational service district, the pilot program for childcare improvement, and early learning coalitions provided insight into the early learning sector’s interest in screening. County and state public health officials participated in the Work Group to provide support, gather information, and connect the work in Yakima County to other public health efforts. In addition to professional diversity, the composition of the Work Group was fairly representative of Yakima’s complex demographic makeup. The Work Group was comprised of several Caucasian members, as well as members of the Hispanic and American Indian populations. Life experiences, such as teen motherhood or living in a

remote area, increased the representativeness of this Work Group as a sample of its community.

In Autumn 2011, the ASQ-3 Family Access and Enterprise systems were purchased to enable families to complete the ASQ developmental screening form online and submit it to Children's Village as the coordinating county resource. Public health professionals representing Project LAUNCH, a federal grant for improving childhood access to mental and behavioral health resources, allocated funds for the purchase. Funding from the Washington State Medical Home Project allowed Children's Village to hire a short-term administrator to launch the online system. The administrator made preliminary visits to medical practices interested in implementing the ASQ, to address any concerns and explore how screening might be feasible in their setting. Workshops on developmental screening were conducted by an early intervention professional in the Work Group at the request of childcare providers, medical providers, early childhood educators, and members of the Yakama Tribe. These visits were made possible by existing grants in Yakima County, such as the CDC's "Learn the Signs. Act Early." campaign. A developmental screening coordinator was hired with funding from Project LAUNCH, who coordinated outreach to community partners and promoted use of the online developmental screening system.

### **Purpose of Study**

The purpose of this study was to evaluate the collaborative approach of members of the Yakima County Developmental Screening Work Group. Universal developmental screening requires coordination among the many organizations and professionals working with infants and young children. Such collaborative efforts are historically difficult to organize, direct, and sustain. Funding must be blended from many sources and resources used creatively to realize the goals of a cross-sector collaborative group. An examination of the Work Group's collaborative activities may provide insight for neighboring counties and state-level professionals. An examination of the group's work may also illuminate actions the group could take to maximize and sustain its impact. In addition, professionals from neighboring counties and state agencies have expressed an interest in learning about the Yakima Work Group's efforts and experiences.

### **Objectives**

#### 1. Primary Objective:

Evaluate how members of the Yakima County Developmental Screening Work Group approached collaboration in the effort to provide universal developmental screening in Yakima County?

- How do members describe collaboration with their fellow Work Group members?
- How do members describe collaboration with new partners in the community, such as medical clinics or childcare centers?

#### 2. Secondary Objective:

Evaluate the Yakima County Developmental Screening Work Group relative to the Collective Impact framework for multi-sector collaboration.

Kania and Kramer (2011) developed the Collective Impact framework to address the limited effectiveness of single-sector community initiatives. They posited that in

order to achieve sustainable change in complex social issues, cross-sector coordination must replace the current norm of isolated interventions. In the Collective Impact framework, communities are challenged to define the problem and its solution in ways that encompass many stakeholders and to accomplish this in a measurable and accountable way.

According to this model, an effective collaborative satisfies five conditions of collective success: 1) common agenda, 2) shared measurement, 3) mutually reinforcing activities, 4) continuous communication, and 5) backbone support (see Appendix A) (Hanleybrown). Many organizations and individuals around the world have utilized this framework to promote lasting, large-scale change (Hanleybrown, Kania & Kramer, 2012). *Opportunity Chicago* used the model to place 6,000 public housing residents in new jobs, while *Memphis Fast Forward* created 14,000 new jobs and reduced the rate of violent crime (Hanleybrown, Kania & Kramer, 2012). Examination of the components of the CI framework has been used to inform program planning, and the model's component of shared measurement lends itself to ongoing program evaluation.

The Collective Impact framework for multi-sector collaboration is applicable to the Yakima County Developmental Screening Work Group (Hanleybrown, Kania & Kramer, 2012)(See Appendix A). Ensuring universal developmental screening to prevent and reduce developmental delay and disability is a challenge too complex for any one sector to address independently. The Collective Impact framework was used in this study to identify unique aspects of the Work Group's approach to collaboration and to illuminate areas of strength and areas for revision or growth.

## **Methods**

### **Study Design**

The present case study was conducted to evaluate the activities and collaborative approach of the Work Group in developing a community-wide program of universal developmental screening for infants and young children. Research questions were developed with input from representatives of Washington State Department of Health-- Division of Prevention and Community Health, who had observed or participated in the group's work. The study was approved by the University of Washington Institutional Review Board.

### **Study Setting**

The study location was Yakima County, Washington. In the 2010 US Census, Yakima County had a population of 243,231. It is a largely rural and agricultural county, located in the center of the state. The population of Yakima County is 46.9% non-Hispanic white, 45.8% Hispanic, 1.4% black, and 5.6% American Indian, predominantly members of the Yakama Nation Tribe (some census respondents in this county self-identified by more than one race/ethnicity category.) Nearly 9% of residents in the county are under the age of five, in comparison with the statewide figure of 6.5%. In Yakima County, 24% of the residents live below the federal poverty level, compared to the overall poverty rate in Washington State of 12% (Census Bureau, 2010).

