



Colorado Department
of Public Health
and Environment



Dialysis Infection Prevention Initiatives in Colorado

ADVICE Conference – 5/16/14

Tamara Hoxworth, Ph.D.

Manager, Health & Safety Data Services

Colorado Department of Public Health & Environment



Dialysis Infection Prevention Initiatives



Presentation Outline

Dialysis Infection Reporting in Colorado

Project Description

- Background
- Recruitment
- Activities
- Evaluation Results
- Challenges /How They Were Overcome
- Accomplishments

What's Happening Now?

Colorado Dialysis Infection Reporting

- CO HAI Disclosure Law passed 5/2006; 1st facilities began reporting 8/2007
- Mandates hosp, ASC and OP dialysis clinics to submit data to state on CLABSI, SSI in specified surgeries, dialysis infections
- 6 main conditions
 1. HC facilities report HAI as condition of licensure (fine, delay or revocation)
 2. Use NHSN to report
 3. Physicians ensure that HAI dx'd at FU visits reported to facilities where procedures were done
 4. CDPHE lead agency to implement legislation (PS)
 5. CDPHE to prepare, submit reports of individual facility infection rates to legislature/public
 6. Establish and coordinate an HAI Advisory Committee
- CO 1st state to require reporting by OP dialysis clinics (began 3/2010)
- Currently have 70 OP dialysis clinics reporting into NHSN



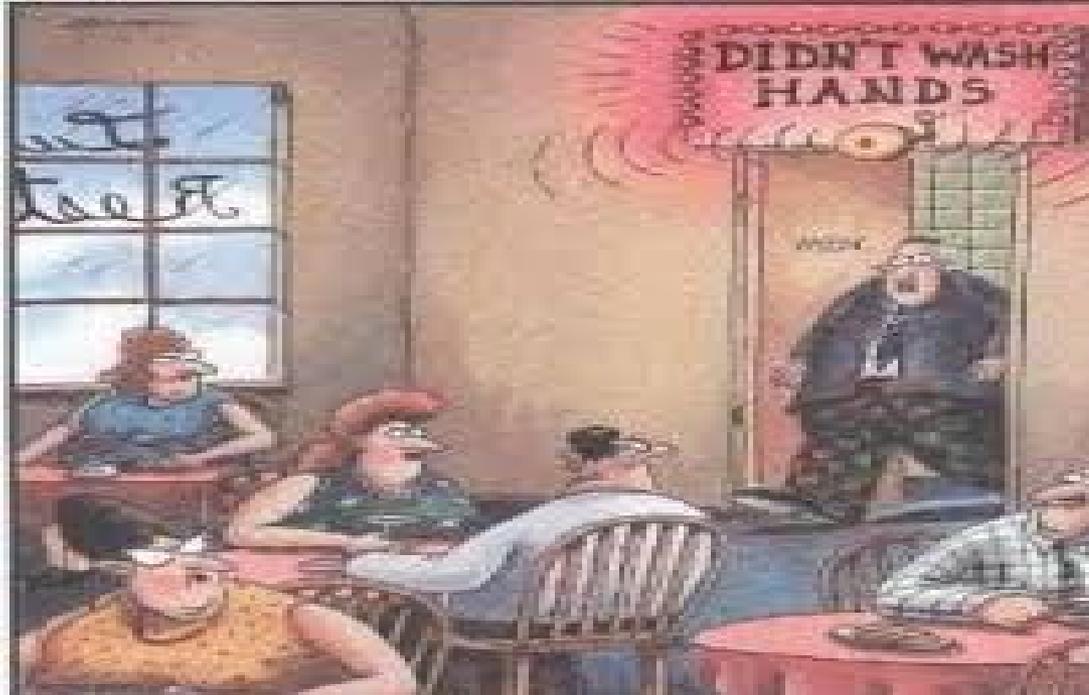
DIPC - Background



- Received funding from CDC's Epidemiology & Laboratory Capacity grant (8/11).
- Partnered with regional ESRD network, who have vast clinical experience, expertise in dialysis, experience in education, QI and relationships with dialysis providers, patients

Goal - work together to reduce dialysis infections by improving hand hygiene (HH)/gloving practices and spur more interest in infection prevention among dialysis community.

DIPC Focus – Hand Hygiene



Recruitment - DIPC

- Project Period (8/2011-7/2012)
 - Recruitment Oct/Nov 2011
 - Facility involvement (11/2011-7/2012)
 - Data Collection (1/2012-6/2012)
- Recruited through emailed recruitment letter, information conference call in Nov, and a few one-on-one conversations with facility administrators
 - clarified no relation to regulation/compliance survey process
 - Participation voluntary/data shared only within collab; no individual facility was identified (code #s)
- Of 62 facilities, 31 joined; 30 remained throughout the collaborative



Expectations

- Participate in **shared** learning, **share** information, experiences, collect & **share** data
- Select/develop a strategy to improve HH by 12/1/2011- strategy of their choice (structural/phys environment, procedural/policy, education), but needed them to identify and describe it to us.
- Pilot test audit tool Nov. and Dec. 2011 and provide feedback to finalize tool
- Use finalized tool to observe and report staff HH practices monthly (at least 20 observations per month) – start 1/1/2012 and continue thru 6/30/12
- Attend 3 learning sessions - educational/information sharing meetings
- Attend monthly conference calls/webinars in months without learning sessions
- Continue entering dialysis data into NHSN
- Implementation team will track, feedback to facilities HH adherence, LAI, BSI numbers & rates

Activities-Shared Learning

- **Learning Sessions (3)**

- Kickoff (11/17/11); 2nd (3/17/12); Final (7/26/12);
- Held at local conference center; breakfast provided
- Welcome piece that reiterated rationale for collaborative; presented process & outcome data
- Guest speakers on relevant topics
 - Dr. Matt Arduino (Outbreaks in Dialysis Settings, HH Importance); Sally Hess (collaborative experience, lessons learned)
 - Dr. Wendy Bamburg (MDRO in Dialysis Patients), Rosetta Jackson, R.N. (IC in Dialysis Settings, Patient Perspective)
 - Dr. Jesse Flaxenburg, Shayla Urban (Doctor/Patient Panel on Ideas to promote teams to reduce infections)
- Interactive exercise (“I Wish”; PPT presentations, Dialysis Trivia)
- Wrap up piece to reiterate expectations, and honor and motivate participants.

- **Conference Calls**

- Initial recruitment/information call 11/03/11 for prospective participants to learn about collab rationale, activities, expectations.
- Subsequent calls addressed topics as HH improvement strategies, HH audit tool feedback and selection, clarification on audit tool use, challenges and lessons learned, demonstration of feedback reports, discussion on what’s working and what can be improved, ideas for future webinars/learning sessions, and upcoming schedules.
- Final webinar 6/21/12 -presentation by Dr. Patel on results, lessons learned from the CDC Dialysis Collaborative.

Facility Intervention Overview

- Facilities chose intervention to implement
- Educational, Structural, Procedural, Cultural
- Presented ppts describing their intervention at learning session 2 in March (provided standard template)

Specific Facility Interventions

27 of 30 facilities attended March learning session

- Educational (10)
 - Watched videos emphasizing HH importance
 - Brainstorm ways to increase HH adherence
 - Patient Education
- Structural (5)
 - Placed hand sanitizer w/ biohazard bins
 - Increased glove, hand sanitizer stations
 - ABR containers taped w/ brightly colored tape to increase visibility
 - Limited exits to areas with clean sinks.
 - Moved water alarm button.
- Procedural (12)
 - Require ABR when entering station, btwn patients, after touching computer
 - Daily homeroom meetings to discuss audits
- Cultural (12)
 - Observation and on-the-spot correction
 - Positive reinforcement of proper HH (verbal reinforcement, stars, stickers; one w/ most wins prize)
 - Sticker tag-stickers put on staff who break infection control; one with most stickers must do an infection control pres at next staff mtg.





Activities

Data Collection & Sharing

Development , Implementation of HH Audit Tool

- 2 versions of potential HH audit tools introduced at kick off session (Nov) with request for facilities to pilot test tools in 12/11 & provide intermittent feedback on the tools.
- Conference call (12/22/11) addressed pilot test experience & discussion of tools and how they worked. Tool selected by group.
- HH audit tool was finalized /distributed to facilities early Jan 2012; used to complete ≥ 20 HH observations each month.

Process & Outcome Measures

- **HH audits** began Jan; Data on HH, ARB, LAI rates were compiled and presented in a report showing each facility's data and overall collaborative averages.
 - Facilities not identified by name; kept anonymous by using NHSN ID only.
 - Report allowed facilities to review their own HH performance and infection trends over time and compare to other facilities.
- **3 Measures:** Measures: HH adherence (% of “correct” observations); LAI and ARB rates.
- **Monthly Data Feedback Reports** - let's take a look.

