

INDIAN HEALTH SERVICE U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

The Environmental Health Services Program

–of the– INDIAN HEALTH SERVICE U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

Annual Report 2015

The DEHS Mission: "Through shared decision making and sound public health measures, enhance the health and quality of life of all American Indians and Alaska Natives to the highest level by eliminating environmentally related disease and injury."

The Environmental Health Services Program

-of the-

INDIAN HEALTH SERVICE U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES Annual Report **2015**

This Annual Report for Calendar Year 2015 was produced by the Indian Health Service Division of Environmental Health Services to provide relevant information about the Program. Additional information can be obtained by contacting:

INDIAN HEALTH SERVICE

Office of Environmental Health and Engineering Division of Environmental Health Services 5600 Fishers Lane MS: 10N14C Rockville, MD 20857 Website: <u>http://www.dehs.ihs.gov</u>

Mention of trade names or commercial products does not constitute endorsement or recommendation for use.





On The cover: The 2015 photo contest winner...Orlana Schmidt evaluating a deficiency during a playground survey, taken by Charles Mack, both Environmental Health Specialist (Rosebud Indian Reservation; October 2015).

Message from the Acting Division Director

DAVID MCMAHON, M.P.H, R.S.

Division of Environmental Health Services

I am proud to present the Division of Environmental Health Services (DEHS) Annual Report for 2015. This report covers activities and projects conducted by Indian Health Service (IHS) and Tribal/Corporation environmental health partners throughout the nation. The intent of the report is two-fold: to capture historical program information and to highlight activities and accomplishments that address the five DEHS national program focus areas and support the Indian Health Service mission.

Each IHS Area is encouraged to continue to identify and work on local priorities, using maximum stakeholder input, but when it comes to defining need and identifying roles and responsibilities nationally, we have agreed to focus on the following five areas: children's environment, safe drinking water, food safety, vectorborne and communicable diseases, and healthy homes.

It has always been difficult to demonstrate the health impact of our activities when we prevent something from happening in the first place; but it is not impossible. Even though we may not be able to show that our activities directly improve morbidity and mortality rates, we can show that working with a tribe to pass a seatbelt law led to a reduced number of motor vehicle crash-related emergency department visits or that having a tribal food code led to fewer risk factor violations than not having one. Throughout this report, we highlight Area activities that demonstrate our program's impact.

Nationally, we accomplished many of the objectives planned for this year.

- Nine fellows graduated from the 2015 Injury Prevention Specialist Program Development Fellowship. This program provides the highest caliber training to tribes, IHS personnel and other injury prevention partners in the science of injury prevention and control.
- DEHS hosted the 2015 Tribal Injury Prevention Cooperative Agreement

Program (TIPCAP) Workshop in Rockville, Maryland. More than 70 TIPCAP Coordinators, IHS cooperative agreement project officers, and invited speakers attended the workshop. Focus areas included motor vehicles injury, elder falls, suicide, and bullying prevention. This workshop was the culmination of the 2010-2015 TIPCAP Program.

- Twenty-three new IHS Injury Prevention Program Tribal Cooperative Agreements were awarded for the FY 2016-2020 TIPCAP cycle.
- CDR Stephen Piontkowski joined HQ DEHS as a Senior Environmental Health Specialist. Stephen has more than 15 years of environmental health field and District Office experience including service in the Bemidji and Phoenix Areas.
- CDR Charles Woodlee joined HQ DEHS as the IEH Program Manager. CDR Woodlee brings 16 years of field and Area Office environmental health experience in IHS and tribal programs. CDR Woodlee is a graduate of the IHS IEH Residency.

This report highlights the work of individuals recognized through two DEHS Annual Awards: the IHS Environmental Health Specialist of the Year and the Gary J. Gefroh Safety and Health Award. The award narratives provide excellent examples of service and impact in tribal communities and institutional settings.

The National Focus Area section of the report provides even more examples of the tremendous work and the breadth of the environmental health program. Here you will find creative solutions, actions, and impact such as:

- Stopping a Shigellosis outbreak;
- Enhancing food safety through improved surveillance and staff competencies;
- Studying the risk of Vibrio transmission in restaurants serving shellfish;
- Increasing healthcare accreditation preparedness awareness and visibility by

creating an environmental of care reporting dashboard;

- Developing methods for evaluating environmental cleaning in clinical settings;
- Writing environmental health guidelines for inspecting a body art conference,
- Creating enhanced environmental health risk communication for swimming pool operators; and
- Forming a task force to address beg bug infestations in tribal communities.

I hope you enjoy reading about IHS DEHS projects and activities across the country. I welcome your input into how we can better serve the American Indian and Alaska Native people and demonstrate our effectiveness.

Table of Contents

The Environmental Health Services Program Annual Report 2015

Message from the Acting Division Director	Looking Ahead into 2016
Profile of the DEHS Program	IHS Area DEHS Program Directory
Program Mission1Program History1Program Structure2Our Operating Philosophy6Education and Recognition7Program Vision22DEHS Services25Core Services to Al/AN Communities25Specialized Services to Al/AN Communities27	List of Figures Figure 1: RRM (workload) vs. actual DEHS funding from 2002 to 2015
DEHS National Focus Areas. 35 Children's Environment. 36 Safe Drinking Water. 38 Food Safety 39 Vectorborne & Communicable Diseases 47 Hoalthy Hemose 52	Figure 7: IHS Workers' Compensation Cases, 2004-2015
Area DEHS Programs 56 Alaska 57 Albuquerque 58 Bemidji 59 Billings 60 California 61 Great Plains 62 Nashville 63 Navajo 64 Oklahoma City 65 Phoenix 66 Portland 67 Tucson 68	Table 1: DEHS Program Funding Sources. 3 Table 2: Level of Need Funded (LNF) 2014. 5 Table 3: EHSC Sponsored Courses, 2015. 7 Table 4: List of Injury Prevention Fellowship 9 Program Graduates by Year. 10 Table 5: IEH Residency Graduates. 12 Table 6: Summary of DEHS Staff Certifications. 14 Table 7: Summary of Awards Received by DEHS Staff. 15 Table 8: EHS of the Year, 2015 through 1993. 16 Table 9: Gefroh Award Winners, 2015 through 2008. 19 Table 10: IHS TIPCAP Funding. 28

List of Acronyms

AI/AN:	American Indian/Alaska Native	LNF:	Level of Need Funded
ANTHC:	Alaska Native Tribal Health Consortium	MPH:	Master of Public Health
BIA:	Bureau of Indian Affairs	NDECI:	Notifiable Disease and External Cause of Injury
CDC:	Centers for Disease Control and Prevention	NHTSA:	National Highway Traffic Safety Administration
DEHS:	Division of Environmental Health Services	OCPS:	Office of Clinical and Preventive Services
DSFC:	Division of Sanitation Facilities Construction	OEHE:	Office of Environmental Health and Engineering
EH:	Environmental Health	OSHA:	Occupational Safety and Health Administration
EHS:	Environmental Health Specialist	OWCP:	Office of Worker's Compensation Programs
EHSA:	Environmental Health Services Account	PHS:	Public Health Service
EHSC:	Environmental Health Support Center	REHS/RS:	Registered Environmental Health Specialist/Registered Sanitarian
EHT:	Environmental Health Technician	RRM:	Resource Requirement Methodology
FDA:	Food and Drug Administration	TIPCAP:	Tribal Injury Prevention Cooperative Agreement Program
HQ:	Headquarters	USUHS:	Uniformed Services University of the Health Sciences
IEH:	Institutional Environmental Health	WebCident:	Web Based Incident Reporting System
IHS:	Indian Health Service	WebEHRS:	Web-based Environmental Health Reporting System
IP:	Injury Prevention	YKHC:	Yukon-Kuskokwim Health Corporation



LCDR Lee and LT Bante counting bed bugs collected in a bed bug monitoring device.



Profile of the **DEHS Program**

Program Mission

The mission of the Division of Environmental Health Services (DEHS) is "through shared decision making and sound public health measures, enhance the health and quality of life of all American Indians and Alaska Natives to the highest level by eliminating environmentally related disease and injury." In support of this mission, the DEHS provides a range of services to the American Indian and Alaska Native (AI/AN) communities.

Program History

The roots of the DEHS can be traced to 1921, when Commissioner Charles Burke, Office of Indian Affairs, U.S. Department of the Interiors, issued a circular directing agency physicians to serve as Health Officers for their reservation. Over the next several decades, responsibility for community surveys shifted to the sanitary engineering staff. These surveys came to include a wide range of facilities, from water systems to community buildings to dairy plants.

By the time of the Transfer Act of 1954 (Public Law 83-568), which moved the responsibilities for AI/AN healthcare from the Bureau of Indian Affairs (BIA) to the Indian Health Service (IHS), most of the components of the current Environmental Health Services Program were in place with agency policies for food handler training, radiological health, facility inspections, and water fluoridation. The emphasis was on establishing, expanding, and resolving basic sanitation services. The Sanitarian Aides were the workforce in the field, with a few supervisory Sanitarians at Area Offices. In 1962, the first headquarters (HQ) Institutional Environmental Health (IEH) Officer was hired and provided advice and technical guidance on all community-based institutions.

In 1963, a joint conference of BIA and IHS leadership discussed collaborative efforts to combat the community accident mortality problem among AI/AN. An Accident Prevention Program was established within the Division of Indian Health while calls for expanded funding and authority went to Congress. In 1969, Congress provided funding and positions for the Accident Prevention Program within the Health Education Program. The Accident Prevention Program continued as a collaborative effort with Health Education until 1979, when Emery Johnson, Director of IHS, formally transferred responsibility to Environmental Health Services and the name changed to Community Injury Control, and later to Community Injury Prevention (IP).

Program Structure

True to its historical beginnings, the DEHS is a field-based environmental health (EH) services program that takes pride in supporting the needs of individual tribal communities. The DEHS operates under a decentralized organizational structure, with most of its staff employed in district and field offices throughout the 12 IHS Areas. In 2015, the national DEHS program consisted of a total of 273 staff excluding the headquarters staff listed below. The DEHS at Area Offices were typically staffed with a Division Director and one or two professional (IP Program Manager, IEH Program Manager) staff. District Environmental Health Specialists (EHS) and their support staff are often located away from the Area Offices and closer to the tribal communities. DEHS HQ, located in in Rockville, Maryland, is staffed similarly to the Areas.

- CAPT Kelly Taylor Director
- CAPT David McMahon Deputy Director
- CAPT Nancy Bill Injury Prevention (IP) Program Manager
- CDR Charles Woodlee Institutional Environmental Health (IEH) Program Manager
- CDR Darren Buchanan EH Data Systems Manager
- CDR Stephen R. Piontkowski Senior EH Officer
- LT John Hansen IEH resident

Program Resources

The current budget of the DEHS Program is approximately \$32 million. This funding is derived from three primary sources: congressional allocation; the IHS Director's Initiatives; and IP budget enhancements (Table 1). DEHS funds support a wide variety of activities, including IP, IEH, safety management, industrial hygiene, food safety, vectorborne disease control, and technical assistance to community water and waste disposal facility operators.

The DEHS budget is derived from the overall Environmental Health Support Account (EHSA) that supports the activities of both the DEHS as well as Division of Sanitation Facility Construction (DSFC) Programs. For 2015, the DEHS share of the EHSA budget was approximately 41%, or \$32,512,394. Figure 1 depicts a historical comparison of the workload-based Resource Requirement Methodology (RRM) versus the distribution of Program funds from 2002 to 2015. Table 2 displays the current level of need funded (LNF) for each of the 12 Areas; the data represent both IHS staff and tribal staff.

 Table 1: DEHS Program Funding Sources.

Fiscal	Total FHSA	Total EHSA DEHS OEHE Funds Provided to DEHS		o DEHS	IHS Director's	Injury Prevention	Total DEHS		
Year	Budget	RRM Share	*DEHS Budget	COSTEP**	Injury Prevention**	Residency**	Initiative	Budget Enhancements	Budget
1998	\$42,159,000	33.80%	\$14,249,742	\$81,000	\$116,000	\$90,000	\$304,000	\$0	\$14,840,742
1999	\$44,244,000	33.80%	\$14,954,472	\$206,000	\$174,100	\$120,000	\$304,000	\$0	\$15,758,572
2000	\$49,162,000	33.20%	\$16,321,784	\$208,000	\$175,000	\$67,600	\$304,000	\$1,475,000	\$18,551,384
2001	\$50,997,000	34.20%	\$17,440,974	\$184,000	\$69,000	\$63,100	* * *	\$1,779,000	\$19,536,074
2002	\$52,856,000	34.93%	\$18,460,797	\$224,000	\$111,000	\$100,000	***	\$1,779,000	\$20,674,797
2003	\$54,437,000	36.62%	\$19,937,064	\$194,100	\$88,000	\$100,000	***	\$1,779,000	\$22,098,164
2004	\$55,888,650	33.63%	\$18,794,176	\$240,000	\$118,700	\$100,000	* * *	\$1,779,000	\$21,031,876
2005	\$56,328,611	32.80%	\$18,475,968	\$232,000	\$74,000	\$100,000	***	\$1,779,000	\$20,660,968
2006	\$57,447,796	34.03%	\$19,547,711	\$208,000	\$67,500	\$100,000	* * *	\$1,779,000	\$21,702,211
2007	\$63,235,458	35.68%	\$22,564,290	\$232,000	\$98,000	\$100,000	***	\$2,779,000	\$25,773,290
2008	\$64,576,052	37.65%	\$24,313,637	\$216,000	\$61,000	\$100,000	* * *	\$2,779,000	\$27,469,637
2009	\$67,022,000	38.97%	\$26,117,871	\$228,500	\$66,782	\$100,000	***	\$2,779,000	\$29,292,153
2010	\$69,196,000	35.74%	\$24,730,653	\$176,000	\$0	\$100,000	***	\$2,779,000	\$27,785,653
2011	\$69,057,608	32.00%	\$22,098,435	\$144,000	\$84,000	\$0	***	\$2,771,942	\$25,098,377
2012	\$69,703,294	34.00%	\$23,699,120	\$160,000	\$49,000	\$100,000	***	\$2,763,473	\$26,771,593
2013	\$66,521,479	38.00%	\$25,278,162	\$128,000	\$0	\$100,000	***	\$2,280,000	\$27,786,162
2014	\$70,901,479	41.00%	\$29,069,606	\$136,000	\$63,000	\$100,000	***	\$2,766,698	\$32,072,304
2015	\$72,550,497	41.00%	\$29,745,696	\$176,000	\$0	\$125,000	***	\$2,766,698	\$32,512,394
*Repres	ents an approx	imation base	ed on initial DEF	IS and DSFC F	RRM calculation	าร			

**Office of Environmental Health and Engineering funds provided to DEHS

***IHS Director's Initiative, \$304,000 was added to Injury Prevention Budget Enhancements (column to the right) starting in 2001



DEHS Budget and Total RRM from 2002 to 2015

Figure 1: RRM (workload) vs. actual DEHS funding from 2002 to 2015.





Table 2: Level of Need Funded (LNF) 2015.