### **Subjects**

Study subjects were all those who participated in the Yakima County Developmental Screening Work Group. There were approximately 12 professionals in consistent monthly attendance, with 10 more professionals in occasional attendance. The Work Group included experts from a clinical perspective such as pediatricians, clinic managers, early intervention specialists, and advocates for improved care coordination and access to care. It also included representatives from Child Care Aware and the local educational service district, as well as members of regional early learning coalitions. Public health professionals from the local and state level were also included. Members of the Work Group represented the demographic groups of Yakima County including white, American Indian, and Hispanic.

Interview subjects were purposively sampled from the roster of the larger Work Group. Interviewees had consistent attendance at monthly meetings and represented a wide range of disciplines and areas of expertise, including mental health, childcare, pediatric medicine, early intervention therapy, and public health. Administrative staff, such as the grant writer and developmental screening coordinator, were also interviewed.

### **Data Collection**

The Work Group's approach to collaboration was evaluated in three ways:

- 1) Review of documents generated and utilized by the group
- 2) Direct observation at group meetings
- 3) Key informant interviews

### 1. Review of Documents

To identify key activities and create a timeline of events, documents generated by the Work Group were reviewed (Table 1). These documents included meeting minutes, grant applications, and organizational charts. Meeting minutes were compiled each month by one member, and then approved at the next meeting by other members for accuracy. The Work Group's grant writer attended group meetings to better understand the group's work and its financial needs. The grant applications were a rich source of data, as they included a description of the group's history and desired scope of work. The Work Group created several visual images, such as a map of providers and programs in the community that were already engaged in developmental screening activities. The Work Group created a logic model, a diagram of their objectives and assets to guide them towards their overall goal of increasing screening in the county.

Representatives of the Work Group attended meetings of regional coalitions, state partnerships, and other group initiatives. As such, documentation of regional and state level activities was also reviewed. These documents included group charters, meeting minutes, and grant awards. (Table 1).

### 2. Direct Observation of Meetings

The Work Group met monthly at the Children's Village interdisciplinary clinic, the county's centralized source of early intervention services. Meetings from January 2012 through July of 2012 were attended by the investigator for direct observation of work group dynamics. Written notes were taken by the investigator with attention to meeting priorities, group obstacles, and the sharing of progress or concerns. While previous meetings were not directly observed, the content of those meetings was accessed through meeting minutes.

### 3. Interviews of Key Informants

#### *Identification of Interview Subjects:*

Primary documents, including meeting minutes and grant reports, were utilized to construct a roster of participants in the Work Group. This roster detailed their institutional affiliations and their role in the group. Potential interviewees were defined as any person who had attended two or more Work Group meetings since the group's conception in 2010. Twenty individuals were identified. The three individuals who had participated for the longest duration were selected for the initial interviews. Preliminary analysis of the transcripts of these interviews identified unrepresented stakeholder groups and areas of expertise. Subsequent interviews were conducted with seven additional interviewees.

#### *Interview Format:*

The interviews were semi-structured in nature. Interviewees were asked to describe their professional role in the community, as well as their perception of the role they serve in the Work Group. All interviewees were asked to identify aspects of Yakima County that make it unique relative to development of a universal screening model. They were also asked to identify obstacles to screening in their community. Participants were prompted to reflect on whether the Work Group was different in any way from other groups in which they had participated. Participants with a specific area of expertise or

experience, such as procuring funding or hosting workshops for the community, were asked questions specific to those content areas.

*Interview Procedures: Collection and Management of Interview Data*

The semi-structured interviews were audio-recorded and ranged from 30 to 90 minutes in length. At the time of the interview, participants signed a consent form to participate and agreed to audio-recording. Interview recordings were transcribed in full. Participants' names were replaced with codes to protect confidentiality. With the consent of the interviewees, the names of organizations were retained in the transcripts and final report.

**Table 1: Examples of Reviewed Documents**

<b>TYPE</b>	<b>DOCUMENT</b>
<b>Grant-related Documents</b>	CATCH grant application (Jan 2010) AETNA grant application: group history, timeline, work plan (Jun 2011) Project LAUNCH application (2008) Race to the Top grant award overview (Jan 2012)
<b>Partnership Charts</b>	Children’s Village partnership list Children’s Village organizational chart Map of organizations in Yakima County engaged in screening (Spring 2010) Investing in Children coalition charter (Sept 2011)
<b>Meeting Minutes and Reports</b>	WA State Developmental Screening Partnership (Nov 2011) Meetings during CATCH grant period (July 2011) Work Group monthly meetings (Dec 2011—May 2012) WA State partnership’s quarterly progress report (Dec 2012) Yearly report of Project LAUNCH progress (Sept 2011)
<b>Planning Documents</b>	Diagram of developmental screening system, state partnership (Dec 2011) Diagram of Work Group objectives and timeline (Jan 2012) WA DOH strategic framework for statewide screening (Dec 2010) Yakima developmental screening coordinator’s work plan (Jun 2012)
<b>Research Conducted by Work Group</b>	Parent focus group report (Sept 2010) Childcare provider focus group report (Sept 2010) CATCH provider survey report (Jun 2011)

## **Data Analysis**

A preliminary review of the group-generated documents identified events that were critical to the Work Group's formation and progress. The transcribed content of the interviews were coded for examples and references to collaboration both among the members of the Work Group and between the Work Group and the community. The transcripts were also coded for evidence of each framework component. The codebook was refined throughout the coding of interviews. This codebook was then used to more thoroughly review and code group-related documents and written notes from direct observation.

