~Developmental Screening Community Initiative ~

Report of Lessons Learned from Three Maine Communities

December 2015
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**Executive Summary**

**Background**
Documenting the needs of Maine’s infants and young children has been a priority of the Maine Early Childhood Comprehensive Systems Initiative since its inception in 2004. Beginning in 2013, Maine Quality Counts for Kids (QC) started to partner with the State Agencies Interdepartmental Early Learning Team (SAIEL), the interdepartmental sub-agency established by the Maine Department of Education and the Maine Department of Health and Human Services commissioners. Together, QC and SAIEL lead the Developmental Systems Integration (DSI) initiative in order to improve general developmental screening rates for children so that early identification and referral can occur statewide more seamlessly for all children ages 0-3 years. Recognizing that many disciplines, including medical practices, Child Development Services (Maine’s Early Intervention provider), Maine Families Home Visiting, Public/Community Health Nursing and Early Head Start all have a goal to ensure that children in need of services are identified and receive services early, the DSI initiative was committed to testing ways in which to promote best practices between disciplines to enhance communication and coordination in order for this goal to be achieved. It was from this desire that the Developmental Screening Community Initiative was created.

**Approach**
The Developmental Screening Community Initiative (DSCI) was promoted to communities in January 2015 to implement and test best practices for improving developmental screening efforts at the local level. Three DSCI mini-grants were provided to multi-disciplinary teams in the Bangor, Waterville and Midcoast regions to implement and test developmental systems integration. The mission of the developmental screening community initiative was to provide support to a multi-disciplinary community team in testing and implementing best practices for coordination to improve developmental screening efforts at critical ages for children ages birth to three. The overarching vision of the initiative was to result in better health outcomes and school readiness, through early identification, for Maine children ages birth to three.

In order to improve care and coordination, the DSI: SAIEL Steering Committee proposed to test ways to better communicate and coordinate in the aforementioned communities in Maine over a period of eight months. This included involvement in the completion of a pre- and post-developmental systems survey, monthly meetings, monthly data collection requirements, an initial team training, four webinars and two gatherings of all teams to learn from one another. The partners in these communities served as demonstration sites, testing the recommendations of the DSI: SAIEL Steering Committee collectively as a local team. They provided continuous feedback and updates on their progress, sharing lessons learned with other stakeholders.

**Results**
Results from the monthly data collection on the DSI metrics rendered the following results.

*Rates of Developmental Screening*
The overall goal related to the rates of developmental screening was that 75% of children will have a developmental screening using a validated tool at 9, 18, and 24 or 30 months. In aggregate, compared to the sample size of children, approximately 35% of children were screened at least once during the critical ages. The average rate of screening for children by eight months of age was 9.5%; for children on or by their first birthday, the average rate was 37.5%; for children on or by their second birthday, the average rate was 38.7%; and for children on or by their third birthday, the average rate was 17.2%. While rates of developmental screening did not meet the intended goal of 75%, the DSCI rates were higher than the FY 2014 MaineCare

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1 Developmental screening rates of children less than eight months of age was not collected until mid-way through the project in April 2015.
developmental screening rates, which were 18.5% for one year old children; 25.6% for two year old children and 19% for three year old children. The highest number of screenings was conducted in the months of July and March, respectively. The Midcoast region had a developmental screening rate of 55%; the Waterville region had a rate of 31%; and the Bangor region had a rate of 19%.

Information Sharing Across Disciplines
The goal for information sharing across disciplines was 75% of developmental screening results are shared with the child’s medical home and other community organizations upon parental consent. By sharing information, the aim was to reduce duplicate screenings for children and to get children to referrals efficiently if necessary. Also, organizations were encouraged to share screening information, despite the results, whenever a screening was completed. The average rate of sharing information with the medical home in aggregate was 20.5% compared to a baseline rate in the beginning of the project at 1.2%. The rate of information sharing with the medical home in the Waterville region was 32.1%; 17.5% in the Bangor region; and 11.9% in the Midcoast region. Aggregate rates of information sharing with Child Development Services was 3.9% and aggregate rates of sharing information with other community-based organizations was 2%.

Referrals and Referrals to Service
The goal for referrals was that 75% of children would be referred to appropriate services as indicated by the developmental screening results. In total, approximately 505 children were referred for further evaluation; a rate of 42.1% of children screened required a referral for further evaluation. The month with the highest rate of referrals was August. The Bangor team had a referral rate of 41.5% and the Midcoast region had a referral rate of 30.5%. Rates of referrals to screenings in Waterville were skewed in that the rates of referrals that CDS received over the eight month time frame exceeded the rates of screening reported. The goal for referrals to service was that 75% of children referred to services are followed to determine if services are in place and if not, why not. The average rate of children receiving services after a referral is 70.8%. The average rate of children not receiving services due to ineligibility or family decline was 29.2%. Midcoast had the highest rate of children referred then getting into service at 81.3%; Waterville had a service rate of 53.2%; and Bangor had a rate of 46.4%.

Results were also provided through the pre- and post-developmental systems integration survey given at the beginning and end of the initiative. In total fifteen individuals completed the pre-survey from across the three DSCI sites. Thirteen individuals who completed the pre-survey then completed the post-survey. The changes seen from pre- to post-survey are based on these thirteen responses and are not necessarily generalizable to the entire DSCI project or future DSCI-like projects but rather should be viewed as opportunities for continuous quality improvement. The survey examined: 1) the developmental screening process; 2) family involvement in the developmental screening process; 3) information sharing; 4) referrals; and 5) follow-up.

The Developmental Screening Process
Positive change was noted from pre- to post-survey in the developmental screening process. Positive areas of change include:

- clarity on the difference between surveillance and screening;
- staff training on how to conduct developmental screening;
- and ways in which to check fidelity of screenings.

Family Involvement in the Developmental Screening Process
There was little change from pre- to post-survey in the area of family involvement in the developmental screening process. Practices that were changed from pre- to post-survey included:

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2 The rate of ineligibility and family decline were combined. The rates of ineligible clients compared to family decline were not separated.
• completing screenings in advance (decrease in practice from pre to post);
• completing screening like an interview (decrease in practice from pre to post);
• use of probing questions to increase understanding during the screening process (decrease from pre to post);
• and use of toys and materials to demonstrate developmental milestones (increase from pre to post).

**Information Sharing**
Sharing information practices did change from pre- to post-survey. Changes were mostly seen in these areas:
• **Child Development Services**-decreased practice of sharing information from pre to post
• **Medical Practices**-increased practice of sharing information from pre to post
• **Public Health/Community Health Nursing**-increased practice sharing of information from pre to post
• **Child Care**-decreased practice of sharing information from pre to post
• **Behavioral Health**-decreased practice of sharing of information from pre to post
• **Specialty Care**-decreased practice of sharing information from pre to post
• Obtaining parental consent less of a problem from pre to post
• Increased staff training on the consent process from pre to post

**Referral Practices**
Referral practices basically remained unchanged from pre- to post-survey. Some slight changes were noted in the following practices:
• perception that families do not follow-up on referrals was decreased from pre to post;
• report that families decline referrals decreased from pre to post;
• and children ineligible for services decreased from pre to post.