Level of Need Funded (LNF) 2015									
Area	Total Staff*	RMM	%LNF	Federal Staff	Tribal Staff				
Alaska	47**	90.74	51.8%	0	47				
Albuquerque	18	36.85	48.8%	16	2				
Bemidji	22	53.07	41.5%	9	13				
Billings	8	28.76	27.8%	4	4				
California	9	50.98	17.7%	6	3				
Great Plains	24	56.72	42.3%	15	9				
Nashville	17	46.18	36.8%	3	14				
Navajo	37	108.2	34.2%	32	5				
Oklahoma	33	98.84	33.4%	9	24				
Phoenix	42	68.67	61.2%	24	18				
Portland	11	50.48	21.8%	6	5				
Tucson	5	12.05	41.5%	5	0				
Total***	273	701.6	38.9%	129	144				
* Includes tribal s	staff hired with IH	S Cooperat	ive Agreement	Funds					

HQ staff are not reflected here

** Based on 2014 staffing numbers (N=47)

*** Total is not exact due to rounding

Data from 2014 determines the 2015 LNF

As Table 2 shows, the DEHS Program strives to accomplish its tasks at a funding level of 38.9% of the estimated actual need. In order to maximize the utilization of available resources, the DEHS has established partnerships with federal agencies. Partnerships change as needs are addressed or emerge. A few of the partners over the years include:

- Centers for Disease Control and Prevention (CDC)
- National Highway Traffic Safety Administration
- Uniformed Services University of the Health Sciences
- National Institutes of Health (NIH)
- U.S. Fire Administration
- Consumer Product Safety Commission

Our Operating Philosophy

The operating philosophy of the DEHS is based on the Ten Essential Public Health Services first articulated in 1994 by a partnership of local, state, and national public health leaders. The IHS DEHS adopted them as the Ten Essential Environmental Health Services and incorporated this set of strategies into the methods in which it delivers services to Al/AN communities across the country.



The Ten Essential Environmental Health Services are:

ASSESSMENT:

- 1. Monitor health status to identify community health problems.
- 2. Diagnose and investigate health problems and health hazards in the community.

POLICY DEVELOPMENT:

- 3. Inform, educate, and empower people about environmental health issues.
- 4. Mobilize community partnerships to identify and solve environmental health problems.
- 5. Develop policies and plans that support individual and community environmental health efforts.

ASSURANCE:

- 6. Support laws and regulations that protect health and ensure safety.
- 7. a) Link people to needed environmental health services andb) Assure the provision of environmental health services when otherwise unavailable.
- 8. Assure a competent environmental health workforce.
- 9. Evaluate effectiveness, accessibility, and quality of personal and population-based environmental health services.

SYSTEM MANAGEMENT:

10. Conduct research for new insights and innovative solutions to environmental health problems.

Using the Ten Essential Environmental Health Services as a framework, the IHS DEHS developed five national focus areas: children's environment, safe drinking water, food safety, vectorborne and communicable diseases, and healthy homes. Details on projects conducted throughout the tribal communities served by the DEHS Program in 2015 can be found in the National Focus Area section of this report.

Education and Recognition

Education is a cornerstone of any successful public health program because it is the first step in raising awareness and empowering individuals and communities to participate in resolving community health issues. Successful delivery of environmental health services to tribal communities rests on the foundation of a competent and motivated workforce. The DEHS staff conducted training sessions during 2015 on a variety of topics. The Environmental Health Support Center (EHSC) in Albuquerque, New Mexico provided program management, IP, topic-specific EH, and IEH courses. Webinars were also utilized to maintain staff competencies without requiring travel. In 2015 there were 19 classes and 6 webinars with a total of 524 attendees (Table 3).

 Table 3: EHSC Sponsored Courses, 2015.

EHSC Sponsored Courses - FY 2015						
Course	Location	Number of Attendees				
Group Facilitation Methods*	Tucson, AZ	20				
Healthcare Safety Accreditation*	Albuquerque, NM	34				
Introduction to Injury Prevention	Tucson, AZ	15				
Environmental Health & Engineering Orientation – 2015*	Albuquerque, NM	72				
Intermediate Injury Prevention	Anchorage, AK	13				
Healthcare Safety Accreditation*	Anchorage, AK	29				
Integrated Pest Management [IPM] in Schools and Child Care Centers	Duluth, MN	8				
Introduction to Injury Prevention	Chandler, AZ	11				
Healthcare Safety Accreditation*	Billings, MT	27				
Dangerous Decibels Educator Training Workshop	Spokane, WA	18				
Healthcare Safety Accreditation*	Oklahoma City, OK	30				
Lead Inspection / Risk Assessor Course	Albuquerque, NM	6				
10 Hour OSHA Course for General Industry*	Reno, NV	35				
Safe Native American Passengers [SNAP]	Owhee, NV	5				
SNAP - Saving Native American Passengers	Fallon, NV	4				
Fundamentals of Safety Management	Claremore, OK	17				
Introduction to Injury Prevention	Bemidji, MN	13				
Fundamentals of Safety Management	Billings, MT	23				
National Course - Introduction to Injury Prevention	Albuquerque, MN	11				
TOTAL		391				
Webinars	Month	Number of Attendees				
Leadership Webinar – Building Trust in the Workplace	October	50				
Leadership Webinar – Leading the Switch – Motivating Behavior Change	November	13				
TOTAL ATTENDEES		63				

Table 3: EHSC Sponsored Courses, 2014, (cont.).

EHSC Sponsored Courses - FY 2015						
Course	Location	Number of Attendees				
SUSTAINABILITY WEBINARS						
Sustainability Webinar - Paper Recycling and Consumption	February	7				
Sustainability Webinar - Paper Recycling and Consumption	March	7				
Sustainability Webinar - Amalgam Management in Dental Clinics	July	36				
Sustainability Webinar – LEED v4 Building Design and Construction	October	20				
TOTAL ATTENDEES		70				
TOTAL Webinar ATTENDEES		133				

Figure 2 shows the numbers of student externs hired in the past 25 years. In 1994, a mandated reduction in full-time staff resulted in a moratorium being placed on the recruitment of student externs. Since then the number of externs hired annually fluctuated from 16-30. During 2015, the DEHS supported 22 student externs.



Number of Externs, by Year

Figure 2: Number of college students participating in the DEHS extern program, by year.

The DEHS views the opportunity to offer financial support for long-term training as a major retention tool and has supported staff in master's programs for many years. Areas reported ten DEHS staff funded by IHS for college courses in 2015. Of the ten, six were federal employees and four were tribal employees. Staff in five of the twelve Areas received long-term training support.

Another program that builds a competent workforce within IHS and tribes is the IP Fellowship Program. The Fellowship is a 12-month advanced learning experience for individuals who want to address the single biggest killer of young Al/ANs – injuries.

Building on the IHS IP Program core courses and the prior experiences of the participants, the Fellowship offers advanced training in community injury intervention strategies, coalition building, injury epidemiology, program evaluation, presentation skills, and field work. Fellows apply the skills they've acquired by working on individual projects involving data collection and/or program implementation and evaluation. There are two Fellowship tracks; Program Development and Epidemiology. Although the two tracks have a similar structure, their emphasis, content, and prerequisites differ.

Benefits from completing the Fellowship include:

- Project development, implementation, evaluation
- Promote community involvement
- Effective strategies
- Epidemiology
- Data collection and analysis
- Coalition building
- Program evaluation
- Oral/written communication
- Individualized learning experiences
- Field work

There have been 285 graduates from the Fellowship since 1987. A list of the graduates by year can be found in Table 4, on the following pages.



Ms. Honie and Mr. Sarisky collecting fleas during a plague investigation.

2015	Marc Matteson Kendra Vieira Isaac Ampadu Alyssa Bernido Katie Tompkins Jerrod Moore Martha Maynes	2014*	Julie Adams John Hansen Adrianna M. Gibson Sharon K. Silvas Gina Yellow Eagle Rea Joyce Miles Lyndee Sue Hornell Gregory A. Sehongva Patrick H. Martinez	2012*	Chris Chestnut Jennifer J. Jordan Jacqueline Kizer Nicole D. Thunder Desta Walker Donald B. Williams Tina A. Yazzie-Smiley	2011	Martin Stephens Tim Balderrama Bryan Reed Hillary Strayer Lisa Nakagawa Jacey McCurtain Dustin Joplin Jason Hymer David Bales Molly Madson Travis Bowser
2009*	Sarah-Jean T. Snyder Rebecca Morris Laquita F. Fish Karen M. Ansera Pamela A. Michaelson-Gambrell Verlee White Calfe-Sayler Bernice Bert Amanda Parris Le Ray Skinner Jennifer L. Franks Annie Phare	2008*	Fleurette Brown-Edison Mary Robertson-Begay Antoinette R. Short Amy R. Cozad Jason D. Hymer Darcy Merchant, Sr. Lyndon Endischee Robin Lee Janelle Trottier	2007	Sherron Prosser Janae Price Siona Willie Stephanie Peebles Coffey Theresa Yazzie Dr. Verlee K. White Calfe-Sayler Susan E.C. Ducore Belinda Aungie Michael E. Reed Jr. Bonny M. Weed Elisa DuBreuil	2006*	Lisa Aguerro Sherron Prosser Charlotte Ann Branham Samantha Holmberg Bonita Paddyaker Belinda Aungie Kathey Wilson Helen Garcia-Sisneros Angelita Chee Arturo Calvo
2005	Michelle Begay Mark Brewer Kyla Hagan George Hupp Holly Kostrzewski Elvira Martin Ina Mickelson Stephen Piontkowski John Schmitz	2004	Larry Carlson Timothy P. Duffy Jim Ferguson Hayden R. Hardie Rebekah Hunkup Robert Morones Mark E. Pike Randolph G. Runs After Charles Woodlee	2003*	Frances C. Anchondo Andee Beaver Keechi Maria A. Benton Mary Alice Clark Sybil K. Cochran Montell Elliott Eldon R. Espling Helen Gregorio Jodi R. Johnson Danny Joseph Norma McAdams Michael S. Struwin Minnie Yazzie	2002	Christopher W. Allen Jeff Dickson Myla Jensen Dan Kinsey Joseph LaFramboise Shirley Peaches Shelli Stephens-Stidham Sara A. Wagner Mona Zuffante
2000	Bruce Etchison Michael Boley Nicole Horseherder Martin Smith Mark Byrd Bobby Villines Sue Hargis Nate Quiring Andrea Horn Sharon John Richard Skaggs Molly Patton	1999	Bruce Chandler Arla Stroop Myrna Buckles Brian Johnson Ryan Hill Twyla "Zoe" Benally Dennis Renville Zahid Samad Tina Samm	1998	Karen Arviso Gary Carter Casey Crump David Hogner Brad Husberg Karin Knopp James Ludington JoAnn Perank Tish Ramirez Tina Russel	1997	Gordon Tsatoke, Jr Marjorie Winters Tom Fazzini Donna M. Nez Kathleen A. O'Gara Nellie Benally Jim Spahr Teri L. Sanddal Patricia Harris Smith Alex Hardin

 Table 4: List of Injury Prevention Fellowship Program Graduates by Year.

Table 4: I	List of	Iniurv	Prevention	Fellowship	Program	Graduates b	ov Year.
		ingary	11000111011	i chomonip	1 IOSIGIII	aradates .	<i>y</i> icui.

1996	Holly Billie Robert Bialas Wenonya St.Cyr Rebecca Lawrence Vince Garcia Emily Watchman Jennifer Lincoln Don Williams David Cramer Lynn Cook Sherry Fredericks-King Shirley Brewer Debra Haines	1995	Mark D. Miller Diana M. Kuklinski Lovetta Phipps Chris B. Buchanan Barbara A. Spriggs Debra M. Meek Randy Benefield James R. Howell Angela Maloney	1994	Hayden Anderson Michael Keiffer Kenny Hicks Willard Dause Albert Locklear Patricia Rouen John Spriggs Dione Bartmess Dan Hanson Mary O'Connor Wayne Hall Mike Halko Phyllis Cooke-Green Sharan Freiberg	1993	Alta Bruce Matthew J. Powers Roxanne L. Ellingson Wendy Fanaselle Ward Jones Darla Tillman Shawn F. Sorenson Mark Jackson Mark H. Mattson John D. Smart Cynthia LaCounte Paul T. Young
1992	Michael M. Welch Daniel C. Strausbaugh Virginia Begay Christopher Krogh Jodee Dennison Deanne M. Boisvert Louise B. Wedlock Dale M. Bates Susan McCracken Charles Stewart Watson Margaret M. Simons Joe Maloney Duane Kilgus Theresa Botruff	1991	Kelly M. Taylor Evelyne Tunley Vurlene Notsinneh David Robbins Geoffrey G. Langer Craig A. Shepherd Debbie Burkeybile Keith Varvel Linda Thompson Kathi Gurule Gary J. Gefroh Jan Person Kiyomi Bird Steven G. Inserra Meda Nix Mildred Blackmon R. Cruz Begay	1990	Carol L. Rollins Malcolm B. Bowekaty John W. Leith Russell L. Savage Bernadette V. Hudnell Brenda J. Demery Dwayne Reed Kevin D. Meeks Vivian Echavarria DeAnne Pete Hardy John P. Leffel Lisa Lincoln Gina L. Locklear David H. McMahon Vanette R. Chase	1989	Melvin Clifford Jeffrey J. Smith Sherron K. Smyth Eusibeo Toya Lois Jean Bressette Edward "Ted" Moran Glenn Frew Jimmie V. Stewart David C. Martin Woody K. Begay Fred E. Wiseman Richard A. Sullivan Harold Cully Candice N. Bell Michael Rathsam Darrel N. Whitman L.J. David Wallace III
1988	John R. Weaver Helen A. Hayes Christine M. Jackson Robert S.Newsad David M. Mosier Gary A. Schuettpelz Jerry L. Lee Mark A. Kelty David C. Short B. Kevin Molloy Nancy M. Bill Gail G. Buonviri Elaine R. Bender Alan J. Dellapenna Jon S. Peabody Brian Cagle Douglas R. Akin	1987	Ray Van Ostran William Bouwens, Jr. Ronald Perkins Steve McLemore Byron P. Bailey Edwin J. Fluette Jacqueline E. Moore Ralph Fulgham Larry Dauphinais Jack L. Christy				
**There	was not a Fellowship class in 20	velopment (001, 2010	and 2013.				

Another advanced educational program developed by the DEHS is the IEH Residency. The Residency began in 1970 when the IHS sent Public Health Service (PHS) Commissioned Officers to long-term training developed by the Federal Health Programs Service with Tulane University, School of Public Health and Tropical Medicine, and the New Orleans PHS Hospital. The New Orleans PHS Hospital was closed in 1986, so IHS took responsibility for the IEH education and residency program at the Phoenix Indian Medical Center. In 1992, the IHS entered into a Memorandum of Understanding with the Uniformed Services University of the Health Sciences (USUHS), Department of Preventive Medicine and Biometrics, to participate in the Master of Public Health (MPH) degree program. To follow the MPH degree, a 12-month post-graduate residency was developed to provide training in the area of environmental and occupational safety and health. In 2015, the IHS switched from the USUHS MPH degree to the Master of Science in Public Health (MSPH) degree program to increase the academic rigor of the program. Participants selected for the IHS Long-Term Training Program enter a two-year assignment located in Bethesda and Rockville, Maryland. The first year is spent completing coursework and developing a research thesis project of impact to IHS needs. The second year continues coursework, but focuses on completing the research project, while incorporating opportunities to develop IEH competencies in diverse IEH work environments. These competencies may be developed through training and practical work experience rotations through federal healthcare organizations and other government and private institutions.