### **1. Coding of Interview Data**

To assess the group's collaboration using the Collective Impact framework, a preliminary list of codes was generated based on the essential elements of the framework. ATLAS.ti software was used to code the transcripts, expanding the codebook as more detailed subheadings became evident. References or illustrations of collaboration beliefs or approaches were also coded in the transcripts using this software. A list of quotations was generated for each code to examine references to Collective Impact framework components across interviews. Where interview content suggested a relationship among codes, such as between "outreach" and "community barriers," a separate report was run for content tagged with both codes. All of these reports were reviewed for insights and themes.

### **2. Coding of Group-related Documents and Written Observation Notes**

The group-generated documents were coded using the codebook described above. They were also coded for critical events: A 'critical event' was defined as any interaction with another group (e.g. speaking at a conference), outreach to the community (e.g. participating in a health fair), or major decisions made (e.g. endorsing a screening tool). The electronic transcript material and direct observation notes were also coded for 'critical events.'

## Results

The primary objective of this study was to examine the collaboration occurring among members of the Yakima County Developmental Screening Work Group and between the Work Group and partners in the community. The secondary objective utilized the Collective Impact framework to evaluate the activities of the Work Group.

### A. Collaboration Among Work Group Members

Members of the Work Group exhibited three traits that contributed to positive collaboration among the members of the Work Group: 1) high level of personal commitment to developmental screening; 2) capacity to view universal developmental screening from a systems perspective; and 3) belief in a “whole child” approach to child wellness.

#### 1. High Level of Personal Commitment to Developmental Screening

Passion for the long-term goal of universal screening was evident in each member’s willingness to contribute time and support to the Work Group’s efforts in addition to their other professional obligations. As stated by one interviewee, *“The real resource is to have people who are infected with the passion of this, who want it to succeed.”* The shared desire to increase developmental screening in the county provided incentive for participation in the Work Group without financial compensation. Each group member attended the meetings voluntarily with the approval of his/her agency, without additional funding to participate.

#### 2. Thinking at the Systems Level

Work Group members exhibited the capacity to think at a systems level. Members emphasized the value of this trait in discerning the complexities of a developmental screening system. Systems thinking is a conceptualization of health systems in which component parts, such as the prevalence of disease and the availability of treatment, interact in a dynamic process (Savigny & Adam, 2009). A founding member of the Work Group reflected: *“I sit around that table and I realize, ‘These are people who have great systems minds.’ I can kind of sit back into my own little corner, and know that, ‘Okay, I’m here to be a part of this, but I don’t have to be all of it, because I’ve got this great group.”* By using systems thinking and drawing on their diverse professional and personal experiences, the Work Group members evaluated potential changes to the existing system. The focus groups conducted during the CATCH grant indicated that many physicians did not conduct developmental screening during child exams, because the insurance companies do not typically reimburse for them. If the providers conduct and bill for a developmental screening and insurers do not provide reimbursement, the family may be billed. If the family cannot pay, the clinician absorbs the cost. The Work Group clinicians could attest to the financial burden of providing screenings to families who cannot pay the bill. Other Work Group members, with experience in parent counseling, clinic administration, or supporting low-income families, expressed concern that reimbursement rates can be insufficient, with the cost of the screen passed on to families. They noted that even a nominal charge per screen could become a barrier to continued screening, as these screens are usually done repeatedly and for each child in a

family. The Work Group members agreed that policy change was needed to address the reimbursement issue. They concluded that receiving reimbursement from insurers would mitigate the resources required to add screening to routine clinic protocols and would improve reporting of screening, as billing records can be excellent sources of data.

### 3. Belief in the “Whole Child” Approach

During interviews and meetings, members of the Work Group frequently referred to the “whole child” approach to child wellness. In the “whole child” model, facets of development such as language, social interaction, or mental health, are inextricably linked. Work Group members who held this belief described developmental screening as a means to expand the conversation between screener and caregiver relative to the child’s health. In the experience of Work Group members, such a conversation often revealed other needs in the family, such as food instability or inadequate medical insurance. *“Even those children who may not screen positive or need early intervention...I look at it as every family with young children benefits from some level of connection.”* Other participants expressed the view that developmental screening had many benefits for the parents and caregivers. *“It’s not just about identifying who needs an evaluation. It’s an education process. The little slice is early intervention. The big slice is parent education.”* In viewing the child in this broader developmental context, parent/caregiver education was an essential piece.

The Work Group was highly motivated to build a system in which professionals from many sectors could submit screening results or refer a child for screening. The Work Group recognized that some agencies and organizations were not structured in a way that permitted developmental screening but were positioned to promote universal screening and to recognize children with developmental concerns. The Work Group also recognized that organizations and facilities that could provide screening, such as childcare centers and medical practices, varied in level of interest and capacity to offer screening. As one interviewee described the system, *“Say, [one practice] does a great job of universal developmental screening...then over here there’s a family doc that doesn’t want any part in it...Maybe [the child is] in childcare. Have this “no wrong door,” so if they are in childcare centers, then they’re screening along and [all] feed into this system.”* A single coordinated system would allow the varied organizations and facilities that addressed the health and developmental needs of children to connect those children to developmental screening and appropriate follow-up.