**Follow-Up Practices**
A positive area of change in the follow-up questions was reports of organizations reviewing data on the developmental screening process more from pre- to post-survey. However, there was a decrease in tracking children receiving developmental screening from pre to post.

During the final DSCI gathering, all teams shared their successes, challenges, plans for sustainability that were both easy and harder to sustain over time and recommendations to the DSI Steering Committee.

**Accomplishments**
At the end of the DSCI project, members were asked to reflect on team accomplishments over the course of the DSCI project from January to August 2015. Noted themes of accomplishments reported included:
• sharing of ASQ screening results more; an increase in overall screenings at the critical ages;
• less duplication;
• improved communication across disciplines;
• improved developmental screening, information sharing and referral workflows in all settings;
• development of scripts for families to normalize developmental screening and to make reporting results less threatening;
• improved connection to child health care providers;
• quick and more responsive services for young children;
• timely sharing of results; increased staff training around developmental screening;
• incorporating the parent perspective in the DSCI work;
• closing feedback loops with Child Development Services;
development of family outreach materials on the importance of developmental milestones and screening;  
and more awareness of resources available to families, including expectations related to eligibility requirements.

All teams noted that developing relationships through monthly meetings really helped to improve coordination and communication.

**Challenges**
The teams also noted challenges along the way. Themes around challenges were:

- having a limited timeframe to truly implement all the changes necessary to really make a difference in practices around developmental screening;
- shifts in team members (lost some team members along the way);
- difficulty in scheduling meetings with busy individuals who really needed to be at the DSCI meetings;
- some communities admittedly did not have a strong family voice to help inform the work;
- data collection was time-consuming and required more hand-counting of data than originally expected;
- best use of ASQ on-line and getting ASQ on-line up and running;
- incorporating developmental screening in established workflows so that it is a routine practice;
- family understanding of the importance of early identification and intervention;
- getting staff buy-in;
- improving understanding of the full range of services available to young children and their families;
- some communities admittedly did not have a strong family voice to help inform the work;
- data collection was time-consuming and required more hand-counting of data than originally expected;
- best use of ASQ on-line and getting ASQ on-line up and running;
- incorporating developmental screening in established workflows so that it is a routine practice;
- family understanding of the importance of early identification and intervention;
- getting staff buy-in;
- improving understanding of the full range of services available to young children and their families;
- and technology (i.e., ASQ on-line implementation, incorporating results into EMR, databases that capture developmental screening data without the need for hand-counting).

**Plans for Sustainability**
Team members were asked to reflect on DSCI activities they felt they could sustain in the future. Reflections were reported on: 1) those activities important and easy to sustain and then 2) those activities that are important but harder to sustain. Activities which were reported to be easier to sustain included:

- maintaining flow of data between group members (e.g., e-mail; sharing printed materials; quarterly meetings);
- using health services advisory meeting through Early Head Start as a conduit to continue conversations;
- continuing to fax screening results to providers;
- promoting higher engagement of families about ASQ and more family outreach in general on the importance of developmental milestones;
- and child health care provider engagement.

The activities that are important but harder to sustain are:

- financial pieces (i.e., printing of outreach materials; maintaining ASQ online)
- long-term data submission and analysis;
- keeping a consistent group going;
- community education, including patients and providers.

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• continuous improvement of communication systems as there is still a need to bolster communication
to improve coordination;
• keeping the momentum going;
• and working on consent to make the process more aligned for families.

Recommendations to the DSI Steering Committee
DSCI team members were asked to reflect on recommendations for the DSI Steering Committee moving
forward with developmental system integration. Recommendations from the teams included periodic follow-
up meetings/exchanges with community teams (e.g., email check-ins with DSI Program Manager); developing
communication links between local communities and DSI Steering Committee to inform teams of latest work
and to get input on practices; help with messaging to families regarding the importance of developmental
milestones and screening; looking at ASQ on-line implementation as a statewide initiative in order to sustain
and build on the ASQ effort; use of generated data to educate partners and stakeholders involved in
developmental systems integration; universal process and consent to release information form; creation of a
“passport” of services system; systematic developmental screening training when on-boarding staff; and
assistance with promoting clarity on early intervention process and eligibility. DSCI teams also voted on
priorities for next steps which were (in priority order): 1) universal consent process and form; 2) improving
feedback loops or responses to referrals; and 3) improving information sharing efforts.

Moving Forward
The greatest lesson to be learned from the DSCI work was that while a lot was accomplished in eight months,
it also felt like the work was just getting started. Realistically, the testing phase of the DSCI could have been
extended into a year or eighteen months. An important lesson to be learned was not to underestimate the
importance of building relationships within a team. During the eight month period building trusting
relationships across disciplines in order to increase understanding of eligibility and program requirements and
to build a system of coordination improvement was a noted accomplishment.

As other communities consider a DSCI, the following should be considered based on lessons learned from
the original DSCI teams:
1) Designate a leader who acts as the convener of the group and can provide information as well as
follow-up in between meetings. The leader can enlist support from others to bring stakeholders to the
table. Personal invites explaining the initiative is helpful to bringing stakeholders to the table for the
initial meeting.
2) Consider having a facilitator help with agenda development, follow up and documenting decisions.
The community leader will more than likely want to participate in the DSCI team meetings, so having
a separate facilitator is important to the process.
3) Establish a DSCI work plan that considers the overarching goal of the project and then strategies to
reach the goal with realistic timelines. Once a work plan has been developed, building in metrics or
using established metrics should be a part of the plan to evaluate success.
4) Begin with strategies that lend themselves to a small or quick “win”. For example, beginning with
family outreach messaging and materials are tangible and allow all disciplines a chance to test change.
5) Initial meetings should include opportunities to better understand the strength of the relationships
necessary for coordination and communication of DSCI strategies. Beginning with a community eco-
map allows for a visual representation of the strength of relationship and clearly shows areas where
relationships can be fostered.
6) Allow time at each meeting for members to check-in with one another on any program or community
changes that may affect the strategies within the DSCI work plan. Time for team members to better
understand program and eligibility requirements should be built into agendas as well.
7) Build in small tests of change using quality improvement methodologies throughout the project and review these tests to document lessons learned. Quality improvement methodology training may be necessary if partners are not familiar with ways in which to test quality improvement.
8) Collect and review data often throughout the initiative to examine trends and the need for mid-course program adjustments. This includes any data or lessons learned from small tests of change using PDSA cycles.
9) If strategies include additional technological requirements, develop a separate work plan around implementing technology into the DSCI.
10) Celebrate and document successes along the way. Systems change is hard and significant work.