There are 16 IEH Residency Graduates currently active with IHS and tribal programs (Table 5) and a new resident began the program in 2015.

Table 5: IEH Residency Graduates.

Graduate	Residency Year
Katherine Hubbard	2014
Timothy Taylor	2014
Valerie Herrera	2010
Ricardo Murga	2010
Danny Walters	2009
Charles Woodlee	2008
David Cramer	2005
Mark Strauss	2005
Gary Carter	2003
Brian Hroch	2003
Kit Grosch	2001
Chris Kates	2001
Keith Cook	1999
Jeff Morris	1995
David McMahon	1994
Curt Smelley	1993

Figure 3 shows the distribution of DEHS staff (273) within the national program (this excludes headquarters staff). Of these 129 were federal employees and 144 were tribal employees. The types of staff are Environmental Health Specialists (EHS) (204), Community Injury Prevention Specialists (43), and Institutional Environmental Health Specialists (26).



2015 Environmental Health Staff (N=273)

Figure 3: Distribution of DEHS staff within the national program.

Thirty-four percent (94/273) of all DEHS staff, including federal and tribal employees, have master's degree in Environmental Health or a related field. Of the federal staff 49% (63/129) and 22% (31/144) of tribal staff have this advanced degree. Figure 4 presents the percentage of DEHS staff with master's degrees by specialty. Thirty two percent (66/204) of generalists, 26% (11/43) of IP Specialists, and 65% (17/26) of the IEH staff have master's degrees.

Of all the DEHS staff 56% (153/273) are Registered Environmental Health Specialists or Registered Sanitarians (REHS/RS). Of the federal staff 65% (84/129) were registered and of tribal staff 48% (69/144) were registered. Figure 5 summarizes registration according to specialty. Sixty-two percent (126/204) of generalists, 85% (22/26) of IEH Specialists, and 12% (5/43) of the IP staff are registered.



Figure 4: Percentage of DEHS staff with master's degrees.



Figure 5: Percentage of DEHS staff with REHS/RS credentials.

Percentage of DEHS Staff with REHS/RS CredentialS (2015)

Percentage of DEHS Staff with Master's Degrees (2015)

Of all the DEHS staff 19% (51/273) completed the IHS IP Fellowship Program, 15% (42/273) were Child Passenger Safety Technicians, and 2% (5/273) met Food and Drug Administration (FDA) standards to conduct retail food service inspections. Table 6 summarizes these and other credentials.

Table 6: Summary of DEHS Staff Certifications.

Certification	Environmental Health Specialist	Community Injury Prevention Specialist	Institutional Environmental Health Specialist	Total	Percent of total
REHS/RS*	126	5	22	153	56%
IP Fellow	34	14	3	51	19%
Certified Safety Professional	5	0	3	8	3%
Certified Industrial Hygienist	0	0	7	7	3%
Certified in Infection Control	1	0	0	1	0.4%
Child Safety Passenger Safety Technician	29	13	0	42	15%
Certified Playground Safety Inspector	4	0	0	4	1%
Certified Radiation Protection Surveyor	0	0	5	5	2%
Certified Environmental Health Technician	7	0	0	7	3%
Diplomate, American Academy of Sanitarians	2	0	1	3	1%
CHEM**	0	0	2	2	1%
FDA Standard	5	0	0	5	2%
Lead/Asbestos Certification	8	0	4	12	4%
IEH Residency	1	0	12	13	5%
Certified Pool Operator	33	0	2	35	13%
OSHA HAZWOPER	7	0	5	12	4%
Healthy Homes Specialist	3	0	0	3	1%
Certified Professional in Food Safety	14	0	2	16	6%

*Registered Environmental Health Specialist/Registered Sanitarian**Certificate of Healthcare Emergency Management

There are several awards the DEHS staff may earn in recognition of contributions and achievements towards IHS goals, objectives, and the completion of significant activities. Table 7 is a summary of awards received by the DEHS staff in 2015.

Table 7: Summary of Awards Received by DEHS Staff.

Award Type	Federal	Tribal	Total
Public Health Service Awards			
OSM	0	0	0
Commendation Medal	0	0	0
PHS Achievement Medal	5	0	5
PHS Citation	1	0	1
Crisis Response Service Award	1	0	1
Outstanding Unit Citation	1	0	1
Unit Commendation	4	0	4
Isolated Hardship	0	0	0
Training Ribbon	0	0	0
Field Medical Readiness Badge	0	0	0
Foreign Duty Award	0	0	0
Hazardous Duty Award	1	0	1
Special Assignment Award	0	0	0
Indian Health Service Area Awards	10	1	11
Civil Service Personnel Awards	18	0	18
National IHS Awards	16	6	22
Other National Awards	2	0	2
Tribal Awards	1	0	1
TOTAL	60	7	67

Beginning in 1993, DEHS has annually recognized an outstanding Environmental Health Specialist (EHS) for the year. Nominees are scored on three major categories: special achievements, professionalism, and innovation. The achievements of those individuals who have been selected as EHS of the Year are recognized by their peers as being instrumental in advancing the DEHS Program's vision of improving the lives of AI/AN people through model public health practices. A list of all the national EHS of the Year recipients to date can be found in Table 8.

2015	Sarah Snyder, California Area IHS	2003	Casey Crump, Bemidji Area IHS	
2014	Landon Wiggins, Phoenix Area IHS	2002	Pete Wallis, Tanana Chiefs Corporation	
2013	Martha Maynes, Bemidji Area IHS	2001	Molly Patton, Tanana Chiefs Corp.	
2012	Lisa Nakagawa, California Area IHS	2000	Shawn Sorenson, South East Alaska Regional Health Corp.	
2011	Bryan Reed, Bristol Bay Area Health Corp.	1999	Mike Welch, Phoenix Area IHS	
2010	Amanda M. Parris, Phoenix Area IHS	1998	Diana Kuklinski, Phoenix Area IHS	
2009	Timothy Duffy, Bemidji Area IHS	1997	Mark Mattson, Bemidji Area IHS	
2008	Holly Billie, Phoenix Area IHS	1996	Harold Cully, Oklahoma Area IHS	
2007	Stephen Piontkowski, Phoenix Area IHS	1995	Keith Cook, Navajo Area IHS	
2006	Troy Ritter, Alaska Native Tribal	1004	Caral Dalling Ha Churk Nation	
	Health Consortium	1994		
2005	Andrea Horn, Phoenix Area IHS	1993	John Sarisky, Navajo Area IHS	
2004	Celeste Davis, Albuquerque Area IHS			

Table 8: EHS of the Year, 2015 through 1993.

Individuals who received Area EHS of the Year (2015) were:

- Albuquerque Area, Ann Buchannan
- Bemidji Area, Barry Hugo
- California Area, Sarah Snyder
- Great Plains Area, Orlana Schmidt

- Navajo Area, Donna Gilbert
- Phoenix Area, Isaac Ampadu
- Portland Area, Holly Thompson Duffy
- Tucson Area, Chris Caler

From the above list of nominees, the selectee for the IHS EHS of the Year (2015) was Sarah Snyder of the California Area. Her write-up can be found on the following pages.

INDIAN HEATLH SERVICE ENVIRONMENTAL HEALTH SPECIALIST OF 2015:

SARAH SNYDER, REHS

INTRODUCTION

In 2015, LCDR Sarah Snyder demonstrated outstanding leadership, professionalism, dedication, superior technical expertise and innovation while serving as the Sacramento District Environmental Health Officer (EHO), acting California Area (CA) DEHS Director, CA Injury Prevention (IP) Specialist and the Emergency Management Coordinator for the CA DEHS Program which serves approximately 104 federally recognized American Indian tribes with a service population of 86,959 persons.

SPECIAL ACCOMPLISHMENTS

In addition to her significant responsibilities in 2015 as the Sacramento District EHO, CA IP Specialist, Acting DEHS Director, and serving as the Project Officer for two IHS Tribal Injury Prevention Cooperative Agreement Program sites, LCDR Snyder demonstrated initiative, dedication, creativity and collaborative leadership when she accepted being the project lead for a CA DEHS initiative to implement the FDA Voluntary National Retail Food Regulatory Program Standards in 2015. In collaboration with CA DEHS staff, she completed a program audit and identified key areas where opportunities for the greatest impact on improving retail food

safety resided in the CA DEHS food safety program. One significant outcome of this process was a project co-created by LCDR Snyder which involved a systematic risk assessment of all tribal retail food venues for risk factors associated with Vibriosis. Vibriosis is an increasing food safety issue for pacific coast states due to a recent trend of unusually warm coastal water conditions. Furthermore, the reduction of Vibriosis infections is one of the DHHS "Healthy People 2020" food safety objectives. As a result of this project, 21 high risk retail food establishments were identified in California. These facilities were subsequently targeted by CA DEHS staff for the implementation of proven interventions such as the training of tribal food managers on the use of the "Interstate Shellfish Shippers List".

In early 2015, LCDR Snyder completed an intensive 12 month FDA standardization process which is intended to strengthen competencies in retail food auditing and reporting. As one of four FDA-Certified Standardization Officers in the IHS, LCDR Snyder again demonstrated her leadership and dedication by volunteering to be the lead for the FDA standardization of all CA DEHS personnel. In this capacity, LCDR Snyder audited the performance of risk based surveys by two candidates in CA DEHS and



provided direct mentoring and hands on training as necessary to improve staff risk assessment skills and knowledge of the 2013 FDA Food Code.

As the CA DEHS representative to the Tribal Child Care Association of California (TCCAC) in 2015, LCDR Snyder performed a detailed analysis of the health and safety elements included in TCCAC's 'Tribal Child Care Standards for Sovereign Nations'. These standards are designed to be a model which

tribal child care programs in California funded by the Child Care Development Fund may voluntarily adopt. With the 2014 reauthorization of the Child Care and Development Block Grant Act, the TCCAC standards also represent the first tribal standard in the nation that is specifically designed to meet the new health and safety requirements included this Act's reauthorization. LCDR Snyder completed a detailed comparison of the TCCAC draft standards against existing references such as the IHS Model Head Start Code and Caring for our Children to identify gaps and inconsistencies. Her recommended revisions were incorporated into the final draft of TCCAC model standard. In January, 2016, the Administration for Children and Families (ACF) Office of Child Care (OCC) sought out the TCCAC standards and formally requested the use of this document as a template for the development of a national model tribal child care standard. LCDR Snyder, demonstrating her dedication and professionalism, volunteered to serve as the IHS DEHS representative on the national ACF OCC team who will be developing a national model tribal child care standard in 2016.

PROFESSIONALISM

LCDR Snyder received her B.S. degree in Environmental Health in 2004 from Old Dominion University. She is currently in her first year of the Master of Public Health program at George Washington University. She earned her REHS/RS from the National Environmental Health Association in 2005. She is a certified child passenger safety technician and a 2009 graduate of the IHS IP Specialist Fellowship. She is a ServSafe Certified Food Safety Instructor/Proctor and the only IHS EHO who is a Certified Lead Inspector/Risk Assessor in EPA Region 9.

After two initial assignments with the Virginia Department of Environmental Quality, LCDR Snyder began her career with IHS in 2007 as an Environmental Health Officer stationed in Parker, AZ. In her relatively short time as an IHS Commissioned Corps Officer, LCDR Snyder has quickly become recognized as a leader and subject matter expert by her peers and serves on the WebEHRS eSurvey national IHS workgroup and the IHS IPP Academic Review Committee. She also contributed to the Centers for Disease Control Model Aquatic Health Code, first published in 2014.

LCDR Snyder exceled while managing a much larger than usual workload typical of an IHS District Environmental Health Officer. In 2015, LCDR Snyder successfully balanced her routine assignments along with serving as the acting CA DEHS Director and the CA IP Specialist. She consistently utilizes the public health approach and ten essential services to inform and prioritize her day to day activities to ensure that services delivered are targeted to satisfy core program elements and address known and emerging environmental health risks. For example, LCDR Snyder's injury surveillance efforts for the CA led to the identification of low seatbelt usage amongst teens in tribal communities as a key target area for the CA IP Program. In response, she sought new methods and resources to assist tribes contending with this issue. As a result, the Arizona Battle of the Belt program was tapped as a resource to use as an intervention for the 2016-2020 GPRA indicator for injury prevention in the CA. In addition, LCDR Snyder designed a survey for use at the annual Health Program Leaders meeting which served to market services available through the CA DEHS Program and create a baseline inventory of the occupational health risk factors in CA typical of tribal healthcare facilities (e.g. nitrous oxide, x-ray radiation). Such facilities were subsequently targeted for regular survey assessments of these risk factors.

SUMMARY

LCDR Snyder exemplifies the highest qualities of leadership and commitment to the mission of the Indian Health Service. She has become a cornerstone of the CA DEHS Program and a role model among staff/peers. Her extraordinary knowledge, expertise, creativity, and dedication have contributed to elevating the health status of Indian people. Foremost, her contributions to the CA DEHS Program have had a major positive impact on the lives, health, and well-being of thousands of Indian people throughout California.



LCDR Snyder leading a food service sanitation survey.

In 2008, the IEH program began awarding the Gary J. Gefroh Safety and Health Award, in honor of CAPT Gefroh who served the Indian Health Service (IHS) for 20 years providing expert technical consultation in the fields of healthcare accreditation, safety management, infection control, industrial hygiene and radiation protection. The purpose of the Gary J. Gefroh Safety and Health Award is to recognize significant contributions by an individual or group resulting in improved healthcare safety and/or infection control conditions at an IHS and/or tribal healthcare program. All IHS or tribal employees are eligible who have made significant contribution to the identification, reduction, control, or elimination of safety or infection control hazards in the healthcare setting.

Table 9: Gefroh Award Winners, 2015 through 2008.

Year	Winner	Profession	Area/Facility
2015	Emily Warnstadt	Dental Hygienist	Portland Area (Team Award)
2015	Angel Daniels- Rodriguez	Medical Technologist	Portland Area (Team Award)
2014	Brian Hroch	IEH Officer	Albuquerque Area
2013	Greg Heck	Safety Officer	Phoenix Indian Med. Ctr.
2012	Jeff Morris	IEH Officer	Chickasaw Nation Div of Health
2011	Tim Duffy	IEH Officer	Bemidji Area
2010	Wayne Keene	Safety Officer	Northern Navajo Med. Ctr.
2008	David Cramer	Safety Officer	Phoenix Indian Med. Ctr.