## **B. Collaboration between Work Group and Partners in the Community**

The Work Group demonstrated four key behaviors as they engaged community partners in developmental screening efforts: 1) visited the partners’ locations; 2) customized presentations about child development and screening; 3) listened to partners’ concerns; 4) supported partners’ knowledge of their service population and their decisions regarding screening implementation activities.

### 1. Visited Community Partners’ Location

A central strategy to the Work Group was personal visits to the sites of community partners. Community partners ranged from resource centers for migrant or immigrant families to pediatric and family medicine clinics, from childcare centers to

literacy promotion agencies. Visits by Work Group members were usually made upon the request of the community partner. The Work Group member who visited a clinic, center or organization's site was typically selected for her knowledge of the organization or its work. The initial visit usually involved a presentation about child development and screening, with subsequent visits exploring the role of screening in that partner's existing setting. A Work Group member explained that visiting the site is "important interfacing," a valuable part of gaining a community partner's trust. Work Group members agreed that being willing to travel across the county showed potential partners that they were committed to the community partner's success.

Visiting these sites of community partners also provided valuable information for screening implementation. *"We actually go to them,"* an interviewee explained. *"Because we do that, we know that technology is an issue. Transportation is an issue. Literacy levels are an issue. Language barriers are an issue. Access to understanding the social media, or the media, is an issue."*

## 2. Customized Information on Child Development and Developmental Screening

Each community partner served a particular segment of the community. To equip each community partner with the information and resources needed to promote or conduct developmental screening in their setting, the visiting Work Group member provided the information needed in a format that was appropriate for the specific setting. For example, Work Group members who visited medical clinics recognized the limited time availability of the physicians, so they modified their presentation by anticipating common concerns and questions of medical assistants and office staff. As the Work Group representatives became more familiar with the needs of the medical partners in their community, the presentations became more focused. A Work Group member who visited the medical clinics advised: *"Distill it down to a very simple message: Why do you need to do developmental screening? This is the rate without developmental screening, this is the rate of identification with developmental screening. Which tool? This is the tool that we're advocating."* The presenting Work Group members learned that breakfast, rather than lunch, was a preferable time for medical clinics to receive this information.

A range of community groups requested workshops and presentations about child development and screening, from the medical residents at Central Washington University to the 24-hour day care at a local casino. A community partner that served a large number of Spanish-speaking children requested information on bilingual language development, while other community partners expressed interest in details about autism spectrum disorders. A Work Group member summed up her goals for these presentations, saying, *"If I can be a catalyst, that's all I am. I'm a catalyst, I'm a flow through of information, that's supporting different populations to be able to receive this material in the most effective way possible."*

## 3. Listened to Concerns of Community Partners

During the period of the CATCH grant, focus groups of physicians and child care providers revealed that many professionals did not feel confident in their knowledge of child development or how the referral system worked. Before potential community partners became involved in providing developmental screening, they often voiced

concerns about follow-up procedures, availability of early intervention services, or wait lists for evaluation. Work Group members welcomed these conversations. *“That’s when they feel like someone is listening to them. It has to be a real relationship...strategic. It needs to be a relationship where they know who they can call if they have a question.”* Community partners often utilized the initial visit from a Work Group member to express concerns they had about partnering, based on experiences they had in the past. A Work Group member who made many visits to community partner sites explained, *“I think it needs to be face-to-face...My experience is with those [visits] is that you don’t just talk about developmental screening.”* Addressing these concerns was a necessary precursor to discussing developmental screening.

#### 4. Supported Community Partners’ Knowledge of Service Populations and Decisions for Implementation of Screening

Visits to community sites provided the Work Group members with a window into the work of the community partners, but the Work Group members did not rely on their own view to inform screening implementation at that location. Partner organizations were respected for their knowledge of the population they served and for the relationships they nurtured with their clients. A Work Group member who visited La Casa Hogar, a resource center for the immigrant community, provided an example of acknowledging the community partner’s expertise: *“Even though we have [a knowledgeable presenter], who is Spanish-speaking, who was going to do the presentation, she’s still not the face of La Casa Hogar. Because these families have built relationships. And they understand the beauty of the relationships those teachers and staff have.”*

Work Group members expressed a consistent view that the personnel at each organization or facility was most informed about the population they served, so they were best situated to make decisions about implementation of screening protocols most suitable for their population. For example, a Work Group member who made many initial visits to medical practices in the county presented an array of formats for incorporating screening, then allowed the community partner to select specific screening-related activities based on their business model, staff, and resources. A small primary care clinic in Sunnyside, WA, was informed about the various tools that existed, including the online ASQ, with examples of how other clinics had integrated screening into their clinic procedures. The medical clinic did not use electronic medical records at that time and knew computer literacy to be low among their patients. The clinic manager opted for use of the paper version of the ASQ. Similar factors were considered by each clinic or organization to determine the extent to which it could incorporate developmental screening. The Work Group was available for trouble-shooting and additional resources, such as creating referral trees or reference booklets on developmental milestones for providers.

