EHDI team: No changes to report.

Anna-Marie Wood, a second-year doctor of audiology (AuD) student at Pacific University, completed a 5-week rotation with us this past June. She helped us update our brochures, website content, and helped enhance and proof our hospital score cards.

EHDI Performance Measures (analysis updated 7/2014):

Oregon EHDI Performance Measures	2011	2012	2013, preliminary	2014, preliminary Jan-Mar	Healthy People 2020 Goal
Ever screened (all births)	96.6%	96.3%	96.8%	96.9%	--
Mandated screening hospitals (93.5% of Oregon births)	99.4%	99.0%	99.3%	99.2%	--
Non-mandated hospitals (2.8% of Oregon births)	86.6%	88.9%	89.8%	92.7%	--
Home births (2.4% of Oregon births)	26.3%	29.7%	31.8%	31.7%	--
Birth center (1.3% of Oregon births)	44.2%	45.4%	47.7%	55.8%	--
Screened by 1 month of age (all births)	93.6%	93.6%	93.9%	93.8%	90.2%
Referred infants with documented diagnostic follow-up	53.9%	44.4%	41.0%^	51.0%^	--
Referred infants with documented diagnostic follow-up by 3 months of age	40.0%	33.3%	31.0%^	49.0%^	72.6%
Ever enrolled in Early Intervention	71.1%	68.3%	64.4%^	--	--
Enrolled in Early Intervention by 6 months of age	50.6%	40.2%	41.1%^	--	55%

^Diagnosis and Early Intervention measures will improve with time, as infants born in the latter part of 2013 have not had as much time to access diagnostic evaluation and Early Intervention services.

Program funding details: EHDI is funded through grants from the CDC and HRSA, with limited in-kind evaluation and management staff time through the Title V MCH Block Grant. The CDC grant is focused on the development, maintenance and enhancement of the EHDI information system and surveillance programs, with a keen focus on using evaluation for program improvement. The HRSA grant is focused on reducing loss to follow-up at the 1-3-6 milestones.

We submitted our continuation application for a new three-year funding cycle to HRSA in March. We are still awaiting the Notice of Award. Changes to this new HRSA grant include: a lower funding ceiling ($250,000/year for 3 years), an expectation of a 5% improvement in loss to follow-up at diagnostic evaluation each year of the grant, and an expectation that states use the knowledge and quality improvement approaches learned during the NICHQ Learning Collaborative to improve our loss to follow-up (LFU).

We submitted our interim progress report for BY3 and our proposed budget and work plan for BY4 to the CDC in April. We received our Notice of Award on 6/27/2014. We remain flat funded for another year. A request for additional funding to offset the HRSA reduction was denied.

As a result of the reduction in the HRSA budget, high cost allocation and our growing program expenses, the EHDI program is projected to have a budget shortfall this coming fiscal year. The EHDI Coordinator will be meeting with the MCH fiscal analyst and leadership to discuss budget solutions in August.

All progress reports and any continuation application documents are available upon request.

Advisory Committee membership: July is the beginning of the 2014-2016 Committee membership! We will elect the Chair and Vice-Chair for the 2014-2016 term at the October meeting. Please refer to the Bylaws for details about the leadership positions and election.

EHDI Information System Updates: A number of updates are underway in EHDI-IS, including:

- Receiving the IFSP date from ecWeb (for use as the enrollment date)
- Updating screening and audiologist tables for automated referrals
- Adding fields for tracking LFU phone calls
- Creating reports for monitoring LFU phone calls
- Creating a new automated Request for Information fax template
- Updating the Nurse Referral process to automatically trigger at the time of an EI Referral

Meuy has been busy creating additional quality assurance reports for our team to help us monitor the quality of our data and perform our work more efficiently. There are a number of reports available for use in the EHDI-IS by both program staff and partners. For additional information or to suggest a QA report, contact Meuy at meuy.f.swafford@state.or.us.

EHDI Newsletter: Archived issues of the EHDI Newsletter are available on our website at http://healthoregon.org/ehdi, under the "EHDI Data, Reports and Newsletters" tab. Julie is starting to collect content ideas for a Summer/Fall 2014 issue - please send your suggestions to: julie.a.hass@state.or.us by August 15 at the latest.

Partner Training and Professional Development:

Hospital Screening Partners: As of April 2014, all of our screening hospitals, with the exception of four in Eastern Oregon, have participated in training or received a site visit. Most recently, Shelby visited Sacred Heart at RiverBend and Samaritan Lebanon Hospitals in April 2014, and we travelled to southern Oregon in July to visit Mercy Medical, Asante Three Rivers, Asante Rogue and Asante Ashland Community Hospitals. Due

to our budget shortfall, we had to reschedule our Eastern Oregon site visits to October 2014 when our new HRSA funding cycle renews.