GARY J. GEFROH SAFETY AND HEALTH AWARD 2015

I CDR ANGEL DANIELS RODRIGUEZ AND LT EMILY WARNSTADT

SUMMARY OF ACCOMPLISHMENTS:

- Expanding and re-invigorating the infection control committee
- Instituting an aggressive environmental surveillance initiative
- Expanding infection control training
- Revising and implementing new policies and procedures based on best practices
- Increasing compliance with OSHA Respiratory Protection Standards

INTRODUCTION

LCDR Daniels Rodriguez and LT Warnstadt serve at Yakama Service Unit, Toppenish, WA. LCDR Angel Daniels Rodriguez is a Medical Technologist and serves as the Laboratory and Radiology Supervisor. LT Emily Wamstadt is the sole Dental Hygienist in the Dental Department. Officers Daniels Rodriguez and Warnstadt volunteer to serve on the Infection Control Committee to improve healthcare safety and infection control conditions for patients.

LEADING CHANGE

LCDR Rodriguez and LT Warnstadt began their assignment as co-leaders of the Infection Prevention Team in January 2015. They immediately began an aggressive surveillance initiative encompassing several departments and programs within the Service Unit. They revised the Infection Control committee incorporating key personnel to represent each department within the Service Unit. Thereby creating buy-in and ensuring that this interdisciplinary team core focus and function was to reduce risk for patients and clinic staff through early detection, education, active surveillances, and ongoing preventative measures.

Both Officers attended an Infection Control Training in March of 2015 earning 20.75 hours of continuing education. When they returned, a new policy and



LCDR Angel Daniels Rodriguez and LT Emily Warnstadt.

procedure manual was implemented to ensure compliance with the CDC and the Association for the Advancement of Medical Instrumentation (AAMI) which will result in completion of all required staff competencies.

UNIQUE AND INNOVATIVE

The officers began an extensive active surveillance of environmental surfaces throughout the entire clinic in the medical, dental and restrooms areas. They used growth of bacteria on culture media to determine whether daily terminal cleaning by housekeeping staff and nursing staff throughout the clinic were conducted appropriately. This was an intensive process, as each object (scales, chairs, door handles, tables, and blood pressure cuffs) were swabbed and cultured throughout the entire building. Four separate active surveillances were conducted.

The result of the surveillance resulted in the implementation of cleaning checklists. The officers established an Environmental Services cleaning checklist implemented clinic-wide for all exam rooms, triage rooms, and restrooms. The checklist is utilized daily by nursing staff before the first patient, after each patient, and at the end of the day. The housekeeping staff utilizes their checklist at the end of the day when they perform terminal cleaning in designated areas. Each checklist is reviewed on a monthly basis by the Infection Control officer and corrective actions are taken to correct all deficiencies.

INFECTION CONTROL NEEDS AND IMPORTANCE

Based on their active surveillance, several other needs were identified to improve the infection control program. As a result new and expanded infection control initiatives were established throughout the clinic.

- Regular in-service trainings were held during interdepartmental dental and medical meetings. This resulted in 100% compliance to appropriate usage of medical/dental heavy duty utility gloves for decontamination of the dental units when handling dental sharps equipment.
- Established continuous monitoring system of the dental water testing to ensure that the unit water lines are cleared of bacteria. This data is reported quarterly to Infection Control Committee.

- Improved forms for Hand Hygiene modeled after World Health Organization to conduct active surveillances of each department using staff as surveyors. The improved forms increased our compliance rates of and improved hand hygiene rates from 85% to 97.3%.
- Increased compliance of the Respiratory Protection Program ensuring all required employees are required to wear respiratory protection as a condition of employment that conforms to the OSHA Respiratory Protection Standard, 29 CFR 1910.134. Only one person was trained to perform mask fit testing which severely limited the availability of fit testing. An OSHA N95 Respiratory Protection and mask fit testing training was held on November 2015. Additional staff were trained to assist with mask fit testing and the medical evaluation questionnaire was modified for easier use. To better reinforce compliance the Washington State, the TB program coordinator provided an inservice to the medical staff on TB protocols. These additional measures resulted in an increase compliance of staff active participation in the Respiratory Protection Program from 75% to 98%.
- Air purifiers were placed in the laboratory and phlebotomy areas to prevent cross contamination between patients, and to reduce dust particles in the environment.

CAPACITY DEVELOPMENT

To insure a continued high level of infection control and efficiency will be maintained in the future, officers Warnstadt and Daniels Rodriquez established new and revised training policies and guidelines. An annual risk assessment will be completed by the Infection Control committee members to guide and determine probability risk, potential impact, current preparedness of potential risks and problems that might be encountered within the clinic and community. Annual Competencies for sterilization will be completed by all medical and dental staff. The housekeeping staff will receive annual training on BBP and hand hygiene that is specifically relevant to their work.

INFECTION CONTROL IMPACT

In addition to the improvements listed above, their hard work and accomplishments were acknowledged during an accreditation survey. There were no discrepancies noted in the area of infection control, and the Infection Control committee received high praises from the surveyors.

LCDR Angel Daniels Rodriguez and LT Emily Warnstadt are passionate about providing a functional, safe, and sanitary environment to provide better patient healthcare at the Yakama Service Unit. LCDR Angel Daniels Rodriguez and LT Emily Warnstadt exemplify proactive commitment to improving infection control outcomes.

Program Vision

The vision of the DEHS is "Every American Indian and Alaska Native will live in a safe, healthy environment. Community-based environmental health programs, developed in partnership with tribes, will utilize sound public health practices and resources to achieve the lowest disease and injury rates in the nation." Using this vision statement, the DEHS Program leadership (HQ and Area Directors) identified seven Vision Elements that would have the most positive impact on the Program.

DEHS VISION ELEMENTS

- 1. A nationwide clear and uniform definition of needs to make a compelling case for budget and prioritization of our work.
- 2. A dynamic, effective, and sustainable DEHS data system.
- 3. Standardized guidelines across the program that support uniform program management and result in positive outcomes.
- 4. Active involvement in budget and RRM discussions.
- 5. Increase the visibility, understanding, and value of the EHS program among internal and external stakeholders.
- 6. Create a career competency roadmap promoting highly qualified, innovative and effective staff able to meet the DEHS mission.
- 7. Develop an operational model that identifies and provides operating guidelines and best practices.

In addition to Area efforts to develop policies and plans, program strategic planning continued to be a major national emphasis during 2015. Over 45 DEHS staff have been involved on teams formed to create significant, tangible progress on the seven Vision Elements since the February 2007 DEHS Directors' meeting held in Nashville, Tennessee.

Vision Element Teams are supported by a Core Group of HQ and Area-level staff. The Core Group is responsible for clearly defining the charge to the team, reviewing work products, and for providing input to each of the teams.

Summary of the accomplishments of Vision Element Teams:

- Team 1 An Improved Definition of Needs: In 2009, this team developed five DEHS briefing documents for the five national priorities they established in 2008. These documents outline the public health significance of each of the priorities. These national priorities are children's environment, safe drinking water, food safety, vectorborne and communicable diseases, and healthy homes. Currently, IHS is using the priorities and templates to guide the DEHS Program.
- Team 2 A Dynamic, Effective, and Sustainable Data System: Team 2 developed a feasibility study with five alternatives for replacing the existing DEHS data system, WebEHRS (the Web-based Environmental Health Reporting System). During the 2009 meeting in Tulsa, Area representatives approved alternative 5, a Commercial-Off-The-Shelf system that will be modified to meet IHS needs. Funds for the first year were secured at HQ, and staff procured the services for this system. The contract for the development of the system was signed in 2010, and the new system is currently in use. A dynamic stage of implementation, including collecting and incorporating user feedback, continued into 2015.

- **Team 3 Standardized Guidelines:** This team revised Part 3, Chapter 11 Environmental Health of the Indian Health Manual. This chapter establishes the policy, objectives, responsibilities, and functions of a comprehensive community-based Environmental Health and Engineering Program. Thanks to the efforts of this team, the updated chapter was signed into policy by the Acting IHS Director and published on July 15, 2013.
- **Team 4 Resource Requirement Methodology (RRM):** In 2008, Team 4 began drafting a written document and a slide presentation that explain how the DEHS RRM is calculated. RRM is used, in part, to determine funds distribution nationally and in the Areas. The final document was completed in 2010 and is in use.
- **Team 5 Effective Marketing to Internal and External Stakeholders:** In 2009, a Vision Element was added to the four Primary Vision Elements. It was found that there was a need to develop communication tools in order to demonstrate to our customers (the communities served, HHS and IHS personnel, and external partners) the breadth of our Program and positive impacts made on the health and well-being of tribal members. The team was charged with the development of a DEHS informational toolbox that provides DEHS personnel with presentation materials for effective communication of Program components, capacity, strengths, and achievements to a variety of audiences. The team produced an <u>informational slide presentation</u>, <u>brochure</u>, <u>publishing tips</u>, <u>"elevator" speech</u>, and business card template.
- **Team 6 Workforce Development:** In 2012 the directors gathered to revisit the strategic plan and refresh the list of vision elements. From the prioritized list one element was selected to be completed in 2013, workforce development. A workgroup formed to complete the following tasks:
 - 1. Create a competency model for staff;
 - 2. Create a list of opportunities to develop the workforce; and
 - 3. Develop an implementation plan.

The team's products will be practical, utilize current technology and resources, and include consideration of federal/tribal, specialties, and organizational levels. These products will result in a career competency roadmap promoting highly qualified, innovative and effective staff able to meet the DEHS mission. The efforts of this workgroup were slated to be completed in 2013, however refinements continue into 2015, and include recommendations for a competency model, a list of opportunities to develop the DEHS workforce, and suggested implementation steps.

Team 7 – Operational Model: In 2014 the directors selected this vision element to identify core services all Areas should provide the tribes. In 2015 the team drafted a chapter to be included in the OEHE Technical Handbook defining the operating guidelines for the DEHS and align with <u>Part 3</u> <u>Chapter 11 of the Indian Health Manual</u>.



24

DFHS Services Core Services to AI/AN Communities

The DEHS is a comprehensive, field-based program with an overarching responsibility to provide community environmental health support. We are leaders in the environmental health profession who provide a range of services on water quality, waste disposal, hazardous materials management, food safety, community injury prevention, vector control, occupational safety and health, and other environmental health issues.

For the DEHS, health monitoring activities not only include real-time surveys for a variety of public health-related issues but also the use of regional and national information systems to manage, track, and respond to trends and issues. Program staff had EH responsibilities for 19,416 facilities during 2015 (Source: WebEHRS Reports, National Establishment Counts*). Staff recorded 9,254 activities that monitored the environmental health status of these facilities (Source: WebEHRS Reports, Activities Summary). Figure 6 summarizes various types of completed activities. Of the 9,254 activities reported, 76% (7,021/9,254) were surveys, representing the most common activity. There were 357 training sessions conducted and 273 investigations completed.





Figure 6: Activities completed in 2015 as reported in WebEHRS.

*Other includes mobilize community, policy development, sample/test, evaluation, control, training received, and data collection.

*All reports used a filter that excludes Headquarters items.



The DEHS manages the <u>Notifiable Disease and External</u> <u>Cause of Injury</u> (NDECI) Web-based data retrieval system. The NDECI system retrieves specific injury or disease categories for tracking and reporting using "passively" exported Resource Patient Management System data to national programs. The application tracks and reports the targeted injury or disease categories via a Web-based application that can provide reports by national, Area, Service Unit, facility, and community levels. Data can be retrieved by International Classification of Diseases, 9th Revision, codes used to define the groupings for injuries, asthma, notifiable diseases, intestinal diseases, and vectorborne diseases.

The DEHS uses the Custom Data Processing, Inc., Environmental Health Inspection Management System to operate the DEHS Web-based Environmental Health Reporting System (WebEHRS). Features include electronic survey capabilities, tracking environmental health activities, a myriad of report functions, and a mobile application for field use.

Specialized Services to AI/AN Communities

The DEHS provides specialized services in IP and IEH through consultation and technical assistance. IP Specialists take the lead in working with communities to develop public health strategies to reduce the burden of injury experienced by AI/AN communities. IEH Specialists have skills to identify, evaluate, and respond to unique environmental safety hazards found in healthcare, educational, childcare, correctional, and industrial facilities. Accomplishments for the two specialized services can be found in this section of the report.

COMMUNITY INJURY PREVENTION PROGRAM

A comprehensive approach is more effective for implementation of IP interventions. Effective IP interventions incorporating all strategies (education, legislation, enforcement, and environmental modification) can have the most impact to improve public health. There were several comprehensive injury prevention interventions implemented by the Areas in 2015:

- Motor vehicle injury prevention effective strategies
 - Promotion of primary occupant restraint laws; DUI laws; distracted driving
 - Child Safety Seat fitting stations and community clinics
- Unintentional elder falls prevention programs (exercise, home safety assessments, clinical)
- Suicide prevention (youth aimed initiatives, locked gun storage)
- Violence prevention specifically in school-based bullying prevention
- Drowning prevention (float coats)
- Fire safety (installation of smoke alarms, home safety)
- Advocacy and training targeting tribal leadership
- Targeted media awareness campaigns in AI/AN communities

Starting in FY 2014, CDC's Tribal Motor Vehicle Injury Prevention Programs (TMVIPP) funded eight tribes/tribal organizations (Oglala Sioux Tribe, Caddo Nation, Hopi Tribe, Rosebud Sioux, Sisseton- Wahpeton Oyate of Lake Transverse Reservation, Colorado River Indian Tribes, California Rural Indian Health Board, Southeast Alaska Regional Health Consortium). The DEHS staff at these tribes provided various levels of valuable technical support that ranged from project design and implementation to data collection and quality assurance. TMVIPPs incorporated at least two interventions from the Guide to Community Prevention Services (http://www.thecommunityguide.org/mvoi/index. html) that included evidence-based road safety interventions designed to increase seatbelt use, child safety seat use, and decrease alcoholimpaired driving.

The IHS <u>Tribal Injury Prevention Cooperative Agreement Program</u> (TIPCAP) started in 1997 to help tribes/tribal organizations build IP infrastructure and capacity. TIPCAP applies the public health approach to employ effective strategies that address education, policy development with enforcement and environmental modifications to ensure effective, and sustainable programs. TIPCAP projects address the IHS IP program priorities of motor vehicle injury prevention and unintentional elder fall prevention. It also supports local tribal community IP priorities such as suicide prevention, violence prevention, drowning prevention, helmet use, poisoning prevention, and fire safety. The final year of the 2010-2015 funding cycle was 2015 and marked several achievements such as the development of fall prevention programs, one reservation's seatbelt use increase from 71% in 2010 to 85% in 2015, and another reservations increase of seatbelt use to 87%.
Since 1997, over \$23.5 million has been awarded to 91 tribes or tribal organizations. During the initial 1997 funding cycle, 13 tribes/tribal organizations were each awarded \$25,000 for three years to create injury prevention programs, and four were awarded up to \$8,000 each for training. As TIPCAP matured so did the funding amount and number of participating tribes. In 2010, approximately \$2.47 million was distributed through 33 cooperative agreements ranging from \$10,000 to \$80,000. Sixteen new tribes/tribal organizations were awarded at \$65,000 for five years. Seventeen tribes/tribal organizations/urban programs received \$80,000 for five years. Seven Tribes received funding for projects at \$10,000 for three years.