Dialysis Infection Prevention Collaborative (DIP-C)

Facility-Specific Aggregate Scores by Month

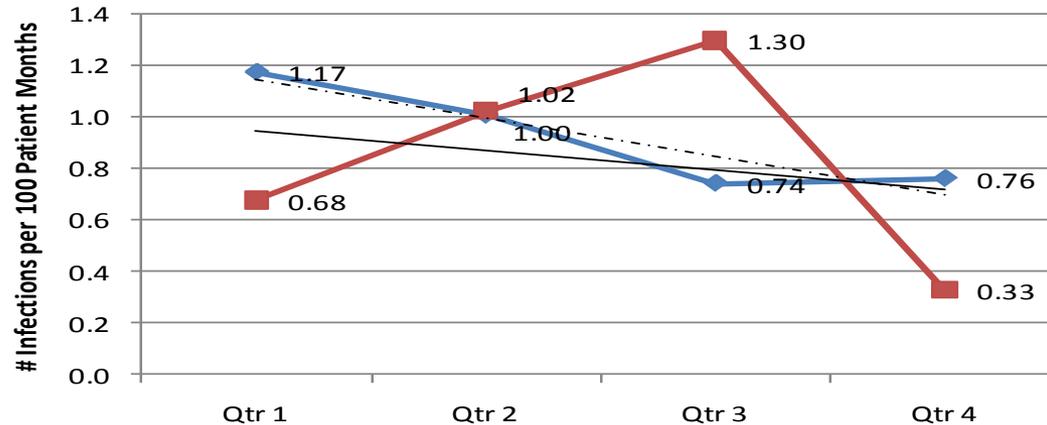
Hand Hygiene Audit Score, Access Related Blood Stream Infection (ARB) Rates, Local Access Infection (LAI) Rates

January through June 2012

FACILITY ORG ID	January			February			March			April			May			June		
	Monthly Score Only			Monthly Score Only			Monthly Score Only			Monthly Score Only			Monthly Score Only			Monthly Score Only		
	Audit Tool	ARB* Rate	LAI* Rate	Audit Tool	ARB* Rate	LAI* Rate	Audit Tool	ARB* Rate	LAI* Rate	Audit Tool	ARB* Rate	LAI* Rate	Audit Tool	ARB* Rate	LAI* Rate	Audit Tool	ARB* Rate	LAI* Rate
15456	57.9 %	0	7.69	85.0 %	0	0	80.0 %	0	0	87.5 %	0	6.67	90.0 %	0	0	97.5 %		
15513		3.49	0	53.5 %	0	0	53.5 %	3.30	0	58.1 %	0	1.14	58.1 %	2.20	0	47.2 %		
15577	65.0 %	0	0	64.3 %	0	0	80.8 %	0	0	73.1 %	0	0	87.2 %			82.2 %	0	2.00
15583	50.0 %	0	0	63.8 %	0	0	75.6 %	0	0	65.2 %	0	0	66.7 %	0	0	79.5 %	0	0
15587	60.2 %	0	0	55.9 %	0	0	76.5 %	0	0	88.2 %	0	0	79.4 %	0	0	64.7 %	0	0
15593		0	2.94		0	0	70.6 %	0	0	80.5 %	0	0	95.3 %			90.2 %	0	0
15597	91.2 %	0	5.20	42.9 %	0	0	80.9 %	0	1.43	56.7 %	0	1.30	65.3 %	0	1.39	85.7 %		
15601	82.9 %		0	84.6 %	1.43	1.43	86.2 %	0	0	87.5 %	0	5.88	88.9 %	1.39	0	91.4 %	0	0
15602		1.85	0	81.8 %	0.93	0.93	62.8 %	0	3.60	84.6 %	0.94	0	88.4 %	0	0	78.0 %	0.94	0
15605	61.3 %	0	0	73.5 %	0	0	81.8 %	0	0	69.7 %	0	0	77.4 %	0	0	69.4 %	1.12	0
15617	90.4 %	0	0	78.9 %	0	0	82.1 %	3.33	0	94.7 %	0	0	91.7 %	0	0	97.3 %		
15629	86.2 %	0.79	0	74.3 %	0.81	0	75.0 %	0	0	65.7 %	0	0	82.8 %	2.33	0.81	73.5 %	1.61	0.81
15631	75.6 %	0	0	79.1 %	2.33	0	88.4 %	0	0	47.1 %	0	0	72.5 %	0	0	37.9 %		
15638		1.72	0		0	0	29.4 %	0	1.82	76.5 %	0	1.85	75.0 %	1.72	0	65.7 %	0	0
15644		1.22	0	69.7 %			63.2 %	0	1.27	74.6 %	0	0	73.5 %	0	0	82.4 %		
15647	76.7 %	0	3.85	74.4 %	0	0	72.1 %	0	6.67	93.0 %	0	0	75.6 %	0	0	72.1 %	0	0
15678	90.0 %	1.72	0	69.7 %	1.75	0	66.7 %	0	0	79.4 %	1.79	1.79	79.4 %	0	0	69.7 %		
15680	78.8 %	0	0	64.7 %	0	0	66.1 %	0	1.75	65.5 %	0	0	66.7 %	0	0	55.6 %	0	0
15682	97.2 %	0	0	79.4 %	0	0	62.9 %	0	0	90.6 %	0	0	85.4 %	0	0		0	0
15708	85.9 %	9.09	0	61.0 %	0	9.10	83.7 %	0	11.11	81.0 %	0	0	90.0 %	0	0	83.3 %	0	0
15722	58.6 %	1.21	2.41	57.7 %	1.18	0	74.2 %	0	0	78.1 %			81.1 %			88.9 %		
15738	43.1 %	1.67	5.00	51.5 %	1.64	3.28	68.5 %	1.64	1.64	55.1 %	0	1.72	38.1 %	0	1.79	39.3 %	1.85	1.85
15746	55.8 %	0.94	0.94	60.9 %	0.97	1.94	65.5 %	1.00	1.00	58.3 %	2.00	0	52.5 %	0	0	57.1 %	2.13	0
15756	100.0 %	0	0	70.7 %	0	3.13	97.1 %	0	0		0	0	72.8 %			95.0 %		
15771	95.3 %	0	0	88.4 %	1.01	1.01	54.1 %	0.98	0	50.0 %	0	1.04	42.4 %			59.5 %		
15774	87.5 %	0	0	85.3 %	0	0	92.1 %	0	0	86.8 %	0	0	81.8 %	0	0	83.3 %	0	0
15785	78.0 %	4.55	0	79.4 %			82.1 %			84.6 %	0	0	58.8 %					
15798		0	0	87.9 %	0	0	96.9 %	0	0	56.8 %	0	2.86						
21077	76.2 %	0	4.76	91.9 %	0	4.55	78.0 %	0	4.17	93.9 %	4.35	4.35	85.3 %	0	0	92.9 %		
21881	50.0 %	0	0	50.0 %	0	0	54.8 %	0	3.70	53.7 %	0	0	66.7 %	0	0	81.0 %		
Total	76.1 %	0.92	0.86	68.4 %	0.60	0.66	72.8 %	0.45	0.95	72.3 %	0.33	0.85	74.7 %	0.56	0.24	74.2 %	0.79	0.34

All Accesses - Collab vs Non Collab

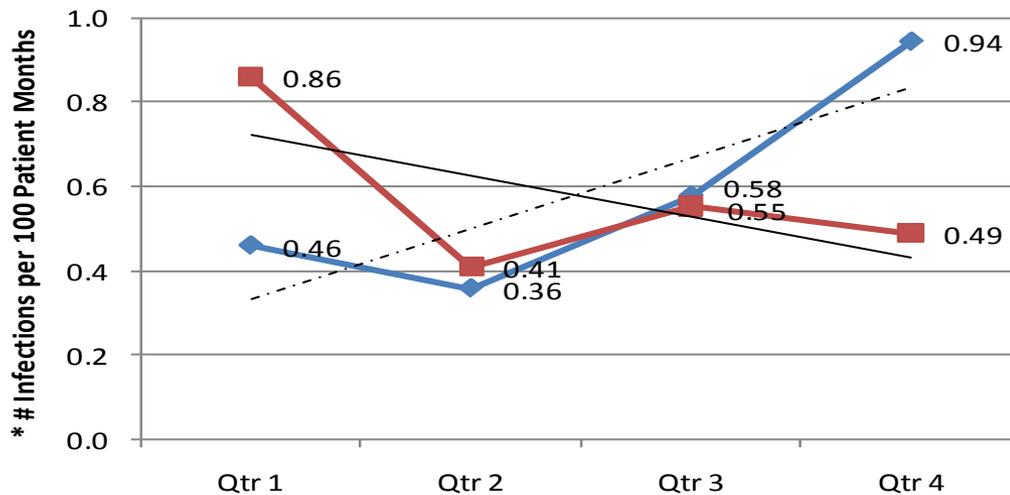
Local Access Infection Rates* Jul 2011 - Jun 2012



Collab (18,185) = 0.7
 NonCollab (15,885) = 1.0

- LAI Rate Non:Collab
- LAI Rate Collab
- - - - Linear (LAI Rate Non:Collab)
- Linear (LAI Rate Collab)

Access Related Bloodstream Rates* Jul 2011 - Jun 2012



Natl. Rate = 0.9
 Collab (18,185) = 0.6
 NonCollab (15,946) = 0.5

- ARB RATE NON:COL
- ARB RATE COLLAB
- - - - Linear (ARB RATE NON:COL)
- Linear (ARB RATE COLLAB)

Challenges/How Overcome?