Next Steps in Developmental Systems Integration
The DSI: SAIEL Steering Committee is committed to using the lessons learned from the DSCI teams to plan for systems of change that incorporate plans for improvement in developmental systems integration. Importantly, the DSI: SAIEL Steering Committee is committed to meeting monthly to work on expanding developmental screening efforts, engaging partners to increase linkages and referrals, utilizing and promoting cross-disciplinary information sharing and referrals and enhancing systems (policy, data, funding) and workflow processes. Specific strategies include: creating a universal process and form for sharing information; exploring a Help Me Grow model of improving linkages and coordination for families with children ages birth to eight; examining statewide data on developmental screening rates, information sharing, referrals and services to determine areas of improvement and areas that need more focused attention; improving family outreach and messaging around the importance of developmental milestones and screening; supporting DSCI replication; and developing a feedback mechanism for articulating progress out to those working within the disciplines that the DSI: SAIEL Steering Committee represents.
Introduction

Background Information
Documenting the needs of Maine’s infants and young children has been a priority of the Maine Early Childhood Comprehensive Systems Initiative since its inception in 2004. Beginning in 2013, Maine Quality Counts for Kids (QC) started to partner with the State Agencies Interdepartmental Early Learning Team (SAIEL), the interdepartmental sub-agency established by the Maine Dept. of Education and the Maine Dept. of Health and Human Services commissioners. Together, QC and SAIEL are leading the Developmental Systems Integration (DSI) initiative in order to improve general developmental screening rates for children so that early identification and referral can occur statewide more seamlessly for all children ages 0-3 years. QC was a natural partner in this work because of their leadership role for the Improving Health Outcomes for Children First STEPS (Strengthening Together Early Preventive Services)4 work with practices in 2012 and 2014, focused on increasing developmental and autism screening in the primary care practices through a federal CHIPRA grant.

The original goal of the DSI initiative, which aligned with the IHOC First STEPS work, was to increase the number of MaineCare children who receive general developmental screening by age 1, age 2, and age 3 by 3% per year using baseline data gathered in 2011. Data from 2011 MaineCare claims showed a rate of developmental screening of 2.1% by age 1, 3.4% by age 2 and 0.5% by age 3 based on the federal CHIPRA measure. By 2016, the goal was to show an increase in general developmental screening of 11.1% by age 1, 12.4% by age 2 and 9.5% by age 3 based on a federal CHIPRA metric and the American Academy of Pediatrics guidelines on general developmental screening. In 2013, MaineCare claims indicated that rates had exceeded the 2016 projected targets. New goals were established to increase developmental screening rates by 15% by December 2015 and 20% for all ages by December 2016.

DSI activities encompassed the following: 1) providing administrative support and project management for the DSI project with oversight from the Maine Quality Counts Child Health Medical Director; 2) planning and facilitation of monthly DSI steering committee meetings; 3) developing and maintaining a web site for the DSI initiative with resources and links to materials to better explain the DSI effort; 4) producing a context map for developmental screening for children ages birth to three in the state illustrating how different organizations, stakeholders and systems interface with families; 5) conducting a developmental screening survey to begin to better understand how developmental screening is approached by the different disciplines; 6) bringing together stakeholders to identify points of leverage and intersection as well as areas of potential conflict; 7) developing common terminology (surveillance, screening, evaluation and assessment) and visibly documenting where developmental screening fits in a comprehensive assessment framework for young children; 8) preparing for and executing three (3) day-long meetings for stakeholders on topics which include: developing a list of approved screening tools, agreements on intents and mechanics of screening, and data sharing/communication across systems; and 9) aligning with practice-based quality improvement initiatives such as First STEPS, providing presentations at regional developmental screening trainings, and conducting presentations at PCMH/HH5 practices to align with practice goals of the State Innovation Model (SIM) Project.

Developmental Screening Guidelines and Tools
In 2006, the American Academy of Pediatrics recommended that children be screened with a standardized validated general developmental screening tool at 9, 18, 24 or 30 months, in addition to autism screening at 9 and 18 months. Developmental screening is different than developmental

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4 The First STEPS initiative was funded by a Children’s Health Insurance Program Reauthorization Act (CHIPRA) grant. In February 2010, Maine and Vermont were awarded a quality demonstration grant by the Centers for Medicaid and Medicare Services (CMS) to Improve Health Outcomes for Children (IHOC). The goals of IHOC are to produce data on standard pediatric quality measures, improve information technology for sharing pediatric data, and support practice.
5 PCMH/HH=Patient-Centered Medical Homes/Health Homes
surveillance. Developmental surveillance is recognizing children who may be at risk for developmental delays through a gathering of history, observation, parental concerns, and documentation of changes over time. Developmental surveillance is routinely performed at all well child visits according to Bright Futures guidelines and is not billed as a separate service.

Developmental screening is the administration of a brief evidence-based tool that assesses 5 domains of development (communication, gross motor, fine motor, problem solving and person adaptive skills) to aid in the early identification of children at risk for a developmental disorder. A clear action step needs to be identified if a child does not meet the criteria for passing in one of the five domains. Developmental screening generally requires additional staff and provider time to perform and review the results and is a separate billable service for MaineCare. Recently, there has been work to bring together stakeholders across the early childhood sectors (health care, early childhood care and education, home visiting and early intervention) to develop a consensus on screening tools in Maine. In November 2013, Maine Quality Counts (QC) working with the State Agencies Interdepartmental Early Learning Team (SAIEL) hosted the first of 3 Developmental Systems Integration (DSI) Stakeholder meetings. The outcome of this meeting was to recommend two developmental screening tools to use across sectors for children ages 0 to 3: the Ages and Stages Questionnaire (ASQ-3) and the Parents Evaluation of Developmental Status (PEDS). The expectation is that early and systematic general developmental screening will improve efficiency and children's health by identifying children with developmental concerns earlier so that they can access intervention services and receive appropriate community and educational supports for the family ultimately saving resources within the early childhood system in Maine.
Approach to Demonstrating the Recommendations of the Developmental Systems Integration (DSI): SAIEL Steering Committee

The Developmental Screening Community Initiative
Maine Quality Counts for Kids, under the guidance of DSI: SAIEL created the Developmental Screening Community Initiative (DSCI) to implement and test best practices for improving developmental screening efforts at the local level. Three DSCI mini-grants were provided to multi-disciplinary teams in the Bangor, Waterville and Midcoast regions to implement and test developmental systems integration.

Many of the organizations that serve children age birth to three in Maine, including Maine Families home visiting, Public Health Nursing, Early Head Start, child health care providers, and Child Development Services, participate in developmental surveillance and screening. Over the past three years, the DSI Steering Committee has worked on strategic plans to coordinate efforts and share results among different organizations, working toward the goals of improving developmental screening rates and the developmental screening process for children ages birth to three. This includes activities like reducing duplicate screening, sharing developmental screening results across disciplines, conducting appropriate referrals and completing the communication loop to make sure information pertinent to a child’s development is communicated back to child health care providers and referring organizations working with children and their families.

In order to improve care and coordination, the DSI: SAIEL Steering Committee proposed to test ways to better communicate and coordinate in the aforementioned communities in Maine over a period of 8 months. The partners in these communities served as demonstration sites, testing the recommendations of the DSI: SAIEL Steering Committee collectively as a local team. They provided continuous feedback and updates on their progress, sharing lessons learned with other stakeholders.