A summary of this funding, by Tribe, is presented in Table 10.

Funding Cycle	1997 to 2000		2000 to 2005		2004		2005 to 2010			2010 to 2015			
Tribo	\$25,000	Up to \$8,000	\$50,000	\$15,000	\$5,000	\$50,000	\$15,000	\$75,000	\$50,000	\$10,000	\$65,000	\$80,000	\$10,000
	for 3 yrs	for 1 yr	for 5 yrs	for 3 yrs	for 1 yr	for 2 yrs	for 2 yrs	for 5 yrs	for 5 yrs	for 3 yrs	for 5 yrs	for 5 yrs	for 3 yrs
Absentee Shawnee Tribe											Х		
Ak-Chin Indian Community				Х									Х
Aleutian Pribilof Islands Association		Х											
Aroostook Band of Micmacs							Х						
Bad River Band of Lake Superior Tribe of Chippewa Indians			Х									Х	
Bristol Bay Area Health Corporation	Х												
Bristol Bay Area Health Corporation									Х			Х	
Caddo Nation			Х					Х					
California Rural Indian Health Board, Inc.			Х					Х				Х	
Chickasaw Nation			Х										
Chilkoot Indian Association							Х						
Chitimacha Tribe of Louisiana										Х			Х
Choctaw Nation of Oklahoma									Х			Х	
Colorado River Indian Tribes			Х								Х		
Comanche Nation of Oklahoma			Х										
Dakota Center for Independent Living					Х								
Eastern Band of Cherokee Indians			Х										
Fallon Paiute Shoshone Tribe	Х												
First Mesa Consolidated Villages			Х										

Table 10: IHS TIPCAP Funding.

Funding Cycle	1997 to 2000		2000 to 2005		2004		2005 to 2010			2010 to 2015			
Tribo	\$25,000	Up to \$8,000	\$50,000	\$15,000	\$5,000	\$50,000	\$15,000	\$75,000	\$50,000	\$10,000	\$65,000	\$80,000	\$10,000
IIIDe	for 3 yrs	for 1 yr	for 5 yrs	for 3 yrs	for 1 yr	for 2 yrs	for 2 yrs	for 5 yrs	for 5 yrs	for 3 yrs	for 5 yrs	for 5 yrs	for 3 yrs
Fond Du Lac Reservation			Х					Х				Х	
Fort Peck Assiniboine & Sioux Tribes	Х			Х									
Gerald L. Ignace Indian Health Center				Х									
Gila River Indian Community											Х		
Grand Traverse Band of Ottawa and Chippewa Indians					Х		Х						
Great Plains Tribal Chairmen's Health Board											Х		
Greenville Rancheria													Х
Hardrock Chapter			Х					Х				Х	
Ho-Chunk Nation											Х		
Hoopa Valley Tribe	Х		Х										
Houlton Band of Maliseet Indians		Х		Х						Х			
Hualapai Tribe											Х		
Indian Health Council, Inc.									Х			Х	
Jamestown S'Klallam Tribe	Х												
Jena Band of Choctaw Indians										Х			
Kiowa Tribe of Oklahoma									Х			Х	
Kodiak Area Native Association			Х										
Lac Vieux Desert Band of Lake Superior Chippewa Indians										Х			
Maniilaq Association											Х		
Menominee Indian Tribe of Wisconsin											Х		
Miccosukee Corporation	Х												
Mille Lacs Band of Ojibwe				Х									
Mount Sanford Tribal Consortium							Х						
Nambe Pueblo										Х			
Navajo Nation			Х					Х				Х	
Nevada Urban Indians Inc.							Х						
NNAHA Ojibwe Tribes								Х					

Funding Cycle	1997 to 2000		2000 to 2005		2004		2005 to 2010			2010 to 2015			
T .: .	\$25,000	Up to \$8,000	\$50,000	\$15,000	\$5,000	\$50,000	\$15,000	\$75,000	\$50,000	\$10,000	\$65,000	\$80,000	\$10,000
Iribe	for 3 yrs	for 1 yr	for 5 yrs	for 3 yrs	for 1 yr	for 2 yrs	for 2 yrs	for 5 yrs	for 5 yrs	for 3 yrs	for 5 yrs	for 5 yrs	for 3 yrs
Northwest Portland Area											Х		
Indian Health Board													
Indian Health Board											Х		
Norton Sound Health Corporation						Х			Х			Х	
Oglala Sioux Tribe									Х		Х		
Oneida Tribe of Wisconsin						Х			Х			Х	
Osage Nation of Oklahoma	Х								Х				
Pascua Yaqui Tribe of Arizona			Х										
Pawnee Nation of Oklahoma						Х							
Pokagon Band of Potawatomi Indians	Х												
Ponca Tribe of Nebraska		Х		Х									
Ponca Tribe of Oklahoma		Х	Х										
Pueblo of Jemez	Х		Х					Х				Х	
Pyramid Lake Paiute Tribe										Х			
Quechan Indian Tribe									Х			Х	
Reno-Sparks Indian Colony			Х								Х		
Rocky Boy Tribal Health			Х										
Rosebud Sioux Tribe				Х									
Sac & Fox Nation	Х												
San Carlos Apache											Х		
San Felipe Pueblo									Х			Х	
Sapulpa Indian Health Center										Х			
Sault Ste. Marie Tribe of Chippewa Indians					Х								
Seneca-Cayuga Tribe of Oklahoma										Х			
Sisseton-Wahpeton Oyate of the Lake Traverse						Х			Х			Х	
South East Alaska Regional Health Consortium			Х					Х				Х	
Southcentral Foundation				Х			Х						
Southern Ute Indian Tribe													Х

Funding Cycle	1997 to 2000		2000 to 2005		2004		2005 to 2010			2010 to 2015			
T.it.	\$25,000	Up to \$8,000	\$50,000	\$15,000	\$5,000	\$50,000	\$15,000	\$75,000	\$50,000	\$10,000	\$65,000	\$80,000	\$10,000
Inde	for 3 yrs	for 1 yr	for 5 yrs	for 3 yrs	for 1 yr	for 2 yrs	for 2 yrs	for 5 yrs	for 5 yrs	for 3 yrs	for 5 yrs	for 5 yrs	for 3 yrs
Spirit Lake Tribe			Х										
St. Regis Mohawk Tribe			Х										Х
Standing Rock Sioux Tribe									Х				
Stockbridge-Munsee Community Band Mohican Indians				Х						Х			Х
Tanana Chiefs Conference											Х		
The Kaw Nation			Х					Х				Х	
Three Affiliated Tribes			Х										
Toiyabe Indian Health Project, Inc.									Х				
Trenton Service Area			Х										
Tuba City											Х		
Tule River Indian Tribe											Х		
United Tribes Technical College	Х		Х										
Ute Indian Tribe						Х							
Walker River Paiute Tribe													Х
White Earth Reservation Tribal Council				Х						Х			
White Mountain Apache Tribe				Х					Х				
Wichita and Affiliated Tribes				Х									
Winslow Indian Health Care Center, Inc.						Х							
Yavapai-Prescott Indian Tribe	Х												
Ysleta del Sur Pueblo	Х												

The collaboration between the IHS IP Program and <u>The IHS Primary Care Provider</u> began in 2007 to dedicate each July issue to injury prevention. The 2007-2015 issues presented articles on cost of injuries, guiding principles of the IP Program, TIPCAP, a case study on partnerships, and strategies addressing issues such as lack of occupant restraint use in motor vehicles, gang violence, suicide, community-based prevention, and tribal epidemiology centers.

INSTITUTIONAL ENVIRONMENTAL HEALTH PROGRAM

One of the primary objectives of the Institutional Environmental Health Program is to support local safety programs. This is done through providing education opportunities, management of the IHS Web-based Incident Reporting System (WebCident), onsite technical support, accreditation assistance, and safety program evaluation.



IHS Workers' Compensation Cases



One of the few existing metrics for measuring success of safety programs is the number of occupational injury cases and occupational injury rates. Figure 7 illustrates the occupational injury case numbers and rates for IHS federal employees. When compared to the Bureau of Labor Statistics data, IHS injury cases are consistently lower than those in the national healthcare industry. Figure 7 also indicates a trend of decreasing injury cases, total case rates, and lost-time case rates¹ for IHS from 2004 through 2015.

WebCident is a critical data collection and analysis tool supporting healthcare accreditation in the areas of information management, medication management, environment of care, and regulatory concerns for occupational safety and health reporting. Since the DEHS launched the system in 2002, WebCident has collected information on more than 34,723 worker, visitor, and patient incidents at over 200 IHS and tribal hospitals, health centers, health stations, dental stations, school health stations, youth regional treatment centers, and Area and other offices. During 2015, there were 3,667 incidents reported.

The reporting of incidents and analysis of WebCident data has an impact on the reduction of risk in the work environment through heightened awareness, the development of interventions such as educational programs, changes to policy and work practices, and environmental modification.

These impacts may result in the reduction of occupational injury and workers' compensation cases.

Figure 8, shows the potential impact of incident reporting on the reduction of workers' compensation cases (Source: Office of Workers' Compensation Programs (OWCP)).

¹ Lost-time injuries are generally considered more severe injuries which result in lost workdays. These injuries are a subset of the total injury case rate..



Impact of WebCident on Workers' Compensation Claims

Figure 8: WebCident worker injury incidents and Office of Workers' Compensation Programs injury cases; 2004-2015.



The Environmental Health Services Program of the Indian Health Service: **ANNUAL REPORT 2015**



Ms. Dobson and Mr. Vicente collect secondary treated wastewater for a greywater project.

The Environmental Health Services Program of the Indian Health Service: ANNUAL REPORT 2015

DEHS National Focus Areas

The DEHS delivers a comprehensive EH program to more than 2.2 million AI/AN people in 35 states. We consult with and provide technical assistance to tribes in an effort to provide safe, healthy environments. In 2008 DEHS identified five national focus areas: children's environment, safe drinking water, food safety, vectorborne and communicable diseases, and healthy homes. On the following pages you will find descriptions of each of the focus areas and highlights of projects conducted by the IHS Areas in 2015. Evidence-based or promising practices are used most often, but specific projects are also evaluated for effectiveness. Comprehensive interventions use a multi- targeted approach involving education, environmental modification, legislation, and enforcement. The following four key activities are common to each of the focus areas:

- Conduct inspections that identify EH risk factors
- Suggest corrective actions to reduce or eliminate risk factors
- Conduct investigations of disease and injury incidents
- Provide EH training classes to federal, tribal, and community members



Children's Environment

The DEHS is responsible for ensuring EH settings for Al/AN children are safe and ultimately provide a healthy environment in which to learn, play, and grow. EH issues associated with children are present in schools, HS Centers, and childcare facilities on tribal lands. These issues present an ever-increasing set of complex challenges to be addressed. A few examples of EH related issues of concern are as follows: indoor air quality, lead exposure, and infectious disease exposure. The DEHS staff provides services to approximately 3,000 child-occupied facilities as well as services in community housing. Comprehensive interventions, based on local surveillance, are conducted to reduce the impact of disease and injury in the communities.

Many indicators of effective programs focus on reducing the number of critical or repeat violations within a particular facility. Critical violations are threats to the public's health that need to be corrected immediately, and repeat violations occurred in more than one consecutive facility inspection. The DEHS staff focus on eliminating risk factors related to fire safety, emergency response, asthma triggers, lead-based paint, bullying, communicable disease exposure, and child passenger safety. Projects with an emphasis on the children's environment conducted in 2015 can be found on the following pages.



LEAD POISONING JAMES ISAACS

OKLAHOMA CITY AREA

INTRODUCTION

Within the state of Oklahoma, lead poisoning in children, especially Native American children, ages 1-5 is still a major public health concern. Many of these children live in homes that contain lead-based paint that has deteriorated to form lead dust, thus exposing children to unsafe levels. To ensure that staff have the competencies to effectively address the concern of lead dust hazards, several became EPA certified lead inspectors/risk assessors. Three of five recent assessments where lead dust sampling was performed revealed levels at extremely high levels. During each site assessment, parents/caregivers were provided with basic education on how to reduce exposure along with information to assist in remediating known hazards. I explain the process and highlight one case study.

METHODS

During every home site assessment, a detailed questionnaire was completed by the home owner to determine potential sources of lead exposure (e.g. deteriorated paint, types of toys and food containers, hobbies, other locations) to determine if lead dust sampling was needed. If sampling was warranted, careful attention was given to locations where the child spent the majority of their time. Lead dust sampling was conducted using guidance from 40 CFR Part 745 and 24 CFR Part 35. All samples were submitted to an accredited lab for analysis. As soon as results of all samples were available parents/caregivers were immediately contacted.

RESULTS

During one assessment that was conducted as a result of receiving a referral for a child with an elevated blood lead level, dust sampling was conducted (Table 1). Samples were taken from areas identified on the assessment form as being high risk for potential exposure. These included the playroom/living room, dining room window seal, and front porch.

TABLE 1

S N	ample lumber	Room	Surface Type	Dimensions (inches x inches)	Area (ft²)	Results of lab analysis (µg/ft²)	
	A1	Play Room	Floor	12 x 12	1	434	
	B2	Dining Room	Interior Window Sill	2 x 8	0.1	45.1	
	C3	Front Porch	Floor	12 x 12	1	445	

DISCUSSION

All high risk areas sampled contained extremely high levels of lead dust. Based on findings from the assessment form, which indicated locations within the home that the child occupied most frequently and the dust sampling results, the most likely source of exposure was the child's play room.

CONCLUSIONS/RECOMMENDATIONS

Lead exposure among children, especially Native American children, ages 1-5 is still a major health concern in Oklahoma. Although there is a tremendous amount prevention of education available to parents/caregivers, many do not realize the true dangers. Children continue to be at risk and poisoned, and parents/caregivers are unaware of it. In the past when homes assessments were done, lead dust hazards were rarely evaluated. In an attempt to address this issue, every home site assessment conducted will now include a component to evaluate the potential of lead poisoning and if sampling is required. In addition, educational materials in Head Starts and childcare centers will be provided to parents/caregivers to educate them on the potential hazards, along with contact information to request a home site assessment.





Safe Drinking Water



The DEHS is one of the partners responsible for ensuring safe drinking water for AI/AN people. EH issues associated with drinking water can be caused by organisms or contaminants spread through water. Examples of waterborne illnesses include Giardiasis, Shigellosis, Cryptosporidiosis, lead poisoning, and copper toxicity. Annually, the DEHS staff report approximately 300 activities related to drinking water.

There were no projects with an emphasis in safe drinking water reported in 2015. The DEHS staff focused on eliminating risk factors related to the operation and maintenance of water systems.



The Environmental Health Services Program of the Indian Health Service: ANNUAL REPORT 2015

Food Safety

The DEHS staff provide services at more than 5,000 food service facilities across the country. The CDC estimates over 48 million cases of foodborne illness occur in the United States annually,128,000 of which require hospitalization and 3,000 of which are fatal. Organisms that result in the most common foodborne illnesses include Norovirus, Salmonella, Clostridium perfringens, Campylobacter, and Staphylococcus aureus (CDC, Estimates of Foodborne Illness in the United States, 2011, available at: http://www.cdc.gov/foodborneburden/2011-foodborne-estimates.html).