- Lack of staff involvement; Mgr who represented 10 facilities.
- Attendance at Learning Sessions
- Development of the HH audit tool based on # of reviewers, but well worth the effort
- Monthly submission of completed audit tools
- Communication (email)
- Short time period (may have been good)

DIPC Accomplishments - 1

- Of 62 in CO, 31 facilities initially joined, 30 remained throughout collaborative.
- Facilities worked with own staff and staff from other facilities/corporations to share, implement ideas for improving HH, pt. care.
- Selected/developed /implemented a strategy to improve HH in facilities.
- Provided input into the development, distribution of our HH/Gloving Algorithm laminated poster for display in treatment areas.
- Pilot tested audit tools Nov- Dec.2011, provided feedback to improve tool and selected and refined tool used over last 6 months.
- HH audit tool adopted by 2 non-collab facilities in Colorado and by facilities in Arizona, California, Indiana, Texas.



DIPC Accomplishments - 2



- Completed at least 20 HH observations a month for the last 6 mos.
- Recorded data using standard audit tool and submitted observation data monthly (by 5th of following month)
- Most continued entering dialysis data into NHSN B4 deadline
- Attended 3 learning sessions hearing presentations of nationally renowned medical experts in dialysis infection microbiology, transmission & prevention, hand hygiene, MDRO, and pts (one was a pt & nurse, another shared experience w severe infection).
- Developed, delivered creative, dynamic ppt presentations on interventions which spurred lively discussion, energized us all.
- Improved attendance at learning sessions from 14 to 27.
- Improved attendance on monthly conference calls/webinars (from 12 to 23) and became more vocal in sharing ideas.
- Improved HH adherence rates!!!!
- Reduced rates of dialysis infections!!!!

Participant Evaluation Survey

- Online, electronic survey -15 Items administered in early July
- 16 of 30 (55%) completed surveys
- Questions addressed:
 - Why did you join? How valuable? What could make it more valuable? Most/least valuable aspects?
 - Value of completing HH audits? How did you make audits work? How likely will you continue HH audits?
 - What could make audits more useful, easier to implement? How valuable were monthly feedback reports and what would make them more useful? Collaborative website value, how often used?
- **Notable Results:**
- How helpful/valuable was the collaborative to you and your staff?
 - Extremely (3, 19%); Very (8, 50%); Somewhat (5, 31%); None said “a little” or “not at all.”
- How useful was the process of completing HH audits?
 - Extremely (4, 25%); Very (10, 63%); Somewhat (1, 6%); A little (1, 6%); None said “not at all.”
- How likely will you continue HH audits?
 - Extremely (3, 19%); Very (10, 63%); Somewhat (1, 6%); A little (2, 12%); None said “not at all.”
- Would you participate in another prevention collaborative with CDPHE and Network #15? 94% (15 of 16) said YES

Background - TIP

- Why patient education?
- Funding
- Partnership of CDPHE & Intermountain ESRD Network
- Purpose-develop standard educ. For patients
- Focus
 - Basic Infection Control
 - Coaching patients how they can prevent infection
 - Observation and communication skills
 - Empower & encourage to “speak up”



Recruitment-Steering Committee

- Targeted SME local professionals or DIPC participant
- Letter of interest sent to 8 potential recruits
- Clinic administrator, nurse, social worker, patient who had participated in DIPC, and experienced dialysis educator. (5 expressed interest in participating)
- Intro conference call 12/5/12 addressed purpose and description of project, expectations, benefits of participation

Recruitment-Pilot Facilities

- Occurred in 1/2013, concurrently w/ toolkit development
- Clinics chosen based on expressed interest
- 20 prospective facilities were emailed informational recruitment letter
- Ten clinics said “YES!!”

Toolkit Development

- 2nd meeting – 1/2/2013; materials should complement CDC's Key Areas of Patient Educ.



- 2 Major Focus Areas
 1. Basic Infection Prevention
 2. Vascular Access Care
- Agreed each module would use various teaching methods to enhance patient learning and utilize community input from clinic staff and patients.
- Conference calls w/ steering committee continued as materials were developed

Pilot Testing

- Approached 20 facilities who had participated in DIPC and had expressed interest in continuing to work with us and 10 agreed
- Called in Apr to give final details & suggestions for distribution.
- Each pilot facility received 10 copies of each module.
- Module 1 piloted 5/2013
- Module 2 piloted 6/2013
- Facilities instructed to administer the toolkit and patient assessments in way they felt would be most convenient and beneficial to patients
- Left up to facility to select patient reviewers
- Of initial 10 agreeing to pilot test, 8 completed all required activities

Final Product

Assorted patient educational resources including

- Educational booklet
- TIP cards
- Bulletin Board facts
- Videos
- Patient empowerment resources
- Evaluation forms



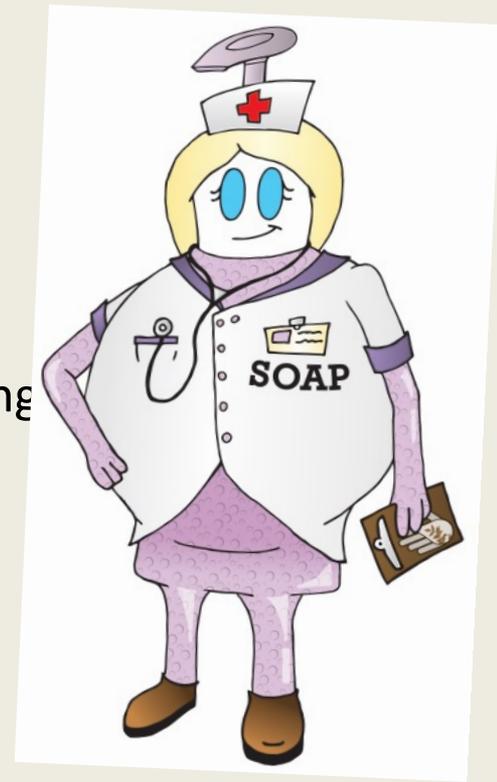
Module 1-Basic Infection Prevention (1)

- Ask Me If I've Washed My Hands button for pilot facility staff
- Infection Control Booklet
 - reasons dialysis pats have higher infection risk
 - symptoms of infections that should be reported
 - preventative measures patients can take
- TIP Cards
- Vocabulary assessments & accompanying definitions
- Bulletin Board Components



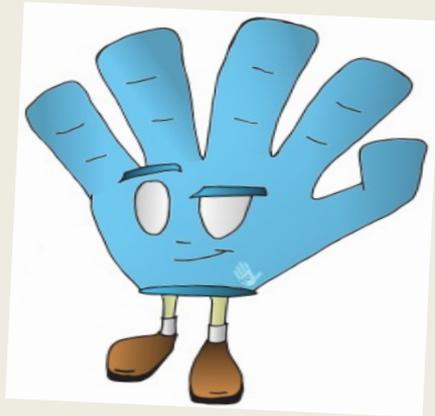
Module 1-Basic Infection Prevention (2)

- WHO Hand Hygiene handout
- “Things You Can Do” Handout
- Tell Me More Checklist
- Infection Games (wordsearch, xword, matching)
- Pre Post knowledge assessments
- Evaluation forms covering each module component
- Patient Confidence Assessment
 - confidence in preventing infections in dial. setting
 - likelihood to speak up to staff members



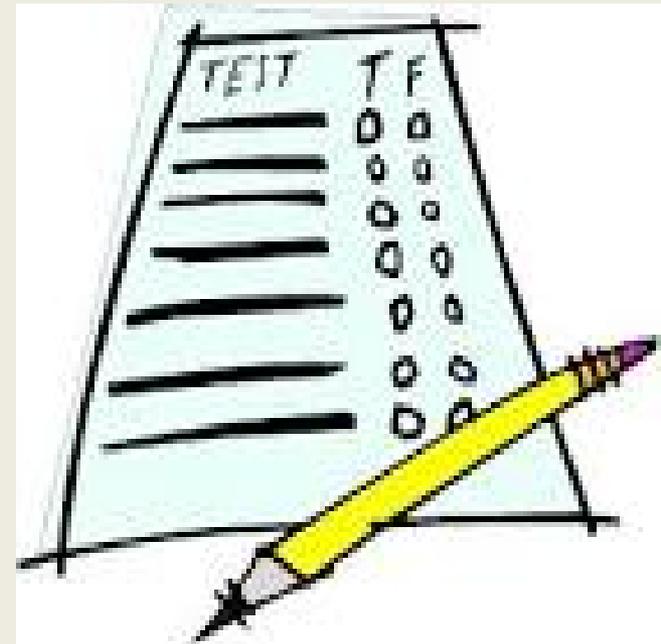
Module 2-Vascular Access Care

- Vascular Access Booklet
- TIP Cards
- Vocabulary assessments & accompanying definitions
- Bulletin Board Components
- “Just Say Something” Handout
- Patient Checklist
- Pre Post knowledge assessments
- Evaluation forms covering each module component



Assessments & Evaluations

1. Pre and post knowledge assessments
 - Module 1 (n=50, 7; 38)
 - Module 2 (n=44, 6; 23)
2. Patient satisfaction evaluation of materials
 - Module 1 (n=44, 7)
 - Module 2 (n=39, 6)
3. Confidence Assessment (n=42,7)