At times, the most appropriate approach for a given organization came from within the organization itself. One participant emphasized the importance of honoring the community partner’s voice in determining screening-related activities: *“I’m just a really firm believer that all the answers, everything is within the community. I don’t want to approach people and say, ‘This is the plan and this is how I want you to do it.’ I want to go to places...and develop a relationship with them, and then have them tell me what works best for them.”* At La Casa Hogar, teachers of a computer literacy class for

monolingual Spanish-speaking adults asked for training in developmental screening, so they could incorporate the online screening tool for the ASQ into their curriculum for computer use. *“For example, we brought these developmental screenings and the developmental milestone booklets to a place called La Casa Hogar... When I first had the conversation with them, they said, ‘We would love to have our parents have this information about developmental milestones and developmental screening, but we want to teach it to them ourselves. So you teach us, and then we will teach them.’”* The Work Group members who visited that organization affirmed the partner’s position that the participants in the computer literacy courses would receive information about the ASQ more readily from their trusted teacher than from a visiting professional.

### **C. Evaluation of the Work Group Relative to the Collective Impact Framework**

The Collective Impact framework was used to examine the Work Group’s activities to promote developmental screening in Yakima County. Each of the five components was examined individually. See Table 2 for a display of findings for each component.

#### **1. Common Agenda**

Although the Work Group had an interdisciplinary focus, the overall approach to developmental screening in Yakima County continued to center on the medical home setting. The Work Group was initiated by members of the medical community. Although medical professionals welcomed the involvement of the early childhood professionals, and respected the work they were doing in their sector, some clinicians were unclear as to how their work would intersect with screening efforts pursued by early learning professionals. Nonetheless, the varied stakeholders shared a common motivation of achieving universal developmental screening, with a belief that both sectors must be part of the solution.

The comments of the members of the Work Group indicated that the difference between the two sectors’ efforts reflected the separation that had existed between their fields for many years. A Work Group member from the childcare field explained, *“Because everything we do is around early learning, we don’t often blend with the medical field. Even though we should. You think of the whole child, and everyone promotes that, and advocates for that, but how often do medical professionals come in close with parents, with early learning...that doesn’t happen too often.”*

Developing a common agenda remained a complex component, as the medical and early learning professionals pursued greater understanding and clearer direction on a mutual approach. One interviewee described how her participation in the Work Group changed her perspective towards collaboration between the two sectors: *“It’s been unique for me in that this has really bridged the partnership in my mind, between the medical community and the early learning community.”*

#### **2. Shared Measurement**

Outcome measures for individual outreach efforts, such as website visits or workshop attendance, were devised. However, no measure that spanned all sectors was in use during the evaluation period of this case study. The Work Group discussed the

potential for a county-wide registry for developmental screening that would allow many types of professionals, from home visitors to medical clinics, to input and utilize screening results. Such a system would allow the many collaborating organizations and agencies to see the impact of their shared efforts. A Work Group member with strong cross-sector involvement in the county highlighted the value of tracking child growth in a way that can be utilized by many sectors: *“I think the advantage of having a database is that it would tell us the percentage of children that are being screened, and it would provide an accountable process...I really believe that in the long run, if we have a database, we know the number of children that are screened, and we begin to know our patterns of preparedness of school, let’s just say. As an indicator.”* Members of the Work Group recognized the value of such a system, but creation of a shared measurement system was not a priority during the period of this evaluation due to limited staff and resources. Outcome measures for individual strategies, such as conducting workshops about developmental screening or distributing fliers for online screening at health fairs, were developed.

According to the Collective Impact framework, shared measurement also refers to evaluation of the contribution of individual collaborating agencies, thereby providing partner accountability. Measurement of the activities of individual agencies or participants and of the collective efforts was considered, but an ongoing system of measurement for partner evaluation and accountability was not yet incorporated in the plans of the Work Group.

### 3. Mutually Reinforcing Activities

Several members of the Work Group reported that the Work Group meetings were energizing. They stated that problem-solving in a positive atmosphere and celebrating successes helped them to maintain momentum in their individual work. Most members stressed the importance of personally supporting the work of other members, such as attending events organized by other members. The Work Group members attributed their close professional relationships in part to the size of their community. With minimal redundancy in service agencies, competitiveness was not evident. A culture of support was described by participants in interviews and observed directly in meetings. Understanding how the efforts of other members contributed to the larger goal of achieving universal developmental screening motivated mutual support.