Effective programs focus on reducing the number of critical or repeat violations within a particular facility. Critical violations are threats to the public's health that need to be corrected immediately, and repeat violations occurred in more than one consecutive facility inspection. Some DEHS staff focus on eliminating risk factors related to inspector bias through standardization of the inspection process. Other staff work to persuade tribal councils to pass food code legislation, whereas others focus on eliminating specific deficiencies (e.g. temperature control, hand washing, and/or employee health).

Implementation of effective EH strategies can substantially reduce disease and injury rates. For instance, from 2001 through 2014, as the number of services provided by IHS to food service establishments and

drinking water systems increased 89% (2214 to 4190), the incidence of food and waterborne diseases in the United States decreased 58% (60.2 to 25.52) (Figure 9). Projects with an emphasis on food safety conducted in 2015 can be found on the following pages.



Figure 9: Trends in services and reportable food and waterborne illnesses.

Sources: * CDC MMWR, Summary of Notifiable Diseases, United States. ** IHS WebEHRS Data System.

FOOD SURVEY INDICATORS FOR TRACKING FOOD SAFETY – 2012-2015 CASEY CRUMP

BEMIDJI AREA

INTRODUCTION

During retail food service surveys, Bemidji Area DEHS staff is required to collect data pertaining to five indicators. These indicator data are used to:

- 1. Identify critical food safety deficiencies and risk trends in our Area
- 2. Set program priorities and goals
- 3. Evaluate the effectiveness of our food safety program
- 4. Ensure food service establishments meet the standards identified by the CDC as most important for reducing the risk of foodborne illness

METHODS

Indicators were identified using WebEHRS data from previous years, baseline date and data established, and ccollected using survey reports entered into WebEHRS.

- Certified Food Protection Manager (CFPM) Demonstration of Knowledge
- 2. Exclusion Policy Workers with illness are excluded/restricted from working in food establishment
- 3. Hand Washing Practices Clean hands properly washed
- 4. Bare Hand Contact with Ready to Eat Foods
- 5. Cooling Proper cooling time and temperatures

RESULTS

The results indicated compliance remained steady and the tracking of data using WebEHRS may have allowed for a more accurate evaluation of the indicators.

TABLE 1: Minnesota District Office Food Indicator Data Compilation, 2015 (n=119).

MDO	In Compliance	Out of Compliance	No. of Facilities Assessed Properly	2015 Percent In Compliance	2014 Percent In Compliance	2013 Percent In Compliance	2012 Percent In Compliance
Item 1: CFPM	112	7	119	94%	88%	92%	91%
Item 2: Exclusion	112	7	119	94%	87%	94%	27%
Item 6: Hand-washing	78	41	119	66%	71%	66%	74%
Item 7: Bare Hand Contact	119	0	119	100%	98%	99%	88%
Item 18: Cooling	115	4	119	97%	98%	95%	77%

RDO	In Compliance	Out of Compliance	No. of Facilities Assessed Properly	2015 Percent In Compliance	2014 Percent In Compliance	2013 Percent In Compliance	2012 Percent In Compliance
Item 1: CFPM	132	4	136	97%	97%	91%	88%
Item 2: Exclusion	136	0	136	100%	97%	99%	88%
Item 6: Hand-washing	105	31	136	77%	82%	91%	73%
Item 7: Bare Hand Contact	135	1	136	99%	99%	99%	95%
Item 18: Cooling	135	1	136	99%	97%	99%	86%

TABLE 2: Rhinelander District Office Food Indicator Data Compilation, 2015 (n=136).

DISCUSSION

These preliminary results revealed compliance was very high (>90%) for all indicators except handwashing in both Districts. We believe the large increase of those indicators from 2012 to 2015 is due to: 1) implementation of a comprehensive training program for facilities we serve; 2) education of Human Resource Departments and development of sample exclusion policies; and 3) better tracking of data using WebEHRS. We will address the low compliance with handwashing by increasing our on the spot training program for proper handwashing and by working with facilities to ensure policies, procedures, and necessary equipment are present.

CONCLUSIONS/RECOMMENDATIONS

The following areas for improvement were identified:

- 1. Additional staff training and standardization
- 2. Focused customer training and follow-up visits to improve compliance with hand washing practices

Beginning in 2015 three additional risk factors were added to the original five: proper cold holding temperatures; proper date marking and disposition; and in-use utensils, properly stored. These indicators were chosen because they were most frequently marked out of compliance during routine surveys. We will establish the baseline for these and begin to work with our food service partners to ensure the best practices to correct these are implemented. We will continue to implement best practices to further reduce the occurrence of these critical risk factors with a goal of increasing handwashing in both Districts and begin a new focus on reducing occurrence of the three added risk factors.

FDA STANDARDIZATION OF CALIFORNIA AREA ENVIRONMENTAL HEALTH OFFICERS AARON MCNEILL

CALIFORNIA AREA

INTRODUCTION

The California Area Division of Environmental Health Services (CADEHS) food safety program strives to reduce and prevent the incidence of foodborne illness within food service operations. To enhance the quality and effectiveness of the CADEHS retail food safety program, we enrolled in the FDA Voluntary National Retail Food Standards Program in 2015. This national program establishes best practices that enhance the quality of the food safety services provided by a participating program. We completed a self-assessment of our retail food safety program and began to work on conformance with Standard 2: FDA Standardization of food safety inspection officers. The purpose of standardization is to ensure uniformity in the inspection process and the documentation of risk factors. Conformation with Standard 2 when combined with the ability to use WebEHRS to record and perform trend analysis of risk factors will strengthen CADEHS food safety program. Together, these efforts allow us to develop and implement effective strategies which reduce the risk of the transmission of foodborne illnesses by tribal retail food establishments in the California Area.

METHODS

Standardization of food safety inspection officers in CADEHS adheres to the 5 step training and standardization process outlined in Standard 2.

1. Complete the 31 FDA Office of Regulatory Affairs' University (ORAU) online training prerequisite classes.

- Candidates complete joint inspections with the CADEHS standardization officer. At least 25 joint inspections are necessary before a candidate is deemed to have successfully demonstrated the required performance elements and competencies.
- 3. Candidates complete 25 independent field inspections and required post training at FDA ORAU.
- Candidates complete 8 field standardization surveys which are observed and evaluated by the CADEHS standardization officer. Performance elements include HACCP verification, a risk control plan and a food flow diagram.
- 5. Candidates complete 20 hours of continuing education every 3 years after initial standardization.

RESULTS

CADEHS did not have staff who were FDA standardized in 2014. At the time, the out of compliance rate for food safety risk factors in the Area was 3.60%. By March 2015, 60% of CADEHS staff were FDA standardized. A significant increase in the number of risk factors identified during surveys in 2015 correlated with the increase in the number of CADEHS staff who were FDA standardized. By the end of 2015 the out of compliance rate for food safety risk factors increased to 4.20%.

Standardization: Before and After



DISCUSSION

As all staff become standardized the out of compliance rates should begin to stabilize in time. As a result of the standardization process and identification of out of compliance risk factors, staff will begin to provide education and implement interventions which should begin to lower the out of compliance rates across the California Area.

Percent of Standardized Staff

CONCLUSIONS/RECOMMENDATIONS

In conclusion, completing standardization for all CADEHS staff is an excellent way to achieve uniformity in the survey process and documentation of risk factors, and create a dataset in WebEHRS which can be analyzed for trends in foodborne illness risk factors.

VIBRIO RISK REDUCTION PROJECT MOLLY MADSON AND SARAH SNYDER

CALIFORNIA AREA

INTRODUCTION

Vibrio is a bacteria naturally occurring in marine environments known to cause illness after consuming raw or undercooked seafood. In California, approximately 100 cases of *V. parahaemolyticus* occur each year along with 2-5 cases of *V. vulnificus* and/or *V. cholera*. Concern regarding the transmission of *Vibrio* by tribal restaurants arose after two confirmed cases were reported in California. The goal of this project was to identify the risk of *Vibrio* transmission for each facility serving shellfish and offer interventions to management such as training, policy development and other resources to reduce the risk.

METHODS

A risk assessment form and associated risk scoring matrix was developed to quantify the risk of *Vibrio* transmission in facilities serving raw shellfish. The risk score matrix was based on known risk factors such as quantity, type and preparation of shellfish, and the adoption of source control policies and HACCP plans. The DEHS staff performed assessments at facilities serving raw shellfish and filed the assessment in a WebEHRS project file for subsequent risk scoring. In addition, the DEHS staff provided facility managers sample policies that included the seven main components for a comprehensive/effective policy upon completing the risk assessment.

RESULTS

A total of 22 *Vibrio* assessments were completed and scored using the risk scoring matrix developed by the California Area in 2015. A maximum risk score of 54 was possible using the matrix. Facilities were automatically scored 27 if they served shellfish from an unapproved source. An additional 27 points could be assigned based on cooking method/raw product, quantity and the associated risk of obtaining Vibrio per serving, and the facility's shellfish policies. The average initial risk score was 10 and initial risk scores ranged from 3 to 27. After the intervention by the DEHS staff, the average risk score dropped to 8.77 representing an overall reduction of 36.36%. No (0) facilities in this project served shellfish from unapproved sources. Facilities with higher risk scores served raw product, large quantities, and did not have a comprehensive shellfish policy in place.



DISCUSSION

The reduction of risk scores after the intervention by the DEHS staff reflects facility preparedness and the quality of shellfish policies in place. Through onsite training and providing resources to the facility managers, risk scores were reduced and represent a lower risk of acquiring Vibrio through the consumption of shellfish served by these facilities. Only 6 out of 22 facilities (27%) had some sort of shellfish policy in place prior to the project. After the intervention by the DEHS staff, more than half (55%) of the facilities had adopted a shellfish policy that met at least 5 of the 7 main components in a comprehensive/effective policy.

CONCLUSIONS/RECOMMENDATIONS

The California Area DEHS will continue to work with the high priority facilities identified through this project to continue reducing Vibrio risk factors. Many of the facilities have not made significant improvements to reduce risk factors and will be targeted for additional interventions. Specifically, facilities serving raw product will receive information related to their individual facility risk score and the benefits of switching to pasteurized product. By reducing the number of facilities serving raw product, the overall risk of Vibrio transmission in CA will decline. Vibrio Risk Reduction Project.





CUSTOMER SATISFACTION AND QUALITY ASSURANCE ASSESSMENT OF THE GREAT PLAINS AREA ALYSSA SHELTON



GREAT PLAINS AREA

INTRODUCTION

This assessment provides insight to the perception Great Plains Area (GPA) clients hold of the Area's DEHS survey process. One objective is to provide IHS and tribal staff recommendations for improving future surveys based on interviews with clients. One challenge faced during this project was locating accurate contact information for facilities. One primary recommendation resulting from this project is that, Environmental Health Specialists in the GPA fully utilize the online data collection system, WebEHRS, to update survey results and contact information.

METHODS



To complete this assessment, a total of 15 phone interviews were conducted of school, Head Start and elder food center operators or managers. In order to ensure an accurate representation of the Area, one client from each reservation and exactly five from each [DEHS] District were interviewed. A total of nine questions were asked, three of which were open-ended.

- 1. Have you ever participated in an environmental health survey?
- 2. Do you receive a copy of the written survey? If no, would you like to receive a copy of the written survey?
- 3. Do you enjoy the feedback you receive from the survey?
- 4. Do you find staff knowledgeable in the subject matter?
- 5. Do you feel you can ask staff questions or approach them with concerns?
- 6. Do you feel you would receive a helpful response if you did approach staff with a question or concern?
- 7. Describe 1 or 2 aspects of the survey process you like or find beneficial.
- 8. Describe 1 or 2 aspects of the survey process you do not like or do not find beneficial.
- 9. Is there anything else you would like to add?

RESULTS

All clients (15/15) agreed they enjoy the feedback received from surveys. All clients also found staff knowledgeable on subjects covered during a survey and felt staff are approachable and capable of answering questions regarding the subject matter.

The assessment did not identify one common benefit of surveys to DEHS clients. The respondents indicated that staff adapt to the learning styles of the clients. One client stated: "When I had just started working here I did not know I was doing things incorrectly. [The DEHS staff] helped to point things out and told me where I could buy test strips. He helped me transition." Another client shared the survey section they liked the most: "When they go over the material after the inspection. The pictures [in the reports] are helpful too in case I forget what was talked about specifically."

When asked for recommendations, 8 of 15 clients denied the surveys could be improved. They found the survey beneficial as is. Of those with responses, one mentioned that the EH staff "always arrive on inconvenient days."

DISCUSSION

This assessment shows that clients in the Great Plains Area are satisfied with IHS Environmental Health program services. However, this does not mean IHS cannot improve. The positive feedback reassures IHS that the healthy and supportive relationship needed to provide continuous improvement is being maintained.

A larger study with more facilities, facility types and more specific questions could provide more encompassing results that better represent the Great Plains Area.

CONCLUSIONS/RECOMMENDATIONS

With the results of this assessment, the DEHS staff can continue to fulfill client's needs to the best of their ability. Some recommendations for future DEHS surveys would be to continue/add the use of digital photos in written reports, provide supplemental information regarding their facility capacity, utilize the online record keeping system and maintain updated contact information in WebEHRS.

Vectorborne & Communicable Diseases

Diseases transmitted through humans, insects, or animals present an ever-increasing burden on human health. A few examples of vectorborne or communicable diseases include West Nile virus, H5N1 (Avian Influenza), hantavirus, Rocky Mountain spotted fever, and plague.

The DEHS staff work on the elimination of risk factors through identifying H5N1 in bird populations, conducting spay, neuter, and rabies clinics for dogs and cats, and investigating prairie dog dieoffs to prevent human plague cases. In 2015, staff focused on novel approaches to conducting rabies vaccination clinics and managing a healthcare facility environment of care, and indoor air quality.



DRIVE-THRU RABIES VACCINATION CLINICS: APPLYING POINT-OF-DISPENSING (POD) METHODS LANDON WIGGINS, MIKAYLA DEARDORFF, TIM SLOOP, AND AJ DENICOLA

PHOENIX AREA

INTRODUCTION

Providing rabies vaccination clinics is a major component of the Phoenix Area DEHS program. Clinics are coordinated in partnership with tribes and are focused on capacity building for the control and prevention of rabies virus and animal bite injuries. The large geographical area and the number of tribes served (30+) by the Reno District creates significant challenges to efficiently and effectively coordinating clinics.

- Staffing traditionally includes a veterinarian, 1-2 OEHE staff and occasional volunteers. Because of the wide variation in animal population, this has not always been adequate for managing the clinics.
- Clinics with a large turnout can result in long lines and a concentration of animals and owners in a small area. This can lead to animal altercations, bite injuries, pets escaping, and an overall inefficient process.
- Pilot tested drive-through rabies vaccination clinics using Point-of-Dispensing (POD) methods in the "Mass Dispensing Plan for Rural Nevada and POD" to determine if this model would allow us to:
 - maximize staffing and time resources
 - promote animal and human safety
 - provide a more efficient experience to tribal communities that we serve

Therefore, the Reno District elected to pilot drive-thru clinics using PODs.