Knowledge Assessment

Module 1-Basic Infection Prevention

Item	# Answering Pre- and Post-Tests	Correct Responses		Percentage Point Change in Correct Responses
		Pre-test	Post-test	
Name as many signs and symptoms of infection as you can. *	31	45.2%	74.2%	+29.0
The smallest type of germ that can cause infection is a _____.	22	50.0%	63.6%	+13.6
Cold and flu viruses can survive up to 3 days on surfaces such as counter tops, bedside stands, keyboards, and telephones.	35	97.1%	91.4%	-5.7
Name as many places germs can hide in the dialysis setting as you can. **	32	50.0%	62.5%	+12.5%
Sepsis is the name of a chemical used to clean surfaces.	27	88.9%	96.3%	+7.4
Washing with soap and water is the only method to clean hands effectively.	38	76.3%	81.6%	+5.3

Knowledge Assessment

Module 2 – Vascular Access Care

Item	# Answering Pre- and Post-Tests	Correct Responses		Change in Correct Responses (Percentage Points)
		Pre-test	Post-test	
Name the three types of hemodialysis accesses.*	21	95.2%	100.0%	+ 4.8
Of the three types of dialysis accesses, which has the lowest rate of infection?	21	100.0%	100.0%	0.0
Sepsis can happen when bacteria infect your blood. (true or false)	23	95.7%	95.7%	0.0
What are some ways germs can enter your body?*	21	52.4%	57.1%	+ 4.7
Has antibiotic resistance been rising or falling in the past 10 years?	19	94.7%	100.0%	+ 5.3
After washing your hands and access, do you dry your access first or hands first?	20	65.0 %	80.0%	+ 15.0

Patient Satisfaction

Module 1 – Basic Infection Prevention

Module Resource	# Responses	% Positive Responses
Vocabulary Assessment and Definitions		
Was the information helpful?	43	90.7%
Was the information easy to understand?	41	97.6%
Booklet: Basic Infection Prevention		
Was the information helpful?	40	97.5%
Was the information easy to understand?	38	97.4%
World Health Organization Handout		
Was the information helpful?	37	94.6%
Was the information easy to understand?	36	91.7%
TIP Cards: Basic Infection Control		
Was the information helpful?	36	88.9%
Was the information easy to understand?	33	97.0%
“Things You Can Do”		
Was the information helpful?	36	94.4%
Was the information easy to understand?	34	97.1%
“Tell Me More” Checklist		
Was the information helpful?	36	80.6%
Was the information easy to understand?	35	88.6%

Patient Satisfaction

Module 2 – Vascular Access Care

Module Resource	# Responses	% Positive Responses
Passport to Infection Prevention		
Was the information helpful?	37	100.0%
Was the information easy to understand?	38	94.7%
Vocabulary Assessment and Definitions		
Was the information helpful?	39	97.4%
Was the information easy to understand?	39	100.0%
Booklet: “General Vascular Access Care”		
Was the information helpful?	39	100.0%
Was the information easy to understand?	39	97.4%
NKF Dialysis: “What You Need To Know”		
Was the information helpful?	37	100.0%
Was the information easy to understand?	37	97.3%
T.I.P Cards: “General Vascular Access Care”		
Was the information helpful?	28	100.0%
Was the information easy to understand?	28	100.0%
“Just Say Something”		
Was the information helpful?	30	100.0%
Was the information easy to understand?	30	100.0%
“Just Say Something” Patient Checklist		
Was the information helpful?	27	96.3%
Was the information easy to understand?	27	96.3%
“Tell Me More” Checklist		
Was the information helpful?	28	85.7%
Was the information easy to understand?	28	92.9%
Video: How to Wash Hands & Vascular Access		
Was the information helpful?	9	100.0%
Was the information easy to understand?	9	88.9%

Confidence Assessment

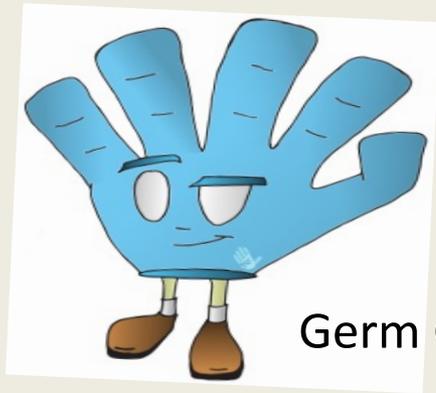
I believe that being active and involved in my healthcare will improve my health and well-being.	41	4.68	4.81
I know what I need to do to prevent or minimize infections.	42	4.38	4.42
I am comfortable discussing my health concerns with my dialysis nurses, technicians and doctors, even when they do not ask.	42	4.64	4.65
I know when dialysis procedures are being done incorrectly which may put me at risk for infections.	41	4.17	4.37
I would definitely speak up to a <u>technician</u> if she/he did something that put me at risk for infection.	42	4.57	4.63
I would definitely speak up to a <u>nurse</u> if she/he did something that put me at risk for infection.	39	4.70	4.68
I would definitely speak up to a <u>doctor</u> if she/he did something that put me at risk for infection.	39	4.61	4.73
I know I can identify symptoms of infections that should be reported to my dialysis nurses, technicians, and doctors.	38	4.36	4.50
I would definitely tell dialysis center staff about another staff member who did something that put me at risk of infection.	38	4.43	4.48
I wash my hands, fingers, and access site before each treatment.	37	3.91	3.92

Introducing TIP's Germ Fighters:

Mr. Hygienix



Don the Mask



Germ Catcher



Bubbles

Challenges/How Overcome?

- Getting facility staff participants to distribute and explain binders to patients
 - Reasons included: lack of staff, patient lack of interest
 - Provided comprehensive instructions and due dates via email and paper copies included in resource packages distributed to facilities.
 - Emphasized short timeline.
 - Reminder phone calls week after receiving materials.
- Getting facility staff to collect assessments and evaluations
 - For Module 1, staff had difficulty determining which pieces of module to return; faxing 70+ pages difficult.
 - To address this, in Module 2, pieces to be returned were printed using a different paper color (yellow), enabling staff to quickly identify pieces of the module to return.
 - Also provided postage-paid envelopes for staff members to use to return completed patient information (3 facilities used mail vs. fax)
- Continued support and periodic check-in calls to individuals were effective.
- Greatest challenge was short time period provided for this collaborative.

TIP Accomplishments



- Development of comprehensive toolkit for infection prevention;
- A shared project website created to post patient educational resources. Future updates and maintenance of website provided by IMESRDN;
- Development and production of one of the first hand wash videos available for dialysis patients;
- Participating patients increased their knowledge of infection prevention;
- Participating patients became more comfortable in approaching dialysis staff members to have conversations about infection prevention;
- Many positive comments were offered by facility administrators, nurse educators, and patients that the toolkits were a great source of infection information for patients, easy to understand, and interesting.

What's Happening Now?

Hope facilities continue to focus on HH and other infection control methods and continue to apply knowledge, ideas learned in 1st collaborative. **Wish we would have continued this one!**

CDPHE Completed 2 Dialysis Data Validation Projects

- Purpose-identify NHSN surveillance & reporting issues and educate facilities to improve application of NHSN definitions & criteria
- Project 1 - 25 clinics, 484 charts, 28% not reported, 13% over-reported; Project 2 - 25 clinics, 377 charts, 24% not reported, 5% over-reported;

Applied for CDC ELC funding to implement BSI Prevention in Dialysis Clinics

IMESRD

- Partnering with AZ to provide guidance to HAI subcommittee
- Working w/ WY DOH on a standardized curriculum for new IP staff
- 71 facilities in AZ, UT, CO, NM to audit HH, CVC care, cannulation practices

THANK YOU!!

- **Contact Info.**

Tamara Hoxworth, Ph.D.

Manager, Health & Safety Data Services

Colorado Department of
Public Health & Environment

(O) 303-692-2930

(E) tamara.hoxworth@state.co.us



Healthcare-Associated Infections (HAI) End-Stage Renal Disease (ESRD) Subcommittee & Updates



www.preventHAaz.gov

Eugene Livar, MD

HAI Program Manager
Office of Infectious Disease Services
Arizona Department of Health Services

Gloria Haught-Neese, RN, BSN

ESRD Subcommittee Co-Chair
Clinic Manager, American Renal Association
Estrella Mountain Dialysis

What Will We Cover Today?

- Arizona Department of Health Services (ADHS) HAI Program
- Arizona's HAI ESRD Subcommittee
- Finished Projects
- Current Projects
- Future projects

Healthcare-Associated Infection (HAI) Program

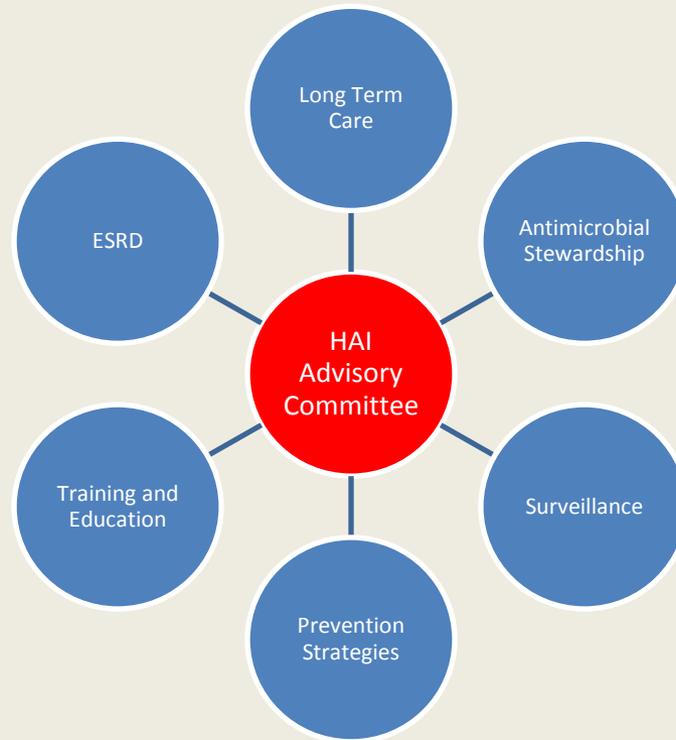
- Facilitate the HAI Advisory Committee and its corresponding subcommittees as they identify and support HAI prevention priorities for the state
- Coordinate intra-agency HAI prevention activities
- Monitor and expand current HAI surveillance activities
- Build and participate in partnerships and collaborations to assist HAI efforts throughout the state
- **Upon request, provide infection prevention technical assistance**



