EHDI team: Our team remains stable, with a few changes:

- Kristen Becker has accepted a new position as the Metrics Analyst for the Performance Management Program within the Division of Public Health. We are very happy for her, but selfishly sorry to lose her! Going forward, our evaluation needs will be met by the MCH Assessment, Evaluation and Informatics team staff.
- Shelby Atwill, AuD, our new part time audiologist, started with us on July 1st. She is a graduate of Portland State University and the University of Washington doctorate in audiology program. Shelby has an undergraduate minor in public health, and brings both technical and clinical expertise, as well as the public health grounding needed for a population based program. We are excited to have her join our team!

Program funding details: EHDI is funded through grants from the CDC ($162,365) and HRSA ($279,000), with some in-kind staff time through the Title V MCH Block Grant. In general, the CDC grant is focused on the development, maintenance and enhancement of EHDI information systems and surveillance programs. The HRSA grant is focused on reducing loss to follow-up at the 1-3-6 milestones.

Our CDC progress report for July 2012-January 2013 was due on April 1st, along with the continuation application for our proposed work in budget year 3: July 2013-June 2014. We received notification on June 28th that we will continue to receive full funding from CDC again this coming year.

The HRSA progress report for September 2012-August 2013 was due on June 21st. All progress reports and any continuation application documents are available upon request.

CDC Site Visit: We were recently notified that we will receive a site visit from the CDC EHDI Program Lead, our Project Officer and their Evaluation Fellow on July 29-30th. It has been a number of years since our last site visit, and given the federal budget climate and restrictions on travel, we feel lucky to have the opportunity to host our leadership from CDC. The site visit will include a review of our program, work plan, cooperative agreement, overviews of our information system, evaluation plan, a review of our participation in the CDA Pilot Project, a discussion of partnerships and collaborations, as well as our successes and challenges.

CDC and HRSA Grant Objectives: The attached spreadsheet provides an integrated list of the proposed objectives for both the CDC and HRSA grants. The status column is updated to reflect the current state of each objective. Objectives have been modified in both the CDC and HRSA continuation applications to conform to federal requirements and/or to reflect the current status of the work and our expectation for completion. Most noticeably, with the 2013-2014 CDC continuation application, we were required to reframe our objectives more concretely with the intent of the funding opportunity announcement and focus of the CDC grant on the EHDI Information System (objectives in blue).

Advisory Committee membership: The 2012-2014 EHDI Advisory Committee term began at the June 2012 meeting. At that time, Pam Fortier was elected Chair, and Anne Heassler as Vice-Chair for the current term.

As we shared last time, Dolores Orfanakis stepped down from her long-standing seat on the Advisory Committee. We are planning to host a small celebration for Dolores in September or October. Please contact Ben Spencer if you would like to participate in this celebration of Dolores' contributions to EHDI.

EHDI Information System Updates: No major system enhancements were made this quarter, however EHDI-IS had a successful conversion from FileMaker version 11 to 12. FileMaker 12 offers great new features and functionality that EHDI will be utilizing to enhance our data collection process.

EHDI Newsletter: Julie is working on the next edition of the EHDI Newsletter, expected to be released in early August. Thanks to all who have offered story ideas and/or content. We are always looking for ideas for upcoming issues - please send your ideas to: julie.a.hass@state.or.us.

Partner Training and Professional Development:

Hospital Screening Partners: In the past three years, 79% of our screening hospitals have been represented at either an in-person or webinar training. Among our screening hospitals, there are 8 which have not participated in training in the past 3 years. These hospitals, concentrated in the Central and Coastal parts of the state, are slated to receive site visits over the remainder of 2013.

Audiologists: Oregon EHDI has been partnering with the Oregon Academy of Audiology (OAA) to support the inclusion of pediatric content at annual OAA conferences, and to make Oregon EHDI information and materials available to attendees. To that end, we co-sponsored Dr. Anne Marie Tharpe from Vanderbilt University to speak about mild and unilateral hearing loss in children at the April 2013 OAA conference.

Pediatricians and other medical providers: Before retiring from the Committee, Dolores encouraged us to piggyback on Dr Tharpe's trip to Oregon by inviting her to speak at a pediatric grand rounds at Oregon Health & Sciences University. With the support of our OHSU Advisory Committee members, Dr Tharpe spoke to residents and other hospital personnel on Friday, April 26.

Public Health Nurses and other Screening and Follow-up Partners: Unfortunately, we had to reschedule our June 27th Audiology 101 webinar to September 10th. This webinar will offer public health nurses, midwives, and other screening partners a foundation of audiology information to support their screening and follow-up activities with families.

A panel of EHDI staff, partners, and Advisory Committee members will be presenting on the continuum of the EHDI system at the Midwifes Alliance North America (MANA) conference this October in Portland. This conference draws upwards of 350-400 midwives from across the country and is expected to have a

strong attendance by Oregon midwives. Special thanks to Caroline Peterson for encouraging us to submit an abstract for participation.