METHODS

- Coordinate with tribes to evaluate needs and potential sites (3 months in advance).
- Gather first-hand site specific information on each proposed location and incorporate into the operational plan. Include points-of-contact, climate, maps, flow diagrams, access to buildings, current status of any use agreements with the tribe.
- Estimate anticipated turnout and assess the number of lanes that can be arranged in the POD.
- Minimum lane width: 13' with 18' radius for turns recommended.

Include emergency exit lane.

- Identify and mark suitable entrance and exit points for traffic control.
- Identify and stock points for stations: forms distribution, command and control, dispensing, supply depot, and first aid station.
 - Train staff on station/job functions
- Create and post station, information and directional signs (station function and directional arrows).
 - Design signage taking into account weather and wind events
- Incorporate an area to accommodate walk-ups without impeding traffic flow.

CONCLUSIONS/RECOMMENDATIONS

Outcomes

- Increased efficiency and capacity (multiple lanes)
- 12 drive-thru clinics: >350 animals vaccinated
- Improved organization (designated stations)
- Improved safety and health (reduced animal fights and bites)
- Improved process control (certificate completion and dispensing)
- Improved standardization and teamwork within the EH program

Challenges

- Required 4 staff to manage functions
- Procurement of signage and equipment
- Identifying a suitable location
- Inclement weather/heat







ALBUQUERQUE AREA'S GOVERNING BODY ENVIRONMENT OF CARE DASHBOARD AND SCORECARD RICHARD TURNER, BRIAN HROCH, GARY CARTER, SPENCER WEAVER, ANN BUCHANAN

ALBUQUERQUE AREA

INTRODUCTION

The Albuquerque Area developed a Dashboard and Scorecard for monitoring and reporting the status of the Area's Health Care Facilities (HCF's) for compliance and proper management of the Environment of Care's (EOC) Safety Management, Life Safety and Emergency Management programs. The status of these programs are critical for: 1) protecting patients, staff and visitors 2) monitoring and improving the Environment of Care and 3) maintaining compliance with accreditation and regulatory requirements. These management tools were developed through a multidisciplinary process with staff from the Area Office, OEHE and the Service Unit HCFs.

METHODS

After developing the EOC Dashboard and Scorecard templates, pilot testing was performed with two of the Area's Hospitals (Acoma Canoncito Laguna (ACL) and Mescalero). After testing, this process was implemented Area-wide for the first Governing Body meeting of 2016.

This process is as follows:

1. The Service Unit staff complete and update the individual EOC Dashboards and return them to the Area IEH program.

- 2. The IEH program will then review, analyze, summarize and score (Green, Yellow, Red) the updated Dashboards and enter into the Area-wide EOC Scorecard.
- 3. These results will be provided to the Area's Governing Body.
- 4. The Governing Body will address noteworthy deficiencies identified from EOC Dashboard.
- The EOC Dashboard should also be used by the Service Unit's Safety and Facility Management staff for planning and monitoring EOC activities.

RESULTS

This reporting process was successfully utilized for the Area's first Governing Body meeting of 2016. It allowed the Governing Body members, OEHE and IEH staff to review the Area-wide EOC Scorecard (Figure 1), and a summarized status of the Area's HCF EOC programs. Additionally, HCFs reported their satisfaction with the EOC Dashboard and have voluntarily begun using it as a planning and tracking tool.

DISCUSSION

With the numerous participants, components and requirements for managing an EOC program, the Dashboard and Scorecard, provide a structured approach to planning, documenting and reporting these numerous activities. The tool allows effective program management and planning locally. At the Area level, it assists with accreditation compliance and preparation. Additionally it allows for proper prioritization and focus of support to the Service Unit HCFs.

CONCLUSIONS/RECOMMENDATIONS

Recommendations for additional actions, include:

- 1. Continuing the use of the EOC Dashboard/ Scorecard by the Area's Governing Body.
- 2. Advocating for the HCFs to use the Dashboard as a management tool.
- 3. Refining and improving the Dashboard with suggestions from the HCFs.
- Sharing this process as a resource with other Area's and through the IHS Quality Consortium.



Figure 1: Aggregated Area-wide EOC Scorecard.

INDUSTRIAL PLANT INDOOR AIR QUALITY ASSESSMENT VINCENT SLAYTON-GARCIA, DAVE CRAMER, RICARDO MURGA, ISAAC AMPADU

PHOENIX AREA

INTRODUCTION

The DEHS program is responsible for helping tribes ensure that workplace indoor air quality (IAQ) is safe, sanitary, and fit for human habitation. At the request of tribes, the DEHS may assess buildings with suspected poor IAQ. Evidence exists linking poor IAQ with upper respiratory tract symptoms; dryness and irritation of the eyes, nose, throat, and skin; headache; fatigue; hypersensitivity and allergies; sinus congestion; coughing and sneezing; dizziness; and nausea.

A request for technical assistance was submitted to Service Unit EHO by a tribal sand and rock operation (rock quarry, rock crushing and asphalt mixing operation). Multiple administrative employees reported a history of symptoms consistent with poor IAQ. Possible sources included dust on surfaces in the office, noticeable fumes from the nearby asphalt plant, aerosolized dust from the truck traffic, and rising clouds of calcium hydroxide dust derived from the asphalt plant approximately 50 yards from the office building (Figures 1-3).

- Initial site and workplace assessment identified significant presence of dust from recurrent heavy duty truck traffic around administrative office and as a byproduct of the asphalt plant located approximately 50 yards from the administrative office.
- Silica sampling initiated using attached personal dosimetry pumps to three workers and collecting air samples over the eight hour work-shift.
- Calcium oxide samples collected using environmental monitoring. Samples collected both outside and inside administrative office using the same model of SKC AirCheck52 sampling pumps used for the silica sampling.

RESULTS

- Sampling revealed high potential "Particulates Not Otherwise Regulated" or "nuisance dust" causing respiratory distress among workers (Figure 4).
- A new administrative office was built with an enhanced ventilation system and dust resistance features (Figure 5).
- Follow-up assessment revealed no adverse upper respiratory tract symptoms among workers approximately a year after moving into new building.

CONCLUSIONS/RECOMMENDATIONS

- Dosimeter results determined silica levels were below the permissible exposure limit (only 1 of 3 dosimeters had detectable measures of silica).
- No calcium hydroxide hazardous occupational exposures were detected.
- High potential "Particulates Not Otherwise Regulated" or "nuisance dust" causing respiratory distress among workers.
- Recommended improved dust control around perimeter of office building.
- Recommended control of dust emissions from the calcium hydroxide silo.
- Recommended to improve dust resistance in the office building.



Figure 1: Rock dust generated by conveyor system on the asphalt plant.



Figure 2: Aerosolized calcium hydroxide flowing from the top of the silo towards the office.



Figure 3: Dust in the office attic.towards the office.



Figure 4: CAPTs Murga (background) and Cramer calculate post-sample flow rate of silica sampling equipment.



Figure 5: New administrative building with improved HVAC.

DETERMINING QUANTITATIVELY WHEN REMEDIATION IS NECESSARY TO AVOID MOLD GROWTH RICARDO MURGA, DAVID CRAMER, KENNY HICKS

PHOENIX AREA

INTRODUCTION

The presence of excessive moisture in buildings has been linked with occupant illnesses and deterioration of building material. When mold spores land on wet or damp areas they may begin to grow and place occupants at an increased risk of respiratory disease.

In the last year alone, there were five incidents involving IHS healthcare facilities in the Phoenix Area (PA) where storm water or utility failure resulted in extensive water damage, the suspension or relocation of patient care or essential business functions, and the activation of the facility's incident command system.

The Problem

Following flooding from storms or internal utility failures, facilities in the PA determined the level of moisture remediation based solely on visual inspection. However, this was subjective and frequently led to reoccupying spaces that were not dry or properly remediated resulting in indoor air quality problems.

A literature search identified the NIH Moisture and Mold Remediation SOP, a practical guideline to reduce or eliminate excess moisture in less than 48 hours as a means to prevent mold growth. Although the NIH SOP provides good recommendations for what tools to use, it does not provide a clear method to assess the moisture content of building materials.

METHODS

A Moisture and Mold Remediation Guideline was developed for the Phoenix Area IHS based on the general principles and recommendations from the NIH SOP. The IHS Guideline goes a step further and outlines a method for qualitatively and quantitatively determining when a building material is not considered dry and must be remediated.





Qualitative Inspection Infrared camera technology is recommended to identify the scope of moisture exposure to building materials. IR technology measures temperature variations in building materials allowing the user to quickly scan large areas, pinpoint water intrusion, and find moisture beneath the surface.

Quantitative Inspection: A moisture meter designed to measure percent moisture content in wood, sheetrock and concrete using a relative scale is recommended to determine quantitatively when a particular material has been completely dried. Meters with the sheetrock scale will allow the surveyor to verify that the water activity in sheetrock is below the critical aw level of 0.65, which is the level that limits the growth of the majority of molds.

Healthy Homes



EH issues associated with housing on tribal lands present an everincreasing set of complex challenges to be addressed. A few examples of EH related issues of concern are: lead exposure, asbestos exposure, mold, disease vectors, lack of potable water, radon gas, solid and liquid waste disposal, injuries (e.g. fires, electrocution, and slips/trips/falls), chronic chemical exposures, and asthma triggers.

Many programs focus on capacity building and education related to reducing asthma attack rates, mold and moisture problems, chemical exposure, and other events that are documented through health surveillance systems and through a home inspection program. Home inspections identify threats to the health of occupants and the DEHS staff focus on identifying and eliminating related risk factors. Projects with an emphasis on healthy homes conducted in 2015 can be found on the following pages.



ASSESSING HOUSING ISSUES USING THE PROTOCOL FOR ASSESSING COMMUNITY EXCELLENCE IN ENVIRONMENTAL HEALTH (PACE-EH) METHODOLOGY

MICHAEL E. REED

GREAT PLAINS AREA

INTRODUCTION

Community-based Environmental Heath assessments are a priority for the Great Plains Area DEHS. During the initial assessment of the Rosebud Community, healthy housing was found to be one of the three priority health concerns, with specific interest in mold and moisture issues identified (Figure 1).



Figure 1: Moisture damage in a tribal member's home.

Using the Protocol for Assessing Community Excellence in Environmental Health (PACE-EH) methodology, the community examined the complex interactions that led to their housing issues, determined a way to assess and characterize the current condition of homes, and set realistic goals for bringing housing conditions to the desired level.

METHODS

Using PACE-EH protocol as guidance, a survey tool was developed to assess what the community believed to be its most pressing EH issues. These findings were presented to community leadership and in late 2014, after determining the community's interest and readiness to move forward, DEHS proposed developing an additional partnership to assess these issues in-depth and develop proposals for corrective action. DEHS assisted the tribe with establishment of the PACE-EH workgroup and provided facilitation (Figure 2) and technical consultation throughout the process. Having completed 10 of the 13 PACE-EH tasks to date, the tribe is on track to complete the process in just over 18 months.



Figure 2: Orlana Schmidt, EH Specialist, facilitating a PACE-EH workgroup meeting.

RESULTS

During the course of this project, the PACE-EH workgroup developed a method for identifying trends in housing deficiencies known to directly impact public health. This method involves tracking work requests and key conditions identified using the annual home inspection process.

While developing these tracking tools, the workgroup identified a gap in information related to privately owned homes (approx. 50% of homes). Because private homes do not receive routine home assessments, there is little data available to characterize the general health conditions (related to housing) across the reservation. This lack of information makes it difficult to assess the health needs of individuals living in private housing and presents some challenges obtaining resources to make improvements.

The workgroup has yet to create corrective action plans for the priority housing issues; however, developing a method for gathering deficiency data for this category of homes has been discussed as a likely action.

DISCUSSION

Community-based Environmental Health Assessments, such as the one completed in Rosebud, SD, are very useful for creating a shared understanding of complex Environmental Health issues in a community. In fact, the depth of an assessment completed by these workgroups is much greater than any one department could develop in isolation. Through community partnership, and a strong commitment to resolve issues of significance, we can ensure our plans for future action are feasible, realistic, and acceptable to the community at large.

The workgroup's efforts set the stage for action planning and the completion of a successful project in 2016. In addition, their successes influenced two other tribes to consider similar projects in the Great Plains Area.

CONCLUSIONS/RECOMMENDATIONS

Projects such as PACE-EH can do a lot to strengthen the relationship between DEHS and the communities they serve. At a minimum, these projects result in an improved understanding of community EH needs and priorities. On a deeper level, it also provides the community with a better understanding the DEHS program and our sustained commitment to public health. Even when a priority issue cannot be easily solved, there is an increased understanding of why the condition persists. That increased understanding and visible effort to address each issue is important to retaining program support, maintaining community trust and confidence, and opening pathways for future EH initiatives.

Area DEHS Programs



EH programs in the Alaska Area are all tribally managed under the authority of the Indian Self-Determination and Education Assistance Act (Public Law 93-638), as amended. Seven regionally-based EH programs serve a specific geographical area. These organizations include the South East Alaska Regional Health Consortium (Sitka), the Bristol Bay Area Health Corporation (Dillingham), the Yukon-Kuskokwim Health Corporation (Bethel), the Norton Sound Health Corporation (Nome), the Maniilaq Association (Kotzebue), the Tanana Chiefs Conference (Fairbanks), and the Alaska Native Tribal Health Consortium (ANTHC, of Anchorage). Typical services include assistance related to water, sewer, solid waste, air, and vector control activities. Other services include disease outbreak investigations, support for communitybased clinics related to infection control and safety, and IP efforts. Additionally, several of the tribal EH programs operate State of Alaska certified drinking water laboratories that assist communities in ensuring the safety of their drinking water and ensuring compliance with state and federal regulations.

The regional EH programs, together with ANTHC, offer communities and tribes a comprehensive set of environmental health services that protect and enhance the well being of AI/ANs.



Albuquerque



The Albuquerque Area DEHS Program serves 27 federally recognized tribes in Colorado, New Mexico, Texas, and Utah. The Area's service population of over 100,000 members comprises 20 Pueblos, three Navajo Nation Chapters, two Apache Reservations, and two Ute Reservations. The Area's EHS staff are stationed at the Area Office and six Service Units. Professional positions include the Director of DEHS, District Sanitarians, Service Unit Environmental Health Specialists, Injury Prevention Specialist, EHS/Safety Officer, Industrial Hygiene and Safety Manager, IEH Specialist, and EH Technicians. The Albuquerque Area DEHS is responsible for a wide range of general EH services, including surveys, investigations, consultations, assessments, and technical assistance. EHS staff provide trainings and community outreach on a broad range of topics. Additional services are provided in IP and IEH. The IEH Manager serves as the Area Emergency Management Point of Contact, providing needed coordination in emergency situations. Staff often participate in national program work, as well as working in partnership with many tribal, federal, county, and local groups.