- Infection Prevention and Control Advisory Committee (IPCAC) created by Senate Bill 1356 in 2008
- IPCAC evolved in to HAI Advisory Committee in 2010
- Comprised of various state stakeholders and partners
- Steers HAI subcommittee activities and projects
- Bi-monthly meeting
- Chaired by State HAI Coordinator



HAI Advisory Committee and Subcommittees



HAI Subcommittees

- [Antimicrobial Stewardship Subcommittee](#)
- [Education and Training Subcommittee](#)
- [Prevention Strategies Subcommittee](#)
- [Surveillance Subcommittee](#)
- [Long Term Care Subcommittee](#)
- [End-Stage Renal Disease Subcommittee](#)

ESRD Subcommittee

- 1st meeting was held on September 5th, 2013
- Over 70 subcommittee members
- Meetings are held the first Tuesday of every month
- Meetings are 60 minutes in length
- Voluntary and open participation by members
- Attendance through physical presence or provided conference line

Scope and purpose of subcommittee

- Address common barriers
 - Staff infection control practices/adherence
 - Patient education
 - Training/education
 - Time constraints
 - Staff knowledge of regulations
 - PPE challenges
 - Hand hygiene
 - Environmental cleaning
 - Language
- Possible future projects
 - Optimal catheter care education
 - Optimal AVF/AVG education
 - Infection surveillance
 - Environmental cleaning
 - Catheter care education
 - Hand Hygiene
 - Vaccine education and guidance
 - Isolation practices

There is overlap between the two areas that can be addressed by the subcommittee

60 Minutes For Change



- The ESRD community is a great resources for our HAI Subcommittees!
- Subcommittee meetings occur monthly and average 60 minutes in length
- Voluntary and open participation by members
- Attendance through physical presence or provided conference line

Could you give 60 minutes a month to improve our statewide efforts to address emergent HAI issues?

Infection Control Checklist

- Two sided checklist
 - One side to promote teamwork and interaction concerning infection control between healthcare workers and patients
 - One side to promote infection control education
 - Hand hygiene and cleansing access site
 - Interventions for ESRD patients to prevent healthcare-associated infections
 - Resources

Infection Control Checklist

Help Us Find A Shining Star

Who helped you fight infection!



- Your healthcare provider (HCP) wore gloves and cleaned his or her hands between patients?
Yes No
- Your HCP wore gloves when touching your dialysis machine?
Yes No
- Your HCP cleaned his or her hands before providing care?
Yes No
- Your HCP cleaned his or her hands after taking off gloves?
Yes No
- Your HCP did an access check?
Yes No
- Your HCP scrubbed your access for one whole minute and let it dry before sticking?
Yes No
- Your HCP gave you a glove to hold your sites and you washed your hands after removing it?
Yes No



Who was your shining star today?



How can infections affect you?

Infections are the second leading cause of death among hemodialysis patients.

What can I do to help prevent these infections?

How to perform proper handwashing and access site cleansing:

- Wet hands and access site with water, apply soap, rub hands and/or site for at least 15-20 seconds.
- Rinse and dry with a disposable towel or air dry.
- Use a disposable towel to turn off the faucet.

How to use alcohol-based hand sanitizer properly:

- Apply sanitizer to the palm of one hand (read label for correct amount).
- Rub your hands together.
- Rub the product over all surfaces of your hands and fingers until your hands are dry.



The following recommendations can help prevent a healthcare-associated infection (HAI):

- Healthcare providers (HCPs) should wear gloves prior to contact with patients, treatment station and potentially contaminated surfaces.
- Your HCP should change gloves between patients and between clean and dirty sites on the same patient.
- Make sure that all healthcare providers clean their hands with soap and water or alcohol-based hand sanitizer before and after caring for you or your vascular access site.
- Your access site should be cleaned and allowed to air dry prior to access or sticking.
- Your dialysis station should be disinfected before and after each use.
- Let your HCP know right away if the area around the central line is sore or red, is draining (pus), or if the bandage becomes wet or dirty.
- Ask your HCP to explain why a central line is needed, how long it will be in place, and if you can use a fistula or graft for dialysis treatment.
- Make sure you are up-to-date on your vaccinations (influenza, hepatitis B, and pneumococcal) and talk to your healthcare provider if you have any questions.

Be sure to ask questions and discuss how to prevent infections with your HCP.



More information can be found at:
CDC's Dialysis Safety: www.cdc.gov/dialysis/
CDC's Hand Hygiene: www.cdc.gov/handhygiene/
ADHS HAI website: www.preventHAIs.arizona.gov



Influenza Vaccination of Healthcare Workers - Arizona 2014 Survey

- Assess the vaccination protocol and practices at various healthcare settings in Arizona
 - **ESRD**
 - LTC
 - LTACH
 - ACF
 - CAH

Influenza Vaccination of Healthcare Workers - Arizona 2014 Survey (Cont.)

- Current policy concerning healthcare worker (HCW) vaccination
- Noncompliance vaccination protocol
 - Included requested documentation
- Proof of off-site vaccination
- Surveillance of non-employee vaccination status
- Materials that might aid and improve vaccination rates within their facility
- Current HCW vaccination rate

ESRD Needs Assessment – Arizona 2014 Survey

- New patient orientation materials
 - Services
 - Disease
- Patient education
 - Initial
 - Continuing
 - Frequency
- Gaps and additional resources needed

ESRD Needs Assessment – Arizona 2014 Survey (Cont.)

- Emergency and preparedness education
 - Self-sufficient for up to 7 days
- Educational material concerning mental health and changes
 - Patient
 - Family
- Community need for counseling and support groups
- Patient personal needs and resources
 - Transportation
 - Financial
 - Insurance
 - Etc.

ESRD Needs Assessment – Arizona 2014 Survey (Cont.)

- Facilities wanting to participating in a pilot program for tracking patient and HCW vaccination throughout Arizona
- Confirmation of understanding of educational material

Patient and Caregiver Resource Fact Sheet

- From analyzing the data obtained through the ESRD needs survey
- Identify not only common materials and resources that are available, but also those that will address and fill identified gaps and needs
- Have resources available in an easy to read and location
- Be comprised of websites and hyperlinks

Patient and Caregiver Resource Fact Sheet Possible Topics

- Disease
- Fluid intake
- Nutrition
- Infection prevention
- Medications
- Safety
- Emergency
- Financial strains
- Normal financial responsibility
- Insurance
- Medication
- Transportation
- Ability to work

Patient Orientation to ESRD and Services Pamphlet

- Educational pamphlet or booklet that can be shared by Arizona facilities with patients
- Resource will be available on ADHS HAI website for download and review

Patient Orientation to ESRD and Services Pamphlet (Cont.)

Will include but not limited to

- Renal Physiology
- ESRD
- Types of Dialysis
 - Hemodialysis
 - Peritoneal Dialysis (PD)
- Treatment option
 - Clinic
 - At home
- Transplant
- Nutrition
- Exercise
- Rehabilitation
- Coping and mental health
- Finances
- Vacation
- Rights

Arizona State Immunization Information System (ASIIS)/ESRD Subcommittee Project

- During the 2013 ADVICE collaborative and in previous ESRD Subcommittee meetings a question was raised
 - “Is there a way to capture and track immunization data for ESRD patients and healthcare workers?”
- Arizona Department of Health Services (ADHS) HAI and Immunization programs have come together to address this need in partnership with the ESRD community
- There are several simple steps that need to be met in order to achieve our goal in cooperation with Arizona dialysis facilities.
- Steps include patient consent to report, setup facilities in ASIIS, training and testing.
- ADHS would be willing to provide guidance to facilities interested in participating in this project.
- This project has the potential to share immunization information across registered dialysis facilities in the state of Arizona, increase the rate of vaccination by automatic due date reminders, reduce the number unnecessary vaccinations, and promote overall patient wellbeing.

Healthcare Worker Influenza Vaccination Campaign 2014-2015

- Based on dialysis facility HCW vaccination rate for 2013:

≈10%

- Room for improvement
- ESRD subcommittee would like to address this
- Have support from ADHS, HAI Program, ESRD Community, other HAI Subcommittees, and Network 15

Healthcare Worker Influenza Vaccination Campaign 2014-2015 (Cont.)

- Multi-tiered approach
 - Pre and post survey
 - HCW Influenza toolkit
 - Letter of support for HCW influenza vaccination from ADHS
 - Educational materials
 - HAI Program support
 - Possible recognition system
 - Possible other items
 - Sharing of best practices

Next Steps

- Participation in collaborative events:
 - ADVICE Collaborative
 - ESRD Subcommittee
 - HAI Advisory Committee
- Push forward with current projects
- Share best practices
- Identify road blocks for project implementation

Questions?