Public Health Nurses and Other Screening and Follow-up Partners: Along with several of our audiologist partners, EHDI presented at the Naturopathic Midwives Conference in April 2014. There were approximately 40 midwives in attendance, and many have since contacted our team about purchasing or borrowing equipment for their own patients.

We are working with the Oregon Center for Children and Youth with Special Health Needs to create an EHDI case study for regional trainings of public health nurses around the state, starting this fall.

We have been working with our state public health nurse colleagues to re-envision the process and protocols for public health nurse referrals for both our diagnosed and lost to follow-up infants.

Shelby continues to offer a monthly free screening clinic. Families of infants born three months prior to the clinic date with (a) no documented screening or (b) still requiring follow-up are sent flyers about the clinic with information about how to schedule an appointment. A number of infants have been screened, including some for whom it took repeated contacts to motivate scheduling an appointment. Unassigned EHDI loaner equipment support this monthly clinic.

Pediatricians and Other Medical Providers: We continue to send follow-up letters and requests for information to medical providers obtained through the Immunization ALERT data system. We are also investigating whether the provider name available in the bloodspot record is more accurate and thus a better contact for follow-up.

Shelby continues to send letters with the screening results and flyers with information about screening resources to the primary care provider and/or midwife of each child tested through the free screening clinic. To date, she has reached approximately 35 providers with this outreach.

As part of our Southern Oregon site visits, we gathered PCP information at each hospital in an effort to help share information and resources to shore up the follow-up process in that region. Approximately XX provider contacts were obtained.

Partner Performance Reports:

Hospital Screening: We provide quality assurance reports for hospital newborn hearing screening program staff through a secure online web portal. 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 births, 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.

In addition to these on-demand reports, we are finalizing the latest batch of Hospital Performance Report Cards for our screening hospitals and out of hospital screening partners, to be sent in July. A few additions to the Performance Report include:

- # births screened by anyone OTHER THAN the hospital
- # outpatient screenings performed for own (hospital) births
- # outpatient screenings performed for infants not born at hospital
- Color coding – excellent indicators coded green (for GO!), poor indicators coded red (needs immediate attention!)
- Graph depicting follow-up for hospital compared to state, where possible also includes comparison of average for all hospitals in county
- Table of providers performing follow-up for infants referring at hospital

Loaner equipment update: Since the January update, Oregon EHDI has placed OAE screening equipment at Trillium Waterbirths / Wise Woman Care in Medford.

Count of Results reported by Equipment Hosts

Host Partner	**Type of Loaner Equipment**	**Annual Birth Count (b), County Referred (r) Count, or Unscreened Count (ns), 2013**	**Total # procedures reported, 2013~**	**Total # procedures reported, Jan-June 2014~**
Alma Midwifery	OAE	106 (b)	126 (s)	88 (s)
Andaluz Waterbirth (Portland and Tualatin) *started 8/2013	OAE	130 (b)	30 (s)	76 (s)
Bella Vie Gentle Birth (12/2013) *started 12/2013	OAE	87 (b)	8 (s)	43 (s)
Growing Family Birth Center	OAE	13 (b)	39 (s)	24 (s)
PeaceHealth Nurse Midwifery *started 2014	OAE	137 (b)	--	16 (s)
Trillium Waterbirth / Wise Woman Care *started 7/2014	OAE	70 (b)	--	--
Washington County Public Health	OAE	103 (ns)	27 (s)	7 (s)
Bayside Audiology (Clatsop, Columbia, Tillamook)	AABR	^30 (r)	5 (s)/5 (d)	1 (s)/2 (d)
Central Oregon ENT (Deschutes, Crook, Jefferson)	ABR	^89 (r)	76 (d)	25 (d)
PeaceHealth Hilyard (Lane)	AABR	^226 (r)	55 (s)/142 (d)	45 (s)/39 (d)
Portland State University / EHDI Clinic	OAE and		--	11 (s)/3

	Tympanometer			(rescreening)
Willamette ESD (Marion, Polk, Yamhill)	AABR	^174 (r)	16 (s)/184 (d)	4 (s)/91 (d)

~ (s)= screening, (d)=diagnostic

^Sum of referred infants in designated counties. These are approximate catchment areas only.