The Albuquerque Area DEHS implements creative methods to provide high quality services to their tribal partners. The Area is committed to program excellence and staff expertise. With consideration of tribal needs and priorities, extensive long range planning is conducted to ensure the provision of necessary and timely services. The Albuquerque Area DEHS Program strength is in its staff's commitment to continuous program and selfimprovement, collaborative partnerships, and innovation in providing quality services to tribes in a myriad of programmatic areas.



The Bemidji Area DEHS serves 34 tribes occupying an area covering 5,183 square miles. Approximately 100,000 American Indians live within the service area covering three states: Michigan, Minnesota, and Wisconsin. There are two district offices within the Area: Minnesota (Bemidji) and Rhinelander, Wisconsin. Staff includes six field EHS, two District EHS, one DEHS Director, and one Area IEH Specialist. The DEHS staff provide field services to 23 tribes; tribal EHSs provide field services to 11 tribes. The Bemidji Area provides EH services to improve food safety, solid and liquid waste management, water quality, hazard communication, epidemiology, vector control, recreation/celebration sanitation, indoor/ outdoor air quality, home sanitation and safety, HS, childcare, and school issues, and training. The DEHS is also responsible for specialized services in IP and IEH.

The Bemidji Area emphasizes: (1) preventing pollution and reducing resource depletion; and (2) partnering with tribes in building community resilience by localizing food and energy systems. These "sustainability" aspects of EH have become a priority because of scientific consensus. Bemidji Area DEHS realizes a future scenario in which climate change, environmental degradation, pollution, and resource depletion will significantly impact the public's health and, the practice of environmental public health. Because Bemidji believes this will become one of the greatest challenges facing the future of their DEHS Program – and tribal communities – they strive for a more holistic practice of environmental public health.



The Billings Area DEHS serves nine tribes (totaling 70,000 people) on eight reservations throughout Montana and Wyoming. Fully staffed, the Billings Area DEHS Program consists of the DEHS Director, an Area Environmental Health Officer, an IEH Officer and an IP Specialist. The Billings Area has three direct service tribes, four Title I tribes that have contracted the DEHS Program and two Title V tribes that have compacted all IHS services. Field staff in the area include three federal EHSs, five tribal EHSs, and two tribal EH Technicians. Although the tribes and reservations of Montana and Wyoming are diverse in their cultures, landscapes and communities, the Billings Area DEHS Program seeks to provide comprehensive services that address environmental health, including the two specialty areas of IP and IEH. The focus of the program includes food safety, vector control, health and safety at schools, Head Starts, IHS hospitals and clinics and other community facilities, technical assistance to the hospital and clinics safety officers, and prevention of injuries from falls, motor vehicle crashes, assaults and suicides. Implementation of the DEHS Program consists of technical assistance, training, health and safety inspections, and communication and coordination between the tribes, other government agencies, and the IHS.







The California Area serves approximately 104 federally recognized tribal governments representing a service population of 86,959 persons, in over 1,550 facilities, in the State of California. Staff provide services to tribes at duty sites in the Area Office, two district offices, and one field office. All of the DEHS staff have a bachelor's degree or higher in EH or a related discipline.

California Area DEHS addresses a variety of issues including, but not limited to: food service, recreational surveys, home sanitation and safety, children's environments, solid waste management, community water, wastewater, and institutional accreditation. The services provided to California American Indian Tribes consist of investigations, surveys, technical assistance, training, and surveillance.

Tribes are provided with IP services that aim to reduce emergency room visits, hospitalizations, and deaths in the communities. The mission of the program is increase the capacity of tribes to address their injury problems. The program currently provides technical assistance to tribes with injury data collection, development and implementation of interventions or projects based on best practices, and training. IEH Specialists are responsible for providing additional services to tribal health programs and community institutional facilities such as Head Start Centers, childcare centers, schools, youth facilities, and substance abuse centers. The services currently provided by this program consist of training, safety program development, accreditation support, risk assessments, industrial hygiene, policy development, and OSHA compliance.

Great Plains



The IHS Great Plains Area encompasses 18 tribes in four states (Iowa, Nebraska, North Dakota, and South Dakota) totaling 281,459 square miles and is the fifth largest Area in the IHS. The DEHS is one of three divisions (DEHS, DSFC, and Facilities Management) within the Great Plains Area OEHE. The DEHS comprises career tribal employees, federal civil service, and PHS Commissioned Corps Officers. At the Area level, Great Plains has a DEHS Director, an Area IP Specialist, and a Staff Environmental Health Specialist. In addition the DEHS Program funds an IEH Officer which is managed through the Deputy Director of Field Operations and works closely with the corporate compliance program. At the district level, the DEHS Program has three staff located in Minot, North Dakota; Pierre, South Dakota; and Sioux City, Iowa. At the field level, the program has 13 offices with Field EHS and/or IP Specialists. Seven of the field offices are contracted programs and managed by the tribe. The other six offices are direct service programs and staffed with Civil Service or PHS Commissioned Corps staff. The DEHS district and field staff are responsible for providing environmental health surveys of the facilities listed in the WebEHRS database, technical consultation and trainings to tribal programs and beneficiaries, and carrying out epidemiological investigations as necessary. The remaining facility survey work is covered by the IEH Officer. District and field staff spend approximately 60% of their time working on general EH issues and 40% of their time engaged in IP activities. Injuries have had a significant negative impact on the health of Great Plains Area communities and as a result, IP is a primary focus for the DEHS Program.



The Nashville Area serves a vast region across 14 states. 29 tribes and three urban areas serving an AI/AN population of approximately 52,000. Fourteen states are covered: Alabama, Connecticut, Florida, Louisiana, Maine, Maryland, Massachusetts, Mississippi, New York, North Carolina, Rhode Island, South Carolina, Tennessee and Texas, Staff includes one Director and two EHOs. The Nashville Area DEHS provides EH training courses that train both federal and tribal employees in the FDA Food Code, hazard communications/ bloodborne pathogens, and WebCident. Annual surveys of numerous facilities, including casinos, hotels, pools, food service venues, and healthcare facilities are conducted. The Area IEH Specialist is part of a comprehensive

team that conducts The Joint Commission and Accreditation Association of Ambulatory Health Care mock surveys to ensure federal facilities are ready for accreditation. All Area federal facilities except the newest Service Unit have received and maintained accreditation. This Service Unit will be scheduling their first accreditation survey soon. The EHOs are Project Managers for IP grants.






The Navajo Area DEHS is a large omprehensive EH program serving more than 250,000 members of the Navajo Nation and the Southern Band of San Juan Paiutes. EH services are provided to Indian communities on reservations encompassing more than 25,000 square miles of land in northeast Arizona, northwest New Mexico, and southern Utah.

The DEHS staff plan and provide EH programs and services in many areas such as food safety, prevention of elder falls, motor vehicle injuries, emergency preparedness, water and sewer sanitation, and prevention of zoonotic diseases including plague, rabies, hantavirus, and West Nile virus. Public health assessments in the form of facility surveys, training, investigations, sampling, and technical assistance (i.e. participation on facility and community committees, facility plan reviews) are just a few services provided by the program to tribes.

The Navajo Area DEHS also provides an IP Program and IEH services through the Division of Occupational Health and Safety Management (DOHSM). The IP Program provides services that address traumatic injuries that can often greatly affect communities while the DOHSM deals with IEH issues in healthcare facilities. Both programs rely heavily on assessments, surveillance, and best practice interventions to target health risks in communities. Training is also offered to build tribal capacity for IP and occupational health and safety issues. These programs and services are provided through multiple offices including the Navajo Area Office in Window Rock, Arizona; three district/field offices in Fort Defiance, Arizona, Shiprock, New Mexico, and Gallup, New Mexico; and field offices at three Service Units in Kayenta, Arizona, Many Farms, Arizona, and Crownpoint, New Mexico. The professional, technical, and clerical staff of the Navajo Area DEHS and tribal EH programs work as a team in partnership with tribes to promote healthy environments in Indian communities.

Oklahoma City

The IHS Oklahoma City Area serves 43 tribes with a service population of nearly 350,000 AI/AN people. The service area covers the States of Kansas, Oklahoma, and Texas. The DEHS provides direct EH support services to 32 Tribes and has five field offices located in Okmulgee, Shawnee, Clinton, Lawton, and Pawnee, Oklahoma, and one in Holton, Kansas.

The DEHS Program includes eleven staff members that provide a wide range of EH services that include, but are not limited to: food safety, solid and liquid waste management, water quality, hazard communication, epidemiology, vector control, emergency management and response, infection control, recreation/celebration sanitation, indoor/outdoor air quality, home sanitation and safety, Head Start and childcare food and safety, in addition to meeting a wide selection of specific training needs.

The DEHS is also responsible for specialized services in the areas of IP and IEH. The goal of the Oklahoma City Area IP Program is to reduce the incidence and severity of injuries and deaths within the tribes they serve and work in conjunction with. Program objectives are met by conducting injury surveillance surveys and by identifying problem areas that can be solved through direct intervention and through community activities. The IEH Program assists healthcare facilities provide a safe environment for patients, visitors, and staff. The IEH Specialist provides direct technical assistance to safety officer and committees, infection control officers and committees, facilities management and leadership. In addition, the IEH Specialist is responsible for conducting annual radiation protection surveys of all x-ray equipment within IHS and tribal hospitals and clinics to ensure safe levels of radiation are used and maintained. Also to conduct comprehensive industrial hygiene surveys within those facilities to ensure that a safe environment is being achieved and maintained.





The Phoenix Area serves 46 tribes/tribal organizations with a combined population of nearly 150,000 and over 2,000 facilities in four states (Arizona, California, Nevada, and Utah). A cadre of EH professionals accomplish the work of the DEHS. The staff is located in the Area Office; three district offices; and nine Service Units/field offices. The DEHS provides a breadth of technical and consultation services that include facility hazard assessments, policy development, investigations, and training. The diverse technical scope of the program includes food sanitation, vector control, water quality, waste management, air quality, infection control, and occupational safety. Specialized services are provided in IP and IEH. The IP services include epidemiology, training, partnership building, and the development of proven intervention strategies for community-based injury prevention. The IEH services include industrial hygiene, occupational health, emergency preparedness, and healthcare accreditation consultation.



The IHS Portland Area provides a health system for an estimated 150,000 American Indian residents of Idaho, Oregon, and Washington. Health delivery services are provided by a mix of health centers, health stations, preventive health programs, and urban programs. The Portland Area DEHS works in partnership with tribes, the six Service Units, and other organizations/agencies to implement a comprehensive service delivery model that includes the following: monitor and assess environmental hazards and conditions in AI/AN homes, institutions, and communities; educate and inform residents about EH issues; develop policies for addressing EH and injury concerns; evaluate programs, plans, and projects; and

conduct projects and studies to determine best practices and solutions to environmental public health problems. The outcomes and impacts of these services control and prevent environmentally related disease and injury and improve personal and overall community wellness. The Portland Area DEHS Program has enhanced services in pesticide safety through an interagency agreement with EPA Region X. In the Portland Area, many of the 43 tribes have assumed all or a portion of the DEHS Program under the authority of the Indian Self-Determination and Education Assistance Act (Public Law 93-638, as amended). The direct service tribes are provided services through a DEHS Director and IEH Specialist at the

Area Office as well as EHS positions in district and field offices. This organizational structure maximizes the delivery of direct services to 23 tribes. The Portland Area DEHS Director also serves as the Area Emergency Management Coordinator, providing services in emergency preparedness and response and continuity of operations planning.





The Tucson Area Environmental Health Services Branch (EHSB) serves two tribes, the Pascua Yaqui Tribe and the Tohono O'odham Nation (total population for both tribes is 52,943). The EHSB program consists of the Director, an Area IP Specialist, three EH Officers, and one EH Technician. The EHSB program focuses on providing the best possible service to the tribes we serve. The EHSB services include, but are not limited to, food safety, vector borne disease surveillance, surveys of recreation\celebration, indoor air quality, Head Starts, child care, elder programs, school programs, home assessments, healthcare surveys, Life Safety, accreditation assistance, and clinical referrals pertaining to EH. The EHSB staff provides many trainings to the communities, for example, bloodborne pathogens, infection control, food handling,

certified car seat installation assistance, and vector related issues.

The IP Program assists the tribes by focusing on partnership\coalition building, using injury statistics, and utilizing evidence-based intervention strategies to reduce the risk of injuries and death. The EHSB is dedicated to the IP program and hosts/supports at least one IP course annually.

The EHSB Program provides services in an effort to raise the tribes' health status to the highest level. By utilizing sound environmental health practices, strengthening external partnerships (federal, state and local), and building capacity within the tribal programs, the quality and timely delivery of environmental health services is enhanced.



Looking Ahead into 2016

For 2016, the DEHS looks forward to accomplishing the following:

- Successful solicitation of the WebEHRS operating system contract to support environmental health programs across the country
- Successful solicitation of the TIPCAP monitoring contract to support tribal and IHS injury program projects and programs
- Successfully initiating the 2016 through 2020 Environmental Surveillance and Injury Intervention performance measures
- Complete the remaining strategic vision element, "develop an operational model for the DEHS that describes the core services all

IHS Area programs should provide"

- Identify a plan for the future of the IHS Injury Prevention Specialist Fellowship advanced training
- Select at least one IHS Environmental Health Officer to begin the two-year Uniformed Services University of the Health Sciences/IHS IEH MSPH and residency program



IHS Area DEHS Program Directory

Alaska Area/OEHE

4141 Ambassador Dr. Anchorage, AK 99508-5928 Ph. (907) 729-3623

Albuquerque Area/DEHS

4101 Indian School Road, NE Albuquerque, NM 87110 Ph. (505) 248-4947

Bemidji Area/EHSS 522 Minnesota Avenue NW Bemidji, MN 56601 Ph. (218) 444-0503

Billings Area/OEHE 2900 4th Avenue North Billings, MT 59107 Ph. (406) 247-7090

California Area/DEHS

650 Capitol Mall, Suite 7-100 Sacramento, CA 95814 Ph. (916) 930-3981, ext. 336

Great Plains Area/DEHS 115 4th Avenue S.E. Room 309, Federal Building Aberdeen, SD 57401 Ph. (605) 226-7597

Nashville Area/DEHS 711 Stewarts Ferry Pike Nashville, TN 37214-2634 Ph. (615) 467-1622

Navajo Area/DEHS P.O. Box 9020 Window Rock, AZ 86515 Ph. (928) 871-5807

Oklahoma City Area/DEHS

701 Market Drive Oklahoma City, OK 73114 Ph. (405) 951-6001

Phoenix Area/DEHS

40 North Central Avenue, Suite 720 Phoenix, AZ 85004 Ph. (602) 364-5068

Portland Area/DEHS

1414 NW Northrup Street, Suite 800 Portland, OR 97209 Ph. (503) 414-7774

Tucson Area/EHSB

7900 South J Stock Road Tucson, AZ 85746-7012 Ph. (520) 295-5629

The Division of Environmental Health Services

-of the-

INDIAN HEALTH SERVICE U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

Annual Report 2015



U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

INDIAN HEALTH SERVICE Office of Environmental Health and Engineering Division of Environmental Health Services 5600 Fishers Lane MS: 10N14C Rockville, MD 20857

Website: http://www.dehs.ihs.gov