HAI Program Pamphlets and Toolkits

NOROVIRUS OUTBREAK DETECTION AND MANAGEMENT

GUIDANCE FOR LONG-TERM CARE FACILITIES
Arizona

What Is Norovirus?

Learning how to control the spread of norovirus

Hand Hygiene is everyone's responsibility, from visitors to physicians!

Adventures in Hand Hygiene

Your Hand Hygiene Journey in a Healthcare Facility
Oh, the places you'll go and the things you'll touch!

Sing the "Happy Birthday" song twice during hand washing!

Washing your hands can help stop the spread of germs!

Be aware! Germs live under your nails (5 times!).

Why wash my hands? To protect myself, family, and friends in the community!

Use a paper towel to turn off the faucet and open the door!

Wash your hands **before and after** changing your gloves!

Wash your hands for at least 15-20 seconds!

If you skip your thumbs, your hands are not clean!

Ask your providers if they washed their hands!

No soap or water? Hands do not look dirty? Use hand sanitizer to clean your hands!

How should I wash my hands with soap and water?

- Wet your hands with clean, running water and apply soap.
- Rub your hands together to make a lather and scrub them well.
- Continue rubbing your hands for at least 15-20 seconds.
- Rinse your hands.
- Dry your hands using a clean towel or air dry them.

How should I use alcohol-based hand sanitizer?

- Apply the product to the palm of one hand.
- Rub your hands together.
- Rub the product over all surfaces of your hands and fingers until your hands are dry.

Arizona Department of Health Services logo

Help Us Find A Shining Star

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- Your HCP wore gloves when touching your dialysis machine? Yes No
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- Your HCP cleaned his or her hands after taking off gloves? Yes No
- Your HCP did an access check? Yes No
- Your HCP gave you a glove to hold your sites and you washed your hands after removing it? Yes No

Who was your shining star today?

Living with C. diff

Learning how to control the spread of *Clostridium difficile* (C. diff)

This can be serious. I need to do something about this now!

Living with VRE

Learning how to control the spread of Vancomycin-resistant enterococci (VRE)

What is whooping cough (pertussis)?

Information and Prevention

Interfacility Infection Prevention Transfer Tool*

Name: _____

Date of transfer: _____ No known active resistant MRSA

Was the patient in isolation on date of discharge/transfer? Yes No

Type of patient isolation: _____

Contact Droplet Airborne

MRSA-resistant Staphylococcus aureus (MRSA)	MRSA-resistant Clostridium difficile (MRCD)
MRSA-resistant Staphylococcus aureus (MRSA)	MRSA-resistant Clostridium difficile (MRCD)
MRSA-resistant Staphylococcus aureus (MRSA)	MRSA-resistant Clostridium difficile (MRCD)
MRSA-resistant Staphylococcus aureus (MRSA)	MRSA-resistant Clostridium difficile (MRCD)

Other active resistant MRSA: _____

Comments: _____

*This tool is for informational purposes only. It is not intended to be used as a substitute for clinical judgment. The information provided in this tool is for informational purposes only and is not intended to be used as a substitute for clinical judgment. The information provided in this tool is for informational purposes only and is not intended to be used as a substitute for clinical judgment.

Arizona Department of Health Services logo

Arizona Department of Health Services

Clostridium difficile Infections (CDI) Prevention Toolkit

Arizona Department of Health Services logo

Carbapenem-resistant Enterobacteriaceae (CRE) Infection in Skilled Nursing Facilities

Arizona Department of Health Services logo

Information and Prevention

Arizona Department of Health Services logo

Living with MRSA

Learning how to control the spread of *Methicillin-Resistant Staphylococcus aureus* (MRSA)

Thank You!



www.preventHAaz.gov

Eugene Livar, MD

Tori Reaves, MPH

Reducing Infections in Dialysis Patients

Nancy Mutzl, RN, BSN, CDN

Disclosures

None

Objectives

Identify how infections effect dialysis and dialysis related areas

Identify how dialysis and dialysis related areas effect infection control

Why so susceptible?

Chronic inflammation

Repeated procedures

Central lines

Exposure to large amounts of water

Exposure to peers in chronic setting

Frequent hospitalizations

Co-morbidities

(ANNA, 2008)

Vascular Accesses

Catheters

AVF/AVG

Anemia

Infection's role in anemia
management

Fluid Removal

Infections role in fluid removal

Nutrition

Nutrition's role in infection control

Infections role in nutrition

Social Issues

Quality of Life

Embarrassment

Economics

Transplant

Infection's role in transplantability

The Big Deal????

One infection can lead to....
catheter
anemia
blood transfusion
decreased albumin
hospitalizations
decreased quality of life
decreased ability to transplant
and possibly....

Take Away Point

Patients are DYING!!!

References

ANNA (2008). Core curriculum for nephrology nursing. Pitman, NJ: AJJ

Science Daily (2012). Chronic kidney disease alter microbial intestinal flora. Retrieved from <http://www.sciencedaily.com/releases/2012/10/121009121743.htm>



“CELEBRATING SUCCESS”

ADVICE Collaborative II

May 16, 2014

Kathy McCanna, RN, BSN, CPHQ

Claudia Montes, MPH

Licensing- Setting the Stage for Improvement



ESRD ADVICE Collaborative
May 17, 2013

Licensing- Foundation for Improvement in Public Health Outcomes



**ESRD ADVICE Collaborative
May 16, 2014**

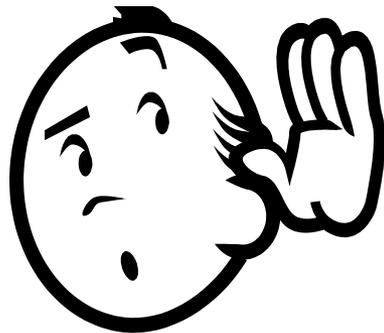
Culture for Success

- Customer Focus
 - Meet the needs of those we serve
- Leadership
 - Commitment starts with leaders
- Data and Measurement
 - Outcomes are a result of processes
 - Data drives our decisions
- Teamwork
 - Everyone needs to work together to meet the needs of those we serve

Customer Focus

Customer Needs

- Stated
- Real
- Perceived
- Cultural



Discover Customer Needs

- Observe behaviors
- Ask
 - Focus Groups
 - Patients
- Analyze feedback
 - Satisfaction Surveys

Leadership

- Vision, Mission and Goals
- Plan for achieving the Vision, Mission and Goals
- Provide resources
- Lead by example

Data and Measurement

Data Sources:

- State Licensing Findings/Deficiencies
- State Agency Survey and Certification Findings/Deficiencies
- Dialysis Facility Report (DFR)/Dialysis Facility Compare
- Reports of Outbreaks/Infections
- Provider Quality Management System
- NHSN Data

Data Evaluation and Improvement

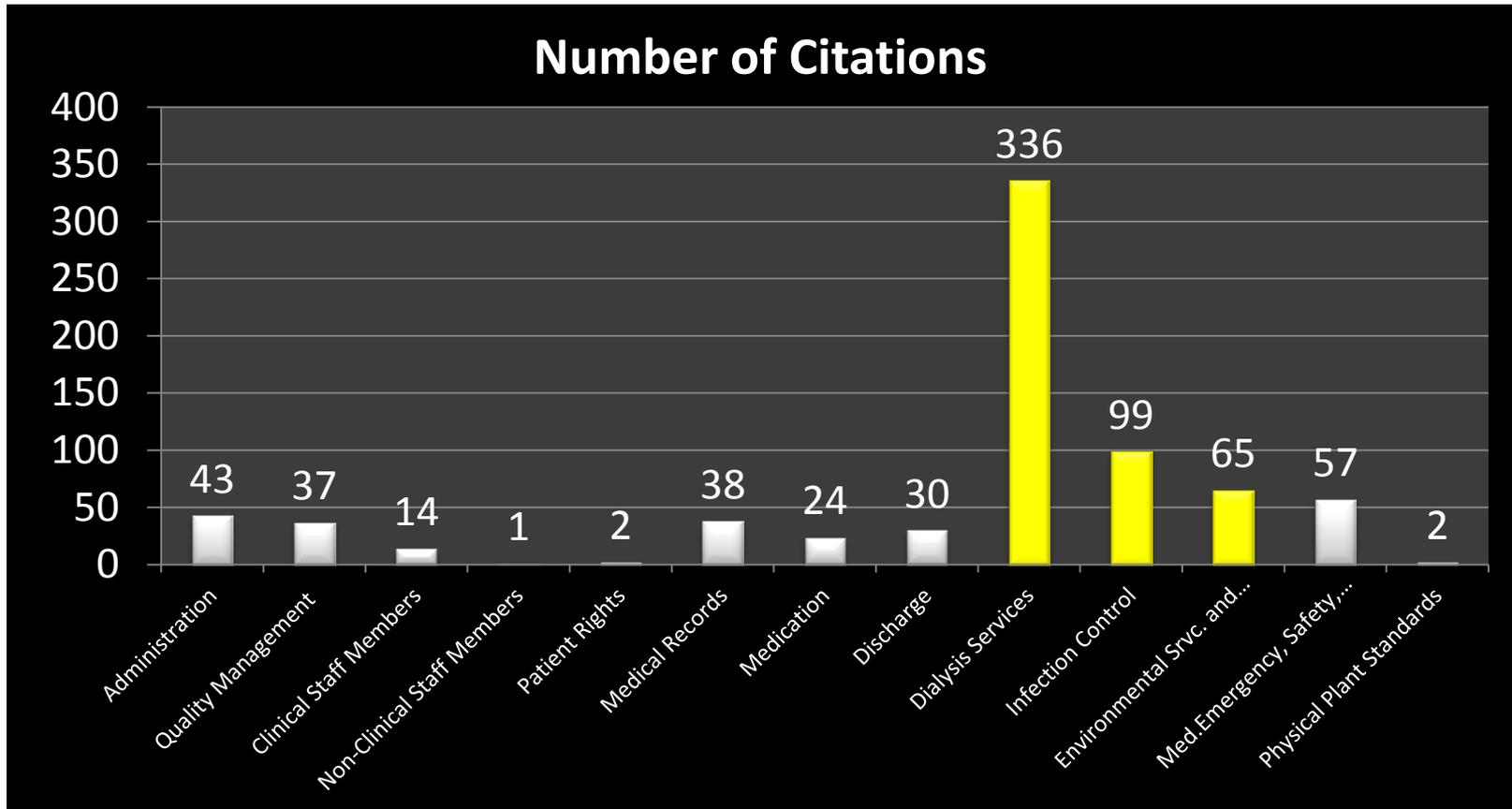
- Evaluate performance
- Compare performance to goals
- Act on differences