Partner Performance Reports:

Hospital Screening: We have been providing quality assurance reports for hospital newborn hearing screening program staff through a secure online web portal since October 2010. These reports are available on-demand, and the user may select the date range of interest. Available reports include both aggregated summary data for each hospital's birth, with summary indicators for diagnostic evaluation and EI enrollment, when data is available, as well as a child-by-child line report of each case with respective hearing screening outcomes. The intent is that hospital hearing screening staff will use the reports to monitor their status on a weekly basis, as well as use the indicators to identify areas for improvement to meet the national goals for screening, screening by 1 month of age, and maintaining a low refer rate.

Oregon EHDI also provides each hospital with a corresponding semi-annual report card that presents the hospital's performance on selected indicators as compared to the state and nation. We sent the latest round of report cards on Friday July 5th. Some exceptional hospital performance in 2012:

- 100% of Infants Screened, 2012: Legacy Good Samaritan, Legacy Mount Hood, Mountain View Hospital, Providence Hood River, Providence Newberg, and Providence Seaside

- 100% Screened by 1 Month, 2012: Harney District, Mid-Columbia Medical, Samaritan North Lincoln, and Tillamook County General

- 98%+ of Screenings Reported within 10 Days, 2012: Good Samaritan Regional, Good Shepherd, St Alphonsus-Ontario, Asante Three Rivers and Willamette Valley Medical Center

- Documented Follow-up for Refers Exceeds State Rate, 2012: Salem Hospital (100%), Sky Lakes (100%), OHSU, St Anthony, Providence Portland, Providence Milwaukie, Providence Seaside, Legacy Good Samaritan, Legacy Emanuel, Kaiser Sunnyside and Grande Ronde

Audiologists: No update to report. We are creating a comparable quality assurance report for diagnostic audiology centers. Like the hospital reports, these will include both summary and individual data that reflect the efforts of audiologists to perform follow-up for children who referred on newborn screening. In addition, these reports will provide audiologists with information about their contribution to the overall number of referred infants in their region or catchment area needing diagnostic follow-up services. A draft audiology report card has been shared with a small group of stakeholders for feedback.

Loaner equipment update: Over the years, Oregon EHDI has been able to purchase limited pieces of equipment for placement in areas/populations with low screening rates and/or high loss to follow-up. In June 2013, we were able to purchase an additional 2 OAEs and 2 AABRs for placement. We are currently evaluating where to place those pieces of equipment. Currently, Oregon EHDI has loaner equipment placed and/or an agreement for service with the following partner agencies:

Table 1: Count of Results reported by Equipment Hosts and Non-Traditional Screening Partners

Screening Partner	**Type of Equipment**	**Primary audiology service provided**	**Total # procedures reported, 2012**	**Total # procedures reported, Jan-March 2013**	**Total # procedures reported, April-June 2013**
Alma Midwifery	OAE	screening	N/A	40	32
Growing Family Birth Center	OAE	screening	34	14	9
Lake County Public Health*	OAE	screening	23	9	8
South Coast ESD*	OAE	diagnostic	19	11	7
Washington County Public Health	OAE	screening	33	9	10
Bayside Audiology	AABR	diagnostic	9	5	1
Willamette ESD	AABR	diagnostic	254	50	56
Central Oregon ENT	ABR	diagnostic	75	16	20
Portland State University	OAE and Tympanometer	screening	105	N/A	N/A
Motherwise Birth Center^	OAE	screening	N/A	6	3
TOTAL # PROCEDURES			552	160	146

*Lake County Public Health and South Coast ESD do not currently host screening equipment, but partner with EHDI to assure screening for infants in their catchment areas.

^We are recalling our equipment from Motherwise, as they have gone out of business. We are discussing alternative midwifery placements in Bend to relocate that OAE.

Audiology Data Audits: No update to report. We continue to work to reduce our high loss to follow-up rate by inviting selected audiology providers to participate in data audits. Regional and facility-specific lists are generated of children who referred on newborn hearing screening but for whom we have no diagnostic evaluation results. We request that providers review lists of children from their facility or region who meet these criteria and identify if they have seen any of the children but neglected to report results. Among these selected audiology audit snapshots, we have seen between 15-54% underreporting.

Early Intervention Pilot: The EHDI direct audiologist to EI referral and reporting pilot process is going well. This process allows audiologists to refer children diagnosed with hearing loss directly to the appropriate EI Program through our data system at the time of reporting. Our system documents the referral details, and an automated report monitors the receipt of the referral. With three simple steps, EI Program staff can enable data sharing of eligibility and enrollment outcomes from ecWeb: 1) enter EHDI as referral source in ecWeb, 2) obtain and record parent consent in ecWeb, and 3) enter child ID in EHDI-IS. We currently have 4 active pilot sites, and are currently scheduling training for Clackamas EI. At last analysis, the automated referral process accounts for 41% of referrals being sent, and significantly reduces the burden on Julie to send, track, and follow-up on nonresponsive EI programs.