The DSCI team from the Bangor region included:

- Penquis Community Action Program: Maine Families
- Penquis Community Action Program: Early Head Start
- Child Development Services Two Rivers
- Penobscot Community Health Care: Penobscot Pediatrics
- Bangor Community Health Nursing
- Family representatives

In the Waterville region, the DSCI team included:

- Kennebec Valley Community Action Program: Maine Families
- Kennebec Valley Community Action Program: Early Head Start
- Waterville Pediatrics
- Public Health Nursing
- Child Development Services PEDS
- United Way of Mid-Maine

Involved in the Mid-Coast region was:

- Martin’s Point Health Care
- United Way of Mid-Coast Maine
- Child Development Services Midcoast
- Maine Families from Opportunity Alliance and University of Maine’s Cooperative Extension
• Midcoast Maine Community Action’s Early Head Start Program
• Best Start Initiative

**Mission, Vision, and Goals of the Developmental Screening Community Initiative Teams**

The vision of the DSCI was to result in better health outcomes and school readiness, through early identification, for Maine children ages birth to three.

The mission of the DSCI was to provide support to a multi-disciplinary community team in testing and implementing best practices for coordination to improve developmental screening efforts at critical ages for children ages birth to three.

The overarching DSCI aim statement was between January-August 2015, the developmental screening process would be improved to ensure that 75% of children ages 0-3 are screened, without duplication, and if the screening indicates, are referred and then receive appropriate services. The goal of 75% was picked to help drive quality improvement efforts and was meant to be a “stretch goal” for participating groups. The goals included:

- 75 % of children will have a documented developmental screening using a validated tool (ASQ or PEDS) at 9, 18, and 24 or 30 months;
- 75 % of developmental screening results are shared with the child’s medical home and other community organizations upon parental consent;
- 75 % of children are referred to appropriate services as indicated by the developmental screening results; and
- 75 % of children referred to services are followed to determine if services are in place and if not, why not.

**Expectations of Developmental Screening Community Initiative Teams**

Maine Quality Counts for Kids, on behalf of the DSI: SAIEL Steering Committee solicited a call for proposals to all regions throughout Maine. In order to be a DSCI team, the following expectations were noted requirements of the initiative:

1. Support the mission, vision and goals of the DSCI, and commit to improving processes, procedures and practices to improve developmental screening efforts for children ages birth to three.
2. Ensure the involvement from the following disciplines (minimally): Early Head Start, Maine Families, Child Development Services, medical practice(s), Public/Community Health Nursing, and an identified parent or family partner or an established parent advisory group that would be willing to provide input, guidance and feedback on the project.
3. Develop a community work plan, with the assistance of the DSI Project Manager, focused on strategies to achieve enhanced cross sector coordination, including a timeline of implementation check-in points to evaluate progress (testing).
4. Identify a local team leader to work with the DSI Project Manager to coordinate community meetings as well as be responsible to report on progress of work plan activities.
5. Identify a fiscal agent to receive and report on funding on behalf of the community team.
6. Commit to a minimum of two half-day meetings over six (6) months (focused on training needs), monthly one-hour meetings in person (to check in on progress, successes, challenges) and bi-weekly check-in calls with the DSI Project Manager and community team (to discuss needs of the community team).
7. Learn about quality improvement methodologies, including the use of Plan-Do-Study-Act (PDSA) cycles to test components of the work plan.
8. Monthly data tracking and collection within *QI Team Space* from the different community organizations that will be submitted to the DSI Project Manager.

9. Identifying, testing and implementing potentially new practices, processes and/or procedures related to developmental screening.

10. Participation in the evaluation of the initiative including sharing lessons learned, challenges and plans for sustainability; at least one member will share this information at the May 20, 2015 DSI Stakeholder meeting.

Each community team was asked to designate a fiscal agent, sign a Business Associate Amendment as well as a Memorandum of Agreement and a contract. For physicians who wanted to earn Maintenance of Certification (MOC) credit for their recertification from the American Board of Pediatrics, additional paperwork was necessary. Staff from Quality Counts helped each of the teams navigate through the paperwork requirements, planned and implemented all webinars as well as training and facilitated monthly community team meetings.

**Pre- and Post-DSCI Survey**

All team members were asked to complete a pre- and post-DSCI survey which included approximately 35 questions related to: 1) the developmental screening process, including family involvement; 2) practices around information sharing; 3) referral practices; and 4) response to referrals. Table 1 highlights the questions that were asked of each team member at the beginning of the initiative and then again at the end.

<table>
<thead>
<tr>
<th>Developmental Screening Process</th>
<th>Information Sharing</th>
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<tbody>
<tr>
<td>-Are staff clear on the difference between surveillance and screening?</td>
<td>-Does your organization share developmental screening results with the child's medical provider despite the results?</td>
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<tr>
<td>-Does your organization have a clear, documented workflow on the screening process (when screening is done, who does screening, how screening is done, steps once the screening is complete)?</td>
<td>-Does your organization share developmental screening results with the child's medical provider only if there are concerning results?</td>
</tr>
<tr>
<td>-Are staff aware of screening program requirements (i.e., when screening should be done, how screening should be done)?</td>
<td>-Does your organization share development screening results with other community-based organizations, upon parental consent, despite the results?</td>
</tr>
<tr>
<td>-Do staff receive training on how to conduct developmental screening?</td>
<td>-Does your organization share development screening results with other community-based organizations, upon parental consent, only if there are concerns?</td>
</tr>
<tr>
<td>-Is there a way to check the fidelity of the way in which staff conduct developmental screening?</td>
<td>-With whom do you share developmental screening results: a) Child Development Services; b) medical providers; c) Maine Families; d) Early Head Start/Head Start; e) Public/Community Health Nursing; f) Child Care providers; g) Developmental Pediatricians; h) Behavioral/mental health providers; and i) Other medical specialty providers (e.g., OT, PT, Speech)</td>
</tr>
<tr>
<td>-Are accommodations provided for families who may have difficulty with the developmental screening process (e.g., if English is a second language, if a parent's literacy is low)?</td>
<td>-Is obtaining parental consent to share information a barrier in the ability to do so?</td>
</tr>
<tr>
<td>-Are children developmentally screened even if they are receiving services for a developmental concern or delay?</td>
<td>-Are staff trained on parental consent and the process in sharing information?</td>
</tr>
<tr>
<td>-Who (roles in your organization) is involved in developmental screening?</td>
<td>-Does your organization accept developmental screenings conducted by others and therefore, do not repeat the screening?</td>
</tr>
</tbody>
</table>

6 An on-line database with a password protected link used by Maine Quality Counts to capture chart review information. Data collected is in aggregate and not associated with patient/children's names.
Does your organization provide information to families regarding the importance of developmental screening?

Surrogates can complete the questionnaire on a child if the parent/guardian is not present (e.g., grandparents, teachers, other caregivers).

Family members complete the developmental screening questionnaire ahead of time.

The developmental screening questionnaire is done like an interview between staff and the family member.

Probing questions are used if a family member does not fully understand the question.

Probing questions are used if a family member responds to all of the questions in the same manner (e.g., answers “yes” to all the questions).

Toys and materials are used during the screening in order to demonstrate a child’s development.

Are results reviewed with the family face-to-face immediately after the screening is conducted?

Is there a standard protocol/practice used by staff to explain results to families, especially if the screening renders concerns?