Data Summary Update – Dialysis Providers in Arizona

Claudia Montes, MPH

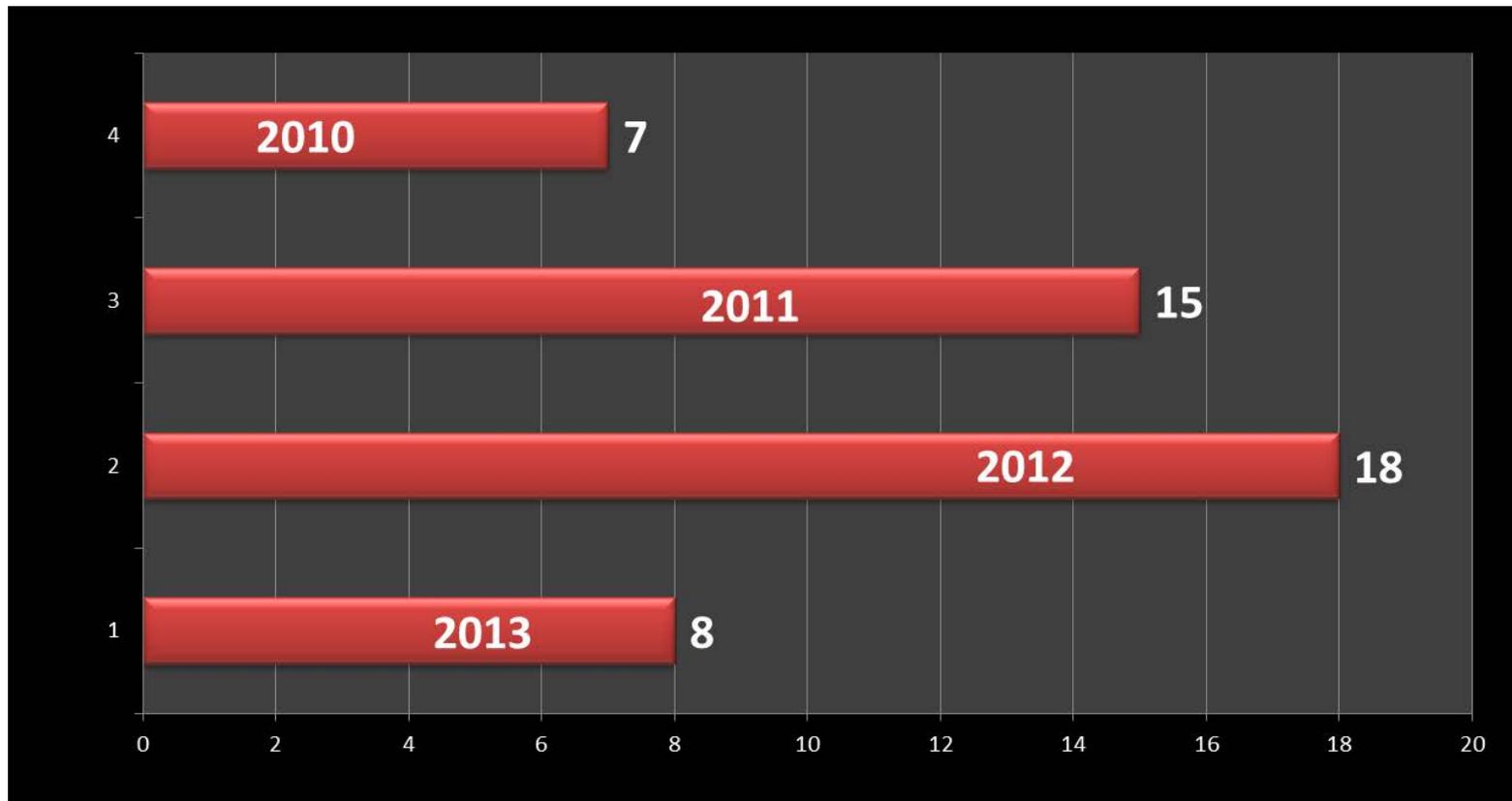
Past Review: FFY 2012 Data

Citations

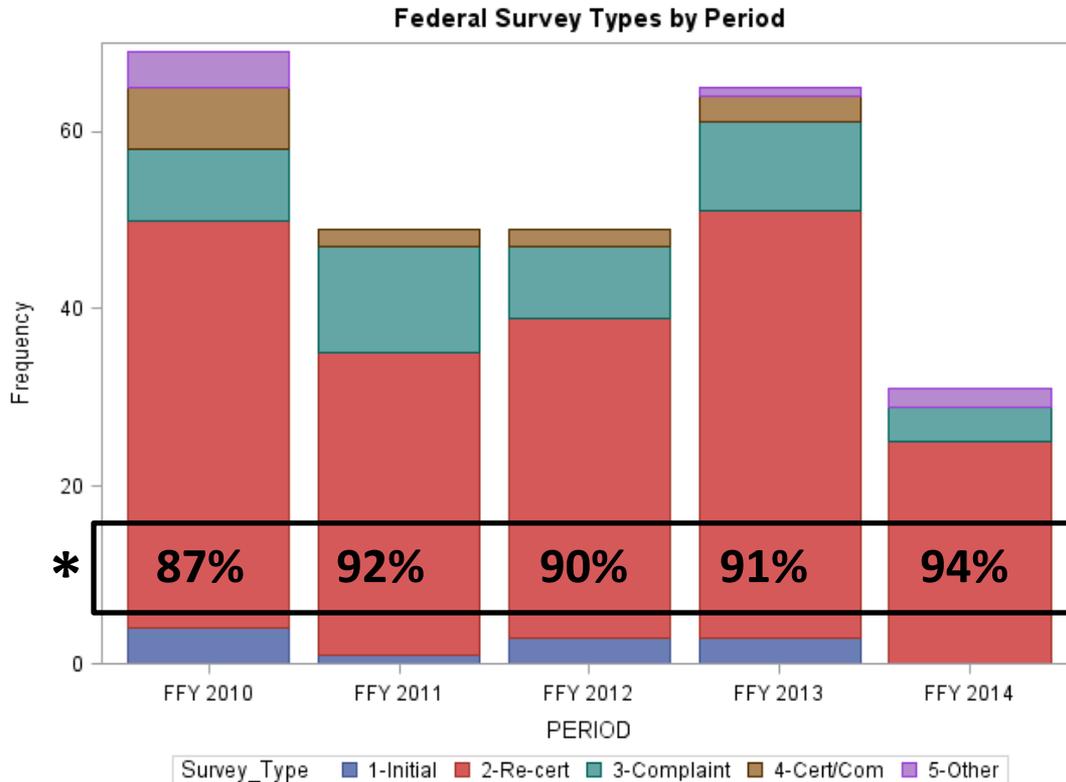


Past Review: FFY 2012 Data

State Enforcement



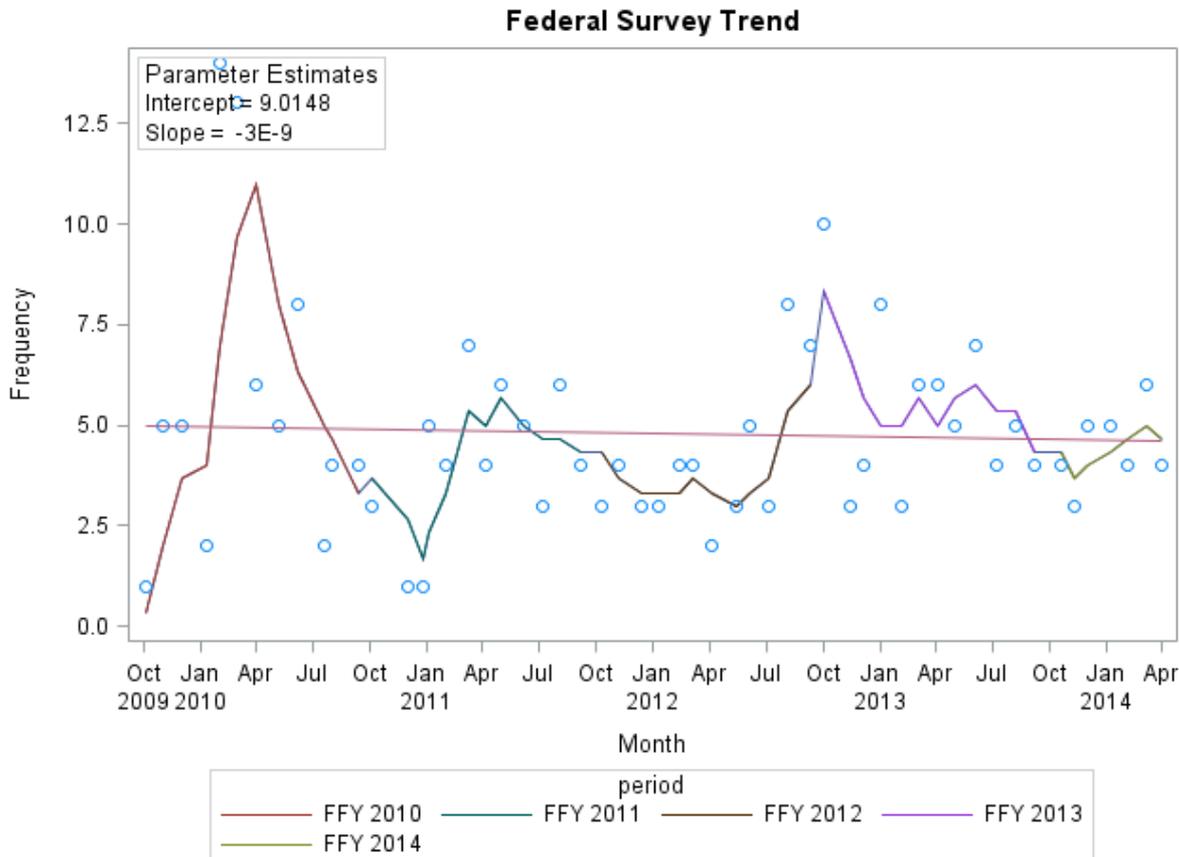
Number of Federal Surveys: Dialysis Facilities



- 100 Federal certified and state licensed facilities
- 16 Federal certified only facilities
- 263 Surveys since FFY 2010 (4.5 year period)