### 4. Continuous Communication

Work Group meetings were a forum for discussing local activity, but also for sharing and receiving feedback with state-level decision-makers. One Work Group member emphasized the value of meeting regularly, *“I also sit on a lot of state steering committees and review committees, and often times local implementation, such as with developmental screening, comes up. So it’s really good to be informed and be able to share that information back and forth to the local and the higher levels of committee. So being able to do that has worked really well to inform the work that we’re doing locally.”*

Communication was also strong between the Work Group and other initiatives at the local and state level. Some members of the Work Group attended other meetings together, as they represent their organizations in other early childhood coalitions and initiatives. As stated by one Work Group member who is involved in many local and

state initiatives, *“We have myself, and a few other people, who are in this meeting, and then we’re going to go to [the] Investing in Children [coalition]. And then we have another state funding thing that is being implemented in Yakima, our Infant/Toddler regional project, we’re on the same one. So there’s a lot of...it’s not quite repetition, ‘cause we’re doing different work, but a lot of consistency of people and the programs that are supporting the work.”*

##### 5. Backbone Support

Most Work Group members identified time as a limiting factor in their participation, as each member joined this group in addition to full-time professional obligations. They believed that a paid coordinator position was critical for maintaining momentum and for preventing group burnout. *“Having this dedicated coordinator will really help us to press on in between meetings and get a lot more accomplished...we need that link! None of us around that table are able to keep up at the level and fidelity we want.”* The members described the priorities for the new coordinator as developing outcome measures, data collection, and building relationships with community agencies that do not currently conduct development screening.

During the period of this study, the Work Group employed a short-term administrator to initiate partner site visits and to launch the online developmental screening system. Months later, a developmental screening coordinator was hired to schedule and orchestrate partner site visits and to refine use of the online screening system. Each of these backbone staff persons promoted the coordination of activities between sectors and increased the Work Group’s capacity to collect and manage data on their activities.

**Table 2: Collective Impact Framework Analysis:**

<b>Framework Component</b>	<b>Finding</b>
<b>Common Agenda:</b>	Common passion for the problem, though approach is more centered on the medical home.
<b>Shared Measurement:</b>	No cross-sector measure was in use to gauge partner contribution or accountability.  Discussion of building a registry of screening results, so professionals in all sectors could submit and review information on a child's developmental status.
<b>Mutually Reinforcing Activities:</b>	Members left meetings feeling invigorated in their work, having heard others report on their progress and ideas.  The view that each member's work in child health is vital to child development resulted in a non-competitive atmosphere.
<b>Continuous Communication:</b>	Monthly meetings always held on same day, time, and location.  Meeting minutes supported documentation of discussions; reviewed and approved by group members at subsequent meeting.  Group members involved in related committees and coalitions see one another frequently, allowing for more ongoing communication.
<b>Backbone Support:</b>	A coordinator was hired to manage online screening results, organize outreach to community partners, and devise outcome measures.  Maintaining funding for this backbone support was a significant challenge.

## Discussion

### Key Findings

This case study of the Yakima County Developmental Screening Work Group identified three key findings pertaining to collaboration. Systems level thinking was vital to Work Group strategizing, and a flexible vision of screening facilitated successful implementation of screening activities in community partner settings. Of all the Collective Impact framework components, shared measurement and backbone support posed the greatest challenge.

**Systems level thinking was essential to the Work Group's approach to the development of a universal developmental screening system.** Systems level thinking allowed the Group to examine and prioritize changes to the childhood health and early learning systems. The World Health Organization's Alliance for Health Policy and Systems Research endorsed the value of systems thinking for addressing complex topics in real-world health systems in the following statement:

Systems thinking can provide a way forward for operating more successfully and effectively in complex, real-world settings. It can open powerful pathways to identifying and resolving health system challenges, and as such is a crucial ingredient for any health system strengthening effort. (Savigny & Adam, 2009, p. 17).

Systems thinking allowed Work Group members to consider the possible effects of systems changes, such as new certification for childcare providers in knowledge of developmental milestones and screening. Systems thinking also enabled the Work Group members to envision the necessary components of a multi-sector data registry and to foresee some of the benefits and obstacles to such a technological investment. With upcoming changes due to health care reform, the capacity to anticipate and capitalize on systems level change may be a great advantage to the Work Group.

**Trust in community partners' ability to discern optimal ways to integrate screening was a critical tactic for engaging community partners.** The flexible approach of the Work Group enabled a wide range of community partners to explore their role in screening promotion. Clinical settings tested new procedures, while childcare and family resource centers gained strategies for advising families about screening. Each organization determined the degree to which it would incorporate screening, allowing the partner to promote screening within the limits of their resources and specific to the needs and characteristics of the children they served.

A qualitative study of the Brownsville Action Community for Health Equality (BACHE) found a similar value in supporting partners as they tailored a health promotion strategy to their setting (Holden et al., 2011). This coalition-based pilot for service system change sought to lower infant mortality rates for African American and Puerto Rican women in Brooklyn, New York. Interviews with participating community partners revealed the importance of flexibility when promoting a new health services program. Customization of tools for use in different clinics was essential to their acceptance and sustained use. The results of the BACHE study support the current study's findings that

strategies for promoting screening were most effective when influenced by the needs of the community partner.

**Shared measurement and backbone support were the most challenging components of the Collective Impact framework for the Work Group.** While individual outcome measures were feasible for individual partners or separate strategies to promote screening, devising a system of measurement capable of evaluating the Work Group's collective success was more challenging. The definition of such measures and the development of an ongoing evaluation system would called for extensive and committed resources.

This finding is consistent with the experience of other Collective Impact initiatives. Since the publication of the Collective Impact framework in 2010, the research firm credited with its formation, FSG (Foundation Strategy Group), has examined many Collective Impact efforts. In reviewing these Collective Impact initiatives, FSG identified implementation of *shared measurement* as the most challenging aspect of cross-sector collaboration to implement. Competing priorities among stakeholders were noted as barriers to the development of common measures. Above all, the significant time and resources needed to develop and maintain a shared measurement system that spans multiple organizations is greater than those needed to develop similar measures within a single organization (Hanleybrown, 2011). These statements are consistent with the findings of the present study. Limited or uncertain funding has most restricted this area of the Work Group's activities.