Are staff trained on how to involve families in the screening process, including how to explain results to families?

Do you feel a parent-completed tool provides an accurate view on a child’s development?

Referral Practices

Does your organization have a standard process in place when a referral is indicated (e.g., explaining the referral to a family, getting consent to make referral and share information, documenting that a referral was made)?

Does all relevant staff know how to follow the standard process to make a referral?

Do you have a tracking system in place to track all children with whom a referral has been made?

Do the following scenarios affect a successful referral 25% or more of the time: a) family chooses just to monitor or “wait and see” progress until next time; b) family does not follow through with the referral; c) family declines a referral being made; d) family follows through with the referral but is found ineligible for services; e) family declines services that the referral produces?

Response to Referrals

Does your organization have a standard process in place to follow-up on referrals to determine if services are in place or not?

Are there designated staff who follow-up on referrals?

Does your organization track whether or not services are in place?

Does your organization review data on the developmental screening process (e.g., number of children screened, number of referrals, follow-up, number of children in service)?
**Monthly DSCI Team Meetings**
Each month from January to August, DSCI teams met to review accomplishments and monthly data trends as well as participate in a quality improvement activity. Those activities included: Plan-Do-Study-Act cycles related to information sharing; an eco-mapping of community resources and relationships; ASQ on-line training; and creating outreach messages and materials for families to improve understanding on the importance of developmental milestones and screening. The monthly DSCI meetings allowed for networking to occur and a better understanding of resources available to families in communities, including a deeper understanding of eligibility requirements.

**Training Opportunities**
An initial three-hour training was conducted in each community in the first month of getting started with the initiative. The goals of the initial training were to: 1) review DSCI purpose, goals, expectations and benefits; developmental screening protocols and workflows pre-work; and metrics and data collection; 2) become familiar with ASQ-Enterprise online features; and 3) develop aims, goals and workflows. In May 2015, an additional training was held for all the teams to gather together with the goal of sharing lessons learned from one another as well as to brainstorm solutions to challenges. Other agenda items included: providing input to family outreach regarding the importance of developmental screening; creating workflows around outreach messaging to families before, during and after the screening process; and information related to ASQ on-line. The final training was hosted in October 2015. This was a formal project meeting, which brought the teams together once last time to discuss lessons learned, continued challenges, plans for sustainability and recommendations for the DSI Steering Committee. Family outreach materials were disseminated and final aggregate data was shared specific to the DSI metrics and the pre-post DSCI survey.

**Webinars**
Four webinars were hosted throughout the DSCI period-January, April and June. The webinars featured:

- **January 8, 2015**: introduction for team members to DSCI; quality improvement methodology: understanding the model for improvement; creating aim statements, effectively designing and using PDSA cycles; metrics for developmental screening and understanding baseline data for project; and an introduction to QI Team Space for data collection.

- **February 12, 2015**: linking the medical home, community organizations and early care and education through developmental screening with Cindy Brown, Child Development Services State Director of Early Childhood Special Education and Roy Fowler, State Early Intervention Technical Advisor along with reviewing QI methodology (effectively designing and using PDSA cycles) and a baseline data review.

- **April 9, 2015**: expanding the medical neighborhood with Maine Families Home Visiting (presented by Lee Sowles) and Early Head Start (presented by Elna Joseph from Midcoast Maine’s Community Action Head Start); reviewing QI methodology (flowcharting at the organization and expanding to community flowchart); and a data review of the DSI metrics.

- **June 11, 2015**: planned coordinated care in patient and family-centered medical home and information sharing within the medical neighborhood with Dr. Bob Holmberg and Sue Mackey Andrews as well as a QI methodology session on sustaining QI work and an updated data review.

**DSI Stakeholder Presentation**
In May 2015, DSCI teams sent a representative to the DSI Stakeholder meeting to inform stakeholders of their progress. Information gathered from the May combined DSCI team training was used during the stakeholders meeting. Each team shared a description of the demographics of their team, their team’s accomplishments to date, barriers and challenges as well as data gathered on the DSI metrics.
Maintenance of Certification (MOC) Credit with the American Board of Pediatrics

Physicians were offered the opportunity to earn MOC for this quality improvement effort from the American Board of Pediatrics based on previous work by Maine Quality Counts and IHOC: First STEPS Project that focused on improving developmental and autism screening in 2014 with MaineCare Services and DHHS. First STEPS was a comprehensive effort to provide outreach, education, and quality improvement support to primary care practices to improve the rates of preventive services. Maine Quality Counts supported primary care practices in engaging in changes/interventions that resulted in increased numbers of children with MaineCare health insurance receiving the required medical, developmental, and dental screenings. MOC was granted to physicians in medical practices involved in the DSCI work that completed the requirements and submitted attestation paperwork prior to December 15, 2015. Continuing Medical Education (CME) credit was also provided to participants engaged in the DSCI training opportunities and webinars through Maine Quality Counts.

Data Collection

Metrics specific to developmental screening, information sharing, referrals and follow-up were drafted by the DSI Steering Committee for the DSCI teams to test. After three months of testing the drafted metrics, feedback from the teams was the data collection effort was taking a great deal of time to gather each month. Members reported that while they had the data variables available, the collection piece took a great deal of effort because some of the variables could be located in an electronic system whereas others had to be collected by hand in a paper system. So, in April the data variables were simplified. The overall metrics remained unchanged, however. The overall metrics included: 1) number of children screened for general development through the use of the Peds or ASQ-3 by ages 1, 2, and 3; 2) number of children whose developmental screening results were shared with their medical home; 3) number of children whose developmental screening results were shared with another service provider; 4) number of children with a developmental screening that indicated a referral; 5) number of children referred who are receiving services; and 5) number of children referred who are NOT receiving services. See table 2 for the original data variables team members were asked to collect to inform the overall metrics.

Table 2: Original Data Variables for DSCI Teams to Collect

| 1.1a) Number of children screened using the ASQ-3 or Peds on or by their 1st birthday |
| 1.1b) Number screening results received by your practice/organization for children on or by their 1st birthday |
| 1.1c) Number of children served by your practice (for well-child check) or organization on or by their 1st birthday |
| 1.1d) Number of children screened using the ASQ-3 or Peds on or by their 2nd birthday |
| 1.1e) Number screening results received by your practice/organization for children on or by their 2nd birthday |
| 1.1f) Number of children served by your practice (for well-child check) or organization on or by their 2nd birthday |
| 1.1g) Number of children screened using the ASQ-3 or Peds on or by their 3rd birthday |
| 1.1h) Number screening results received by your practice/organization for children on or by their 3rd birthday |
| 1.1i) Number of children served by your practice (for well-child check) or organization on or by their 3rd birthday |
| 2.1a) Number of children whose results were shared with their medical home |
| 2.2a) Number of children whose developmental screening results were shared with Child Development Services |
| 2.2b) Number of children whose developmental screening results were shared with other community-based service providers (e.g., Maine Families, Early Head Start/Head Start, Public Health Nursing) |
| 3.1a) Number of children whose screening indicated a need for a referral |
| 3.1b) Number of children who were referred to Child Development Services |
| 3.1c) Number of children who were referred to a community-based service (e.g., Maine Families, Early Head |

In April 2015, the ages were expanded to include data variables of children screened under eight months of age due to the developmental screening efforts of many of the community partners who indicated a great of screening was done early on for children.
3.1d) Number of children who were referred to a medical specialty service (e.g., developmental pediatrician, speech pathologist, OT/PT, audiologist, mental health, etc.)