Early Intervention Data: No update to report. We have requested that all EI Providers indicate EHDI as a referral source and obtain and indicate consent to share data for all referred children and those who are being considered for hearing impairment eligibility, regardless of referral source, in ecWeb. These simple steps enable data sharing and reduce the burdensome process of reporting outcomes by phone or fax. As shown in Table 2 below, for referrals sent in 2011-2012, EHDI received eligibility and enrollment data through ecWeb for 64% of referred infants. EHDI received eligibility and enrollment status for another 29% of infants referred in 2011-2012 by fax or phone notification. This is a significant improvement over our 2010 birth data, when we received eligibility and enrollment outcomes by phone or fax for 74% of all referred infants.

These statistics reinforce several ongoing pieces of work with our EI partners: 1) to support EI providers in routinely obtaining consent and indicating EHDI as a referral source in their data system; 2) to support the remaining EI programs not currently participating in the direct audiologist to EI referral process in joining, and 3) to work with audiologists and EI providers to assure reporting on all children being evaluated for hearing impairment, whether initially referred through EHDI or not.

Table 2: Status of EI Reporting for EHDI Referrals Sent in 2011-2012, All Service Areas

	# (% of total) referred by EHDI with eligibility and enrollment data received through ecWeb	# (% of total) referred by EHDI with eligibility and enrollment data received via fax/phone	# (% of total) referred by EHDI, no information received back	Total # referrals
Totals:	201 (64%)	90 (29%)	23 (7%)	314

*Analysis is available by Service Area upon request.

OTHER PROJECTS:

EHDI Interoperability using Clinical Document Architecture (CDA) Standard: Oregon EHDI successfully completed our participation in the Clinical Document Architecture (CDA) pilot project with the CDC to demonstrate electronic data exchange between clinical Electronic Health Record (EHR) Systems and public health EHDI information systems using Health Level Seven (HL7) standards. Our team demonstrated the feasibility of receiving a well-formed, valid CDA Newborn Hearing Screening Outcome Report and parsing the data into our EHDI-IS. The other pilot state, North Dakota, demonstrated sending a newborn's demographic and hearing screening results to the ND EHDI-IS where an Early Hearing Care Plan CDA document was created and sent to a nurse provider who was then able to access and read the report.

The Oregon EHDI team overcame multiple challenges to successfully complete our portion of the pilot project and was instrumental in identifying key elements for a readiness assessment for other states to use in determining capacity and resources to participate in projects like this in the future.

Special thanks to Denise Kossover-Wechter and Heather Durham for encouraging their IT staff to participate as observers in this pilot! And, a special commendation to the MCH Informatics team and Meuy Swafford for finding a way forward with our designated task given all the obstacles.

National Initiative for Children's Healthcare Quality (NICHQ) Learning Collaborative: Oregon is one of 17 states and territories participating in the current cohort of the Improving Hearing Screening and Intervention Systems (IHSIS) learning collaborative from July 2012- September 2013. The learning collaborative entails monthly conference calls, and periodic in-person sessions that enable us to work with NICHQ team and other state EHDI programs to test, share and implement ideas to improve the quality and timeliness of screening, diagnostic evaluation, and entry into early intervention services. The project uses learning collaboration and quality improvement approaches.

Our team's current PDSA's include:

- Revised diagnostic letters that include simple instructions, recommendation and the 1-2 nearest audiology facilities and/or the audiology facility affiliated with the birth hospital;

- Inclusion of hearing screening results on letters to families;
- Checklist of next steps for families delivered at diagnostic evaluation;
- Audit lists to audiologists;
- Use of performance reports with key indicators for hospitals and audiologists;

CDC Sentinel Surveillance Project: Oregon continues to participate in the (unfunded) CDC Sentinel Surveillance Project. This project seeks to support continuous data quality improvement, and assure more timely assessment of loss to follow-up and loss to documentation among a representative group of states. Participating states were asked to provide a limited subset of the annual CDC data reporting elements for several quarters. An update is requested for each quarter to examine outcomes for children over time.

NECAP: Oregon Hands & Voices is partnering with Early Intervention staff across the state to collect standardized language assessments from parents of children diagnosed with hearing loss. Guides and EI providers are delivering assessments to families in the Metro, Southern Oregon, Salem, Eugene, and Central Oregon regions. To date, 88 families have been invited to participate, and 7 families have completed the assessments for scoring by the research staff in Colorado. Once the assessments are scored, the data will be entered into our EHDI-IS for use by Early Intervention providers. We are planning to explore why the response to this opportunity has been so limited, in hopes to engage more families as the project continues.

EHDI Parent Survey: We are thrilled to have a PSU public health undergraduate student intern, Sharon Coryell, working with us on the EHDI Parent Survey. The last parent survey was sent in late 2009/early 2010. We have built on the successes of that survey, learned from the experience of large surveys in our office such as PRAMS, refined the questions, and are nearly ready to send the survey out. It will be sent to parents of children born in 2011-2012, and identified with hearing loss. For approximately 1/3 of our survey sample, we have email addresses. As such, the first administration will be by email if available, and via regular post if no email address is available. A pre-letter will be sent in advance of the survey to notify families of its arrival. Families who complete the survey will have the opportunity to win a $150 gift card to Fred Meyer, and we are hopeful that the survey response will be high as a result. Sharon will continue to take the lead role in completing the survey administration and analyzing results. We hope to have findings to share at our next EHDI Advisory Committee meeting in October.