The obstacles to fully realizing the Collective Impact framework components are not isolated to the Yakima County Developmental Screening Work Group. The existence of non-profit groups that provide outside support for shared measurement and backbone support is a testament to the challenge that shared measurement poses to community initiatives. "Ready by 21" is a national partnership formed to help communities ensure that all children and youth are prepared for work, college, and life. Committed to the Collective Impact approach, this partnership provides training, tools, and technical assistance to bolster state and national efforts. "Ready by 21" offers an audit process to help these community initiatives develop an improvement and measurement process suited to their needs. Data system recommendations are among the more customized outputs from the audits (Ready by 21, 2012).

Indeed, these obstacles are experienced by organizations within Yakima County. The newly established Yakima County Local Indicators for Excellence (YC-LIFE) is a community-based support organization for local Collective Impact initiatives. This organization is designed to bolster organizational capacity to fulfill the components of the framework. YC-LIFE collects centralized data and acts as backbone support by facilitating discussion between partners and coordinating partner activities (YC-LIFE, 2012). Several organizations in Yakima have partnered with YC-LIFE to pursue their Collective Impact objectives, including the Homeless Network of Yakima County and the Yakima County Gang Commission. This suggests that other initiatives in Yakima County have required additional support in planning and measurement and have found this organization's services to be useful in their collaborative work (YC-LIFE, 2012).

**Strengths of the Study**

A major strength of this study was the case study format. A case study allows the researcher to combine information from a variety of sources, organize the findings in unique ways, and situate findings into a concrete context. This case study format had several advantages for exploring the research questions of the present study. The researcher was able to conduct direct observation of group meetings and activities over many months. The Work Group kept fairly detailed records of participation, events, and work plans. A small number of interviews allowed for in-depth interviews, revealing beliefs and priorities not immediately apparent from observation. These varied sources allowed for beliefs and intentions to be evaluated in addition to records of action and planning.

This case study was designed with and for individuals promoting developmental screening at the local, county, and state levels, causing the participants to have a vested interest in the results of the study. Because the Work Group members were aware that the results would be directly useful to their efforts, they were motivated to provide information and participate in interviews.

Lastly, the Collective Impact framework has been well-by local and national organizations. This important new approach has also been examined by the Washington State Developmental Screening Partnership (Timmen & Miller, 2011).

**Limitations of the Study**

This study had several limitations. Case studies do not allow for generalization. In particular, Yakima County has unique demographics and community resources, such as Children's Village. Meeting minutes were not available for all meetings since the time of the Work Group's inception in 2010. Minutes that were available may have only captured the conclusions and decisions, with incomplete insight into discussion and disagreement. For example, though several developmental screening tools were considered and debated, little is detailed in the meeting minutes about how a single tool was ultimately selected and endorsed. While meeting minutes document who attended, they do not capture how or why the individuals joined the group.

Interview questions about the group's early work elicit data that was subject to recall bias. The Work Group developed a more concrete agenda and identity over time. The Work Group's more recent accomplishments may have influenced their recollection of events and activities in their early work. The Work Group may not have incorporated all stakeholders relative to the issue of universal developmental screening in Yakima County.

## **Conclusions**

An evaluation of the Yakima County Developmental Screening Work Group using the Collective Impact framework revealed that greater backbone support would allow for the development of a shared measurement system to quantify impact and partner contributions. The Work Group may benefit from a partnership with the Yakima County-Local Indicators for Excellence (YC-LIFE), which offers local collaboratives assistance with data collection and the development of cohesive action plans.

Other communities forming partnerships to create a system of universal developmental screening should engage the group members in systems level thinking and should include a wide range of potential community partners with a flexible vision of screening. As backbone support and shared measurement are the most resource intensive components of collective impact, new collaboratives should seek funding expressly for these objectives.