3.1c) Number of children in which a referral was indicated and the child is currently receiving services

4.1a) Number of children who were referred that are now receiving services

4.1b) Number of children receiving services from Child Development Services

4.1c) Number of children receiving services from a community-based service (e.g., Maine Families, Early Head Start/Head Start, Public Health Nursing, etc.)

4.1d) Number of children receiving services from a medical specialty service (e.g., developmental pediatrician, speech pathologist, OT/PT, audiologist, mental health, etc.)

4.2a) Number of children who were referred and are NOT receiving services because further evaluation found the child ineligible

4.2b) Number of children who were referred and are NOT receiving services because the family declined services

4.2c) Number of children who qualified for services but the services were currently not available

In April, the data variables were simplified to what is depicted in Table 3.

**Table 3: Simplified Data Variables from April-August 2015**

| 1a | Number of children screened using the ASQ-3 or PEDS by eight months of age |
| 1b | Number of children screened using the ASQ-3 or PEDS on or by their 1st birthday |
| 1c | Number of children screened using the ASQ-3 or PEDS on or by their 2nd birthday |
| 1d | Number of children screened using the ASQ-3 or PEDS on or by their 3rd birthday |
| 2a | Number of children whose results were shared with their medical home. |
| 2b | Number of children whose developmental screening results were shared with Child Development Services |
| 2c | Number of children whose developmental screening results were shared with other community-based service providers (e.g., Maine Families, Early Head Start/Head Start, Public Health Nursing) |
| 3a | Number of children your organization referred |
| 3b | Number of children in which your organization received a referral |
| 4a | Number of children who were referred that are now receiving services |
| 4b | Number of children who were referred and are NOT receiving services due to ineligibility or family decline. |

Monthly data collection results were shared in aggregate each month at DSCI team meetings in order for the teams to see trends in the metrics.

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Declined services=family did not follow through on referral; family chose to monitor progress; family decided not to take the service(s) offered
Results

Data from Metrics

Rates of Developmental Screening

The overall goal related to the rates of developmental screening was that 75% of children will have a developmental screening using a validated tool at 9, 18, and 24 or 30 months. In aggregate, compared to the sample size of children, approximately 35% of children were screened at least once during the critical ages. The average rate of screening for children by eight months of age was 9.5%; for children on or by their first birthday, the average rate was 37.5%; for children on or by their second birthday, the average rate was 38.7%; and for children on or by their third birthday, the average rate was 17.2%. While rates of developmental screening did not meet the intended goal of 75%, the DSCI rates were higher than the FY 2014 MaineCare developmental screening rates, which were 18.5% for one year old children; 25.6% for two year old children and 19% for three year old children. The highest number of screenings was conducted in the months of July and March, respectively. The Midcoast region had a developmental screening rate of 55%; the Waterville region had a rate of 31%; and the Bangor region had a rate of 19%.

Table 4. Developmental Screening Rates Charts

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9 Developmental screening rates of children less than eight months of age were not collected until mid-way through the project in April 2015.
Information Sharing Across Disciplines

The goal for information sharing across disciplines was 75% of developmental screening results are shared with the child’s medical home and other community organizations upon parental consent. By sharing information, the aim was to reduce duplicate screenings for children and to get children to referrals efficiently if necessary. Also, organizations were encouraged to share screening information, despite the results, whenever a screening was completed. The average rate of sharing information with the medical home in aggregate was 20.5% compared to a baseline rate in the beginning of the project at 1.2%. The rate of information sharing with the medical home in the Waterville region was 32.1%; 17.5% in the Bangor region; and 11.9% in the Midcoast region. Aggregate rates of information sharing with Child Development Services was 3.9% and aggregate rates of sharing information with other community-based organizations was 2%.

Table 5. Information Sharing Rate Chart

<table>
<thead>
<tr>
<th></th>
<th>Medical Home</th>
<th>CDS</th>
<th>Other Community Organizations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aggregate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Screenings</td>
<td>50</td>
<td>40</td>
<td>30</td>
</tr>
<tr>
<td>Shared</td>
<td>20</td>
<td>15</td>
<td>10</td>
</tr>
<tr>
<td>January</td>
<td>5</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>February</td>
<td>10</td>
<td>8</td>
<td>5</td>
</tr>
<tr>
<td>March</td>
<td>15</td>
<td>12</td>
<td>9</td>
</tr>
<tr>
<td>April</td>
<td>20</td>
<td>16</td>
<td>12</td>
</tr>
<tr>
<td>May</td>
<td>25</td>
<td>20</td>
<td>15</td>
</tr>
<tr>
<td>June</td>
<td>30</td>
<td>25</td>
<td>20</td>
</tr>
<tr>
<td>July</td>
<td>35</td>
<td>30</td>
<td>25</td>
</tr>
<tr>
<td>August</td>
<td>40</td>
<td>35</td>
<td>30</td>
</tr>
</tbody>
</table>

Referrals and Referrals to Service

The goal for referrals was that 75% of children would be referred to appropriate services as indicated by the developmental screening results. In total, approximately 505 children were referred for further evaluation; a rate of 42.1% of children screened required a referral for further evaluation. The month with the highest rate of referrals was August. The Bangor team had a referral rate of 41.5% and the Midcoast region had a referral rate of 30.5%. Rates of referrals to screenings in Waterville were skewed in that the rates of referrals that CDS received over the eight month time frame exceeded the rates of screening reported. The goal for referrals to service was that 75% of children referred to services are followed to determine if services are in place and if not, why not. The average rate of children receiving services after a referral is 70.8%. The average rate of children not receiving services due to ineligibility of family decline\(^\text{10}\) was 29.2%. Midcoast had the highest rate of children referred then getting into service at 81.3%; Waterville had a service rate of 53.2%; and Bangor had a rate of 46.4%.

\(^{10}\) The rate of ineligibility and family decline were combined. The rates of ineligible clients compared to family decline were not separated.
Table 6. Referrals and Service Charts

Pre-Post Survey Results
In total fifteen individuals completed the pre-survey from across the three DSCI sites. Thirteen individuals who completed the pre-survey then completed the post-survey. The changes seen from pre- to post-survey are based on these thirteen responses and are not necessarily generalizable to the entire DSCI project or future DSCI-like projects but rather should be viewed as opportunities for continuous quality improvement. The survey examined: 1) the developmental screening process; 2) family involvement in the developmental screening process; 3) information sharing; 4) referrals; and 5) follow-up.

The Developmental Screening Process
Positive change was noted from pre- to post-survey in the developmental screening process. Positive areas of change include:
- clarity on the difference between surveillance and screening;
- staff training on how to conduct developmental screening;
- and ways in which to check fidelity of screenings.