Audiology Data Audits: We continue to send audit lists to our audiology partners around the state. Currently, the following providers/facilities are participating: Legacy Audiology, Central Oregon ENT, Willamette ESD, PeaceHealth Hilyard, MidValley Hearing, Eugene Hearing and Speech, Providence Audiology, Oregon ENT in Medford and Audiology Associates in Grants Pass.

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 ask these providers to review lists of children from their facility or region who meet these criteria and report those children they have seen but neglected to report previously.

We are testing a new audiology Performance Report with Oregon ENT while at our site visit in July. We hope to improve and implement its use more broadly to help our audiology partners see their contribution to reducing loss to follow-up and to activate them to help us achieve our goal for 5% improvement each year!

Early Intervention Reporting: We have requested that all Early Intervention providers indicate EHDI as a referral source and obtain and indicate consent to share data for all referred children as well as those who are being considered for hearing impairment eligibility, regardless of referral source, in the EI data system, ecWeb. These simple steps enable data sharing and reduce the burdensome process of reporting outcomes by phone or fax. Our efforts to build relationships with our EI partners and reiterate the importance of sharing referral outcomes are paying off. In 2011, we received eligibility and enrollment information for 86% of our referrals to Early Intervention. Reporting improved slightly in 2012 to 87%, and is looking to be on track or better for 2013 referrals (currently at 83%, but late 2013 referrals have had less time to be evaluated for eligibility and for data to have been reported to EHDI). Of these results, 67% of eligibility and enrollment reports on our 2013 referrals were received through data matching and import.

The EHDI automated referral process has expanded to include 6 of the 9 Early Intervention Service areas representing 19 of Oregon's 36 counties and approximately 77% of all our referrals. This process allows audiologists to refer children diagnosed with hearing loss directly to the appropriate EI Program through EHDI IS at the time of reporting. EHDI IS 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. Most recent additions to the pilot include Columbia, Clatsop and Tillamook Counties, part of the NW Regional Service Area.

Our partnership and work with Early Intervention is ongoing: 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 3 EI Service Areas 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.

OTHER PROJECTS:

EHDI Information Exchange with Hospitals for Screening Data: 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. We are awaiting further information about federal funding for Phase Two efforts to perform the exchange with real data.

During Phase One, the Oregon EHDI team 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. We recently participated in the Public Health Informatics Institute (PHII) strategic planning activity and assessment of the tool and provided additional feedback and suggestions for improvement based on our experience.

Our new BY4 CDC objective 1.4 is to develop and pilot receipt of newborn hearing screening data via HL7 messaging using standardized codes with at least one birth hospital. Initial steps include developing a draft budget and participating in the Public Health Informatics Institute strategic planning activity and assessment. We are also exploring opportunities to mimic/piggyback public health lab reporting via HL7 for EHDI screening and diagnostic results, while waiting for Phase Two to advance.

NCHAM Audiologist Practices: Parent Hearing Aid Education & Support Questionnaire: Oregon EHDI is participating in NCHAM's national survey to learn about audiologists' practices related to parent hearing aid education and support. The information collected will be used to identify training needs. Oregon EHDI provided the names and mailing addresses of our pediatric audiologists and mailed the surveys, prepared by NCHAM. We will follow with reminder postcards in two weeks to encourage participation. NCHAM will analyze the results and provide a summary of findings for our state.

Guide By Your Side, Oregon Hands & Voices: GBYS is restructuring! Rachel, the Salem area Guide, is now serving in the role of Loss to Follow-Up Parent Guide. In this role, she is contacting parents of infants who refer on newborn hearing screening but who have not returned for follow-up. Helen has been conducting

interviews for a replacement Parent Guide to serve in the Salem area with Rachel's families of children with confirmed hearing loss.

There is a new Parent Guide for the Portland area hired to work with Tami. The new Guide will focus primarily on Washington County families and some inner Portland area families. The two Guides will work together on family events.

Helen is still looking for Guides to serve families in Southern, Eastern and Central Oregon!

Helen will be holding the annual GBYS training with the Washington team in August. The focus this year will be on leadership development, OUR (Observe, Understand, Respond) training on neglect and abuse, in-depth review of the four modes of communication, and IFSPs.

Hands & Voices: Hands & Voices has a new board president! James is deaf, has three deaf children and is a teacher at Oregon School for the Deaf. He was the board president in Utah and is very familiar with the EHDI system, which the board felt was really important.

Babies First Project: Hands & Voices is partnering with EHDI to pilot a project to help improve follow up. The pilot will entail several birth sites (hospitals and midwives) which agree to have parents screen a video about the importance of follow-up at the time they learn their baby referred on the newborn hearing screen. The video's intent is to encourage parents to follow up with further testing. It is still possible for additional birth facilities to participate.