## References

- Ages & Stages Questionnaires, 3<sup>rd</sup> ed. Available at: [www.agesandstages.com](http://www.agesandstages.com). Accessed 10/11/11.
- American Academy of Pediatrics. (2006). Identifying infants and young children with developmental disorders in the medical home: An algorithm for developmental surveillance and screening. *Pediatrics*, 118: 405-420.
- Centers for Disease Control and Prevention. (2005). *Child Development: Using Developmental Screening to Improve Children's Health*. Centers for Disease Control and Prevention.
- Center on the Developing Child. (2007). *A science-based framework for early childhood policy: Using evidence to improve outcomes in learning, behavior, and health for vulnerable children*. Harvard University. <http://www.developingchild.harvard.edu>
- Children's Health Access Task Force. (2006). *Healthy children: Health care coverage and access for King County's low-income kids, final report*. Accessed 11/12/11.
- Early Childhood Outcomes Center. (2012). *Outcomes for children served through IDEA's early childhood programs: 2010-2011*. Office of Special Education Programs, U.S. Department of Education. <http://projects.fpg.unc.edu/~eco/assets/pdfs/OutcomesforChildren-FFY2010.pdf>. Accessed 8/8/12.
- Early Support for Infants and Toddlers (ESIT). (2012). *Quarterly report for indicator #6: Percentage of children birth to 3 with Individualized Family Service Plans*. Washington State Department of Early Learning.
- Halfon, N., Inkelas, M. & Hockstein, M. (2000). The health development organization: An organizational approach to achieving child health development. *The Milbank Quarterly*, 78(3): 447-497.
- Halfon, N., Uyeda, K., Inkelas, M. & Thomas, R. (2004). *Building bridges: A compressive system for healthy development and school readiness*. UCLA Center for Healthier Children, Families and Communities.
- Hanleybrown, F. (2011). *Shared Measurement for Collective Impact*. FSG Online Knowledge Exchange.
- Hanleybrown, F., Kania, J. & Kramer M. (2012). *Channeling change: Making collective impact work*. *Stanford Social Innovation Review*, pp 1-8.
- Holden, C., Moses, N., Fox, M., Glose, G., Vaughn, B.C., & Marshall-Taylor, S. (2011). *Collaborating to address infant mortality: Lessons learned from the Brownsville Action Community for Health Equality*. *Progress in Community Health Partnerships*:

- Research, Education, and Action, 5(3): 281-8.
- Kania, J & Kramer, M. (2011). Collective impact. *Stanford Social Innovation Review*. Winter, pp 36-41.
- Karoly, L.A., Kilburn, M.R., & Cannon, J.S. (2005). Early childhood interventions: Proven results, future promise. RAND, Santa Monica, CA.
- Kavanaugh, J, et al. (2012). *SERIES: An Integrated Approach to Supporting Child Development*. Policy Lab, Children's Hospital of Philadelphia. (Summer 2012).
- Kenney, G.M. & Pelletier, J.E. (2010). Improving the lives of young children: The role of developmental screenings in Medicaid and CHIP. A brief funded by the Birth to Five Alliance & the A.L. Mailman Family Foundation.
- Parent Trust for Washington Children. (2010). *Parents as Teachers Program: Overview*. <http://www.parenttrust.org/index.php?page=parents-as-teachers>. Accessed 10/25/11.
- Pavelcheck, D. (2005). Office of Superintendent of Public Instruction, State of Washington. (November 2005). *Student Readiness for Kindergarten: A Survey of Kindergarten Teachers in Washington State*. Washington State University Social and Economic Sciences Research Center.
- Pavelcheck, D. (2005). Office of Superintendent of Public Instruction. State of Washington. (November 2005). *ADD: DEL Kindergarten Preparedness Survey Report*.
- Ready by 21. (2012). *Services: Technical Assistance*. Accessed 8/9/12. <http://www.readyby21.org/services/technical-assistance>
- Regents of the University of Colorado. (2011). *Introduction to NFP core nursing education curriculum and program materials*. Accessed 11/13/11.
- Savigny, D. & Adam, T. (Eds). (2009). *Systems thinking for health systems strengthening*. Alliance for Health Policy and Systems Research, World Health Organization (WHO).
- TeKolste, Katherine. (2010). *A strategic framework for universal developmental screening for the state of Washington*. Prepared for the Washington State Department of Health, Office of Maternal and Child Health.
- Timmen, R. & Miller, C. (2011). *Universal Developmental Screening E-Update: December 2011*. Washington State Department of Health.
- U.S. Department of Health and Human Services. (2010). *Preventive services covered under the Affordable Care Act*.

<http://www.healthcare.gov/news/factsheets/2010/07/preventive-services-list.html>  
Accessed 11/13/11.

U.S. Office of Special Education Programs. (2011). *Part C child count: Number and percentage of infants and toddlers receiving early intervention services under IDEA, Part C, by age and state, 2010 [Table 8-16]*. U.S. Department of Education.

Washington State Department of Early Learning & Thrive by Five-Washington. (2010). *Plan for the Early Learning System 2010-2020*. Accessed 11/12/11.

Washington State Department of Early Learning & Thrive by Five-Washington. (2010). *Washington State Birth to 3 Plan: Building on existing efforts to improve services and achieve measurable outcomes for children and families*. Accessed 11/12/11.

Yakima County Local Indicators for Excellence. (2012). *Yakima County Annual Report*.

## Appendix A: Overview of Collective Impact Framework Components

The Five Conditions of Collective Impact	
<b>Common Agenda</b>	All participants have a shared vision for change including a common understanding of the problem and a joint approach to solving it through agreed upon actions.
<b>Shared Measurement</b>	Collecting data and measuring results consistently across all participants ensures efforts remain aligned and participants hold each other accountable.
<b>Mutually Reinforcing Activities</b>	Participant activities must be differentiated while still being coordinated through a mutually reinforcing plan of action.
<b>Continuous Communication</b>	Consistent and open communication is needed across the many players to build trust, assure mutual objectives, and create common motivation.
<b>Backbone Support</b>	Creating and managing collective impact requires a separate organization(s) with staff and a specific set of skills to serve as the backbone for the entire initiative and coordinate participating organizations and agencies.

(Hanleybrown, Kania & Kramer, 2012)

## Appendix B: Timeline of Critical Events