Table 7. Developmental Screening Process: Pre- to Post-Survey Results
Family Involvement in the Developmental Screening Process

There was little change from pre- to post-surveys in the area of family involvement in the developmental screening process. Practices that were changed from pre- to post-survey included:

- completing screenings in advance (decrease in practice from pre to post);
- completing screening like an interview (decrease in practice from pre to post);
- use of probing questions to increase understanding during the screening process (decrease from pre to post);
- and use of toys and materials to demonstrate developmental milestones (increase from pre to post).

Table 8. Family Involvement in the Developmental Screening Process

<table>
<thead>
<tr>
<th>Information Sharing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Practices that changed from pre to post:</td>
</tr>
<tr>
<td>- Child Development Services-decreased practice of sharing information from pre to post</td>
</tr>
<tr>
<td>- Medical Practices-increased practice of sharing information from pre to post</td>
</tr>
<tr>
<td>- Public Health/Community Health Nursing-increased practice sharing of information from pre to post</td>
</tr>
<tr>
<td>- Child Care-decreased practice of sharing information from pre to post</td>
</tr>
<tr>
<td>- Behavioral Health-decreased practice of sharing of information from pre to post</td>
</tr>
<tr>
<td>- Specialty Care-decreased practice of sharing information from pre to post</td>
</tr>
<tr>
<td>- Obtaining parental consent less of a problem from pre to post</td>
</tr>
<tr>
<td>- Increased staff training on the consent process from pre to post</td>
</tr>
</tbody>
</table>
Referral Practices
Referral practices basically remained unchanged from pre- to post-survey. Some slight changes were noted in the following practices:

- perception that families do not follow-up on referrals was decreased from pre to post;
- report that families decline referrals decreased from pre to post; and
- children ineligible for services decreased from pre to post.
Table 11. Referral Practices

<table>
<thead>
<tr>
<th>Referral Practices</th>
<th>Pre</th>
<th>Post</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard Referral Process</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Staff Knowledge of Referral</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Referral Tracking</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family, &quot;Wait and See&quot;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family, Does Not Follow-Up</td>
<td></td>
<td></td>
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<tr>
<td>Family, Decline Referral</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Declines Service of Referral</td>
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<td></td>
</tr>
</tbody>
</table>

Follow-Up Practices

A positive area of change in the follow-up questions was reports of organizations reviewing data on the developmental screening process more from pre- to post-survey. However, there was a decrease in tracking children receiving developmental screening from pre to post.

Table 12. Follow-Up Practices

<table>
<thead>
<tr>
<th>Follow-Up Practices</th>
<th>Pre</th>
<th>Post</th>
</tr>
</thead>
<tbody>
<tr>
<td>Follow-Up Process</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Designated Follow-Up Staff</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tracking of Children in Service</td>
<td></td>
<td></td>
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<tr>
<td>Review of DS Data</td>
<td></td>
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</tr>
</tbody>
</table>

Accomplishments

At the end of the DSCI project, members were asked to reflect on team accomplishments over the course of the DSCI project from January to August 2015. Noted themes of accomplishments reported included:

- sharing of ASQ screening results more; an increase in overall screenings at the critical ages;
- less duplication; improved communication across disciplines;
• improved developmental screening, information sharing and referral workflows in all settings;
• development of scripts for families to normalize developmental screening and to make reporting results less threatening; improved connection to child health care providers;
• quick and more responsive services for young children;
• timely sharing of results; increased staff training around developmental screening;
• incorporating the parent perspective in the DSCI work;
• closing feedback loops with Child Development Services;
• development of family outreach materials on the importance of developmental milestones and screening11; and
• more awareness of resources available to families, including expectations related to eligibility requirements.

All teams noted that developing relationships through monthly meetings really helped to improve coordination and communication.

**Challenges**
The teams also noted challenges along the way. Themes around challenges were:
• having a limited timeframe to truly implement all the changes necessary to really make a difference in practices around developmental screening;
• shifts in team members (lost some team members along the way);
• difficulty in scheduling meetings with busy individuals who really needed to be at the team meetings;
• some communities admittedly did not have a strong family voice to help inform the work;
• data collection was time-consuming and required more hand-counting of data than originally expected;
• best use of ASQ on-line and getting ASQ on-line up and running;
• incorporating developmental screening in established workflows so that it is a routine practice;
• family understanding of the importance of early identification and intervention;
• getting staff buy-in;
• improving understanding of the full range of services available to young children and their families;
• and technology (i.e., ASQ on-line implementation, incorporating results into EMR, databases that capture developmental screening data without the need for hand-counting).

**Plans for Sustainability**
Team members were asked to reflect on DSCI activities they felt they could sustain in the future. Reflections were reported on: 1) those activities important and easy to sustain and then 2) those activities that are important but harder to sustain. Activities which were reported to be easier to sustain included:
• maintaining flow of data between group members (e.g., e-mail; sharing printed materials; quarterly meetings);
• using health services advisory meeting through Early Head Start as a conduit to continue conversations;
• continuing to fax screening results to providers;

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11 Magnets and brochures were adapted from materials provided by, “Learn the Signs. Act Early” website (http://www.cdc.gov/ncbddd/actearly/pdf/parents_pdfs/trackchilddevmilestoneseng.pdf) and can be downloaded off the DSI website at: https://www.mainequalitycounts.org/image_upload/Dev.%20Milestones%20Magnet%20Template.pdf (developmental milestones magnet) and at: https://www.mainequalitycounts.org/image_upload/Tracking%20Milestones%20Brochure.pdf (developmental milestones brochure)
• promoting higher engagement of families about ASQ and more family outreach in general on the importance of developmental milestones; and
• child health care provider engagement.

The activities that are important but harder to sustain are:
• financial pieces (i.e., printing of outreach materials; maintaining ASQ online)
• long-term data submission and analysis;
• keeping a consistent group going;
• community education, including patients and providers
• continuous improvement of communication systems as there is still a need to bolster communication to improve coordination;
• keeping the momentum going; and
• working on consent to make the process more aligned for families.

**Recommendations to the DSI Steering Committee**

DSCI team members were asked to reflect on recommendations for the DSI Steering Committee moving forward with developmental system integration. Recommendations from the teams included periodic follow-up meetings/exchanges with community teams (e.g., email check-ins with DSI Program Manager); developing communication links between local communities and DSI Steering Committee to inform teams of latest work and to get input on practices; help with messaging to families regarding the importance of developmental milestones and screening; looking at ASQ on-line implementation as a statewide initiative in order to sustain and build on the ASQ effort; use of generated data to educate partners and stakeholders involved in developmental systems integration; universal process and consent to release information form; creation of a “passport” of services system; systematic developmental screening training when on-boarding staff; and assistance with promoting clarity on early intervention process and eligibility. DSCI teams also voted on priorities for next steps which were (in priority order): 1) universal consent process and form; 2) improving feedback loops or responses to referrals; and 3) improving information sharing efforts.
Moving Forward

**Lessons Learned**

The greatest lesson to be learned from the DSCI work was that while a lot was accomplished in eight months, it also felt like the work was just getting started. Realistically, the testing phase of the DSCI could have been extended into a year or eighteen months. An important lesson to be learned was not to underestimate the importance of building relationships within a team. During the eight month period building trusting relationships across disciplines in order to increase understanding of eligibility and program requirements and to build a system of coordination improvement was a noted accomplishment. Building a strong team meant having: 1) a local team leader/champion who could schedule meetings and promote attendance, communicate with team members in between meetings and assist with getting teams members involved in training opportunities; 2) an outside facilitator to assist with agenda planning and follow-up as well as data collection; 3) data collection efforts to reflect on progress and/or regression; 4) regularly scheduled meetings with the opportunity for team members to check-in on program changes and to share realities of being able to test changes in their organization; and 5) a community eco-map to examine partnerships within a community critical to the DSCI work and assessing the strengths of those relationships to better understand where relationships need to be fostered in order to bolster coordination and communication.

Another important lesson is to start with small tests of change by fostering quality improvement techniques such as Plan-Do-Study-Act (PDSA) cycles. Beginning with one locale or organization that is willing to be a champion of change and then having them report their results of the PDSA helps others to test change within their own organizations. Taking the time to talk about these small tests within the community teams and documenting lessons learned is an important practice of implementing a change of practice. Spending more time on developing, testing and evaluating workflows is another quality improvement activity to help test change.

Recognizing that being flexible during tests of change is acceptable is imperative. Examining the mission, goals, and aims along the way and readjusting based on the realities of the team should be built into the initiative. Data collection is going to be necessary to see if the mission, aims and goals are realistic and need adjustment along the way. Transparency about data collection (e.g., how often it will be collected, who will be collecting it and analyzing it, and method for collecting data) needs to be discussed in the beginning of the initiative. Looking at data trends at each meeting helps in making the necessary adjustments and assesses movement toward goals and aims. Making mid-course adjustments is appropriate if the work is to improve quality. Using data as a guide can help to rationalize why changes are necessary.

Technological changes take time to implement. While the goal of the DSCI was to use ASQ on-line as a tool to promote change and improvement in developmental screening rates and information sharing, this was never able to be fully tested during the time period due to unexpected challenges. These challenges included: building understanding within IT departments at the organizations willing to be the lead agency; staff training in use of ASQ on-line as the product was not as intuitive as originally anticipated; building a better understanding of how to incorporate information sharing within the ASQ on-line system; connections to current electronic medical/health records and other data systems; and ensuring access for families to complete the screening on-line through use of tablets (e.g., not all organizations had tablets for families to complete on-line questionnaires). While teams learned that information sharing was possible through ASQ on-line, establishing permissions needed to be addressed and could not happen without trusting relationships. Beginning with the goal of being able to share developmental screening information was too lofty for the community teams. Starting with a small test of change, like using the ASQ on-line system with a few families at one organization, would have been a better goal to work toward. Building a separate work plan and workflow around the implementation of a technological change, like ASQ on-line, requires time and attention. Community teams expressed the cost of sustaining ASQ on-line subscription fees would be hard to
sustain over time and wondered if an ASQ Statewide Monitoring System may be a better, more affordable and sustainable option for the future if ASQ on-line were to be promoted.

Having the family perspective is important to the DSCI work. Being strategic about family engagement needs careful consideration. Bringing on family partners when there is a role for them to be actively involved is a productive use of their time (e.g., creation of family messaging and outreach materials) and ensuring that someone from the group provides family partners with background information about the DSCI team’s work helps them to feel informed and engaged. Someone from the group should also take responsibility for checking in with family partners in between meetings to assure that questions and/or concerns are addressed. If getting family voice at the table is difficult then a mechanism for sharing information with established family groups needs to be carefully planned and implemented with a feedback loop to the community team. The Bangor DSCI team recruited a family to their group through the Bangor Community Health Nursing partner when it was time to provide feedback on information sharing and developmental screening outreach materials. In between meetings, the local leader made sure that the family was compensated for their time, answered any outstanding questions as a result of the meeting and made sure they had what they needed to attend future meetings. Communication and trusting relationships helped with family engagement and participation. The family voice was especially important as the group brainstormed about sharing developmental screening information between disciplines, the value to families of using ASQ on-line and what family outreach materials and messages would resonate with families regarding the importance of developmental screening.

Lastly, another important lesson to be learned is meaningful planning around staff understanding of the importance of developmental screening and sharing information as well as staff training on messaging to families. Testing and institutionalizing change with staff needs careful planning, testing, implementation and reflection. Assessing what staff may need in terms of training and support to implement change, requires attention while experimenting with tests of change.

**Replication**
As other communities consider a DSCI, the following steps should be considered based on lessons learned from the original DSCI teams:

1) Designate a leader who acts as the convener of the group and can provide information as well as follow-up in between meetings. The leader can enlist support from others to bring stakeholders to the table. Personal invites explaining the initiative is helpful to bringing stakeholders to the table for the initial meeting.
2) Consider having a facilitator help with agenda development, follow up and documenting decisions. The community leader will more than likely want to participate in the DSCI team meetings, so having a separate facilitator is important to the process.
3) Establish a DSCI work plan that considers the overarching goal of the project and then strategies to reach the goal with realistic timelines. Once a work plan has been developed, building in metrics or using established metrics should be a part of the plan to evaluate success.
4) Begin with strategies that lend themselves to a small or quick “win”. For example, beginning with family outreach messaging and materials are tangible and allow all disciplines a chance to test change.
5) Initial meetings should include opportunities to better understand the strength of the relationships necessary for coordination and communication of DSCI strategies. Beginning with a community eco-map allows for a visual representation of the strength of relationship and clearly shows areas where relationships can be fostered.
6) Allow time at each meeting for members to check-in with one another on any program or community changes that may affect the strategies within the DSCI work plan. Time for team members to better understand program and eligibility requirements should be built into agendas as well.
7) Build in small tests of change using quality improvement methodologies throughout the project and review these tests to document lessons learned. Quality improvement methodology training may be necessary if partners are not familiar with ways in which to test quality improvement.

8) Collect and review data often throughout the initiative to examine trends and the need for mid-course program adjustments. This includes any data or lessons learned from small tests of change using PDSA cycles.

9) If strategies include additional technological requirements, develop a separate work plan around implementing technology into the DSCI.

10) Celebrate and document successes along the way. Systems change is hard and significant work.

**Next Steps in Developmental Systems Integration**

The DSI: SAIEL Steering Committee is committed to using the lessons learned from the DSCI teams to plan for systems of change that incorporate plans for improvement in developmental systems integration. Importantly, the DSI: SAIEL Steering Committee is committed to meeting monthly to work on expanding developmental screening efforts, engaging partners to increase linkages and referrals, utilizing and promoting cross-disciplinary information sharing and referrals and enhancing systems (policy, data, funding) and workflow processes. Specific strategies include: creating a universal process and form for sharing information; exploring a Help Me Grow model of improving linkages and coordination for families with children ages birth to eight; examining statewide data on developmental screening rates, information sharing, referrals and services to determine areas of improvement and areas that need more focused attention; improving family outreach and messaging around the importance of developmental milestones and screening; supporting DSCI replication; and developing a feedback mechanism for articulating progress out to those working within the disciplines that the DSI: SAIEL Steering Committee represents.