- Federal re-certification are conducted on a 3 year cycle. Number per cycle may not be constant.

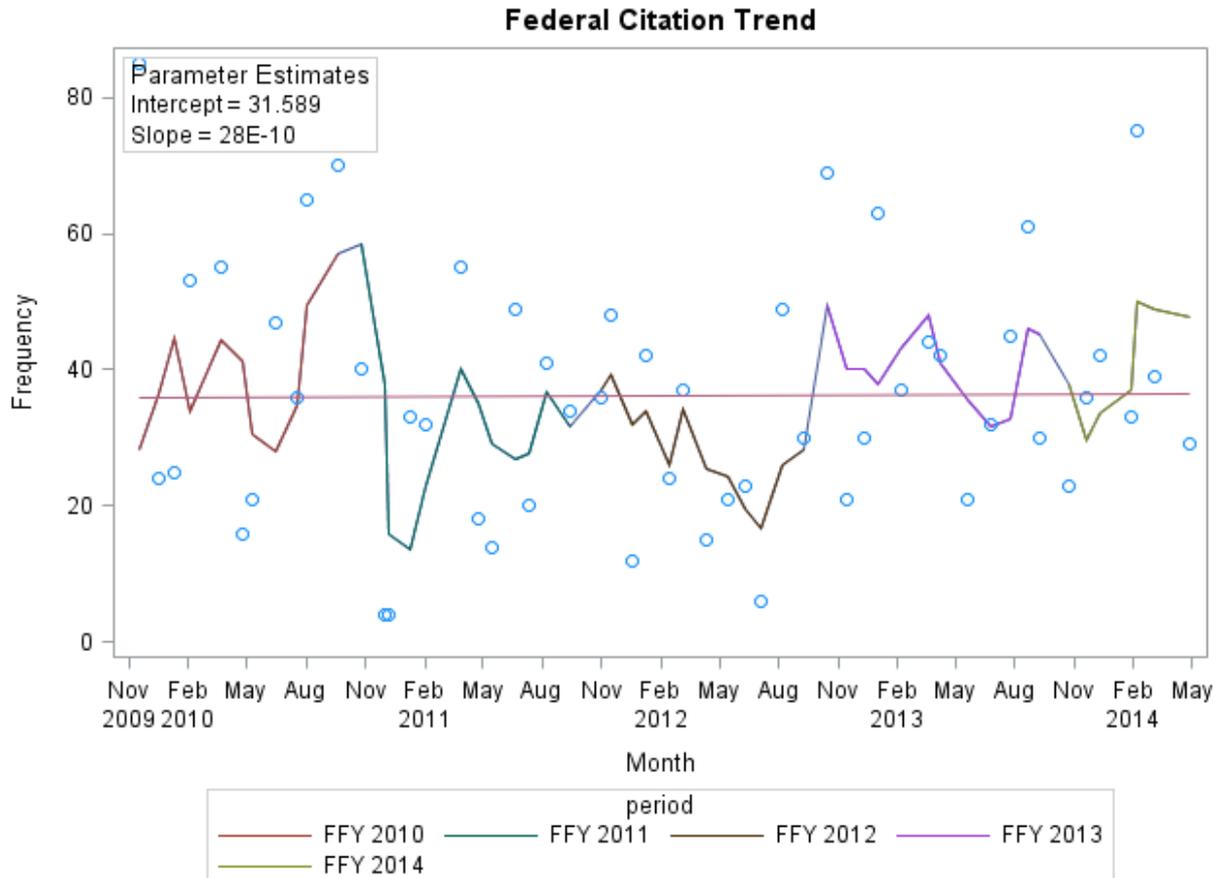
*Percent of facilities surveyed only once in the fiscal year

Federal Dialysis Surveys



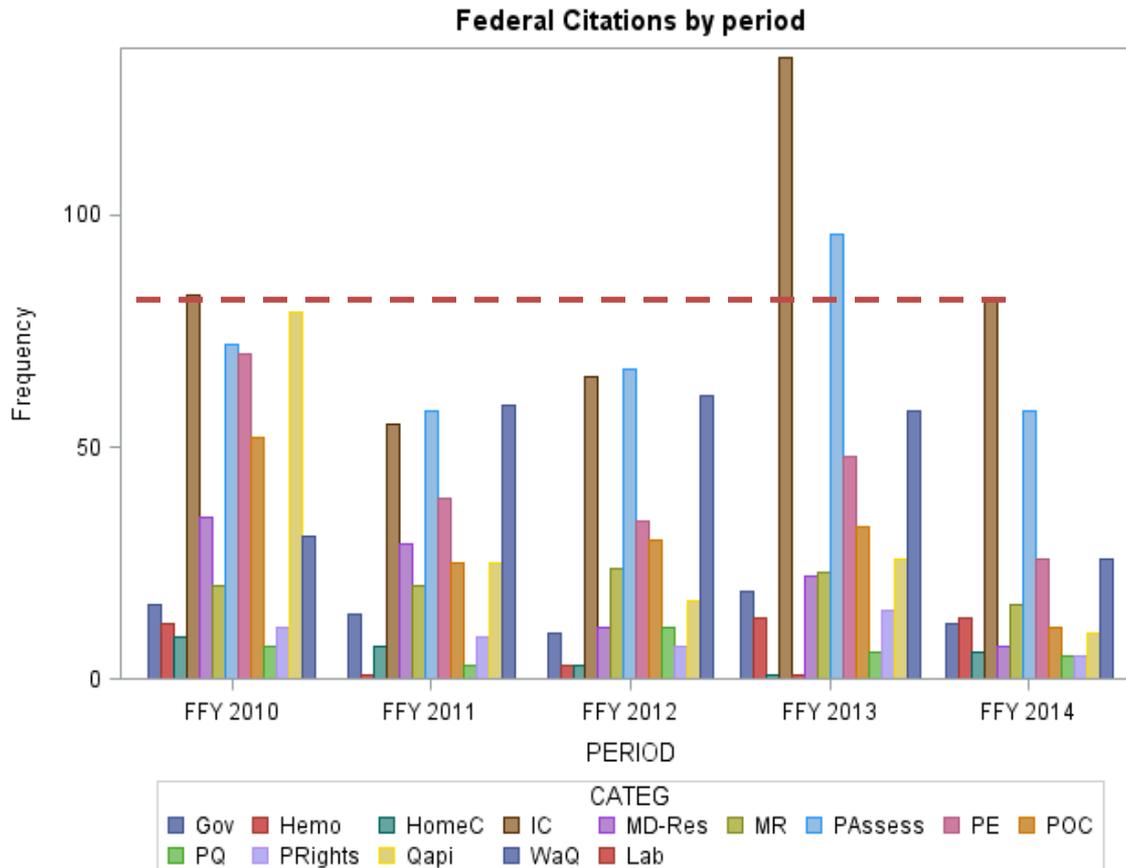
- Overall number of federal surveys have remained stable during this time

Federal Citations



- Overall number of federal citations have remained stable during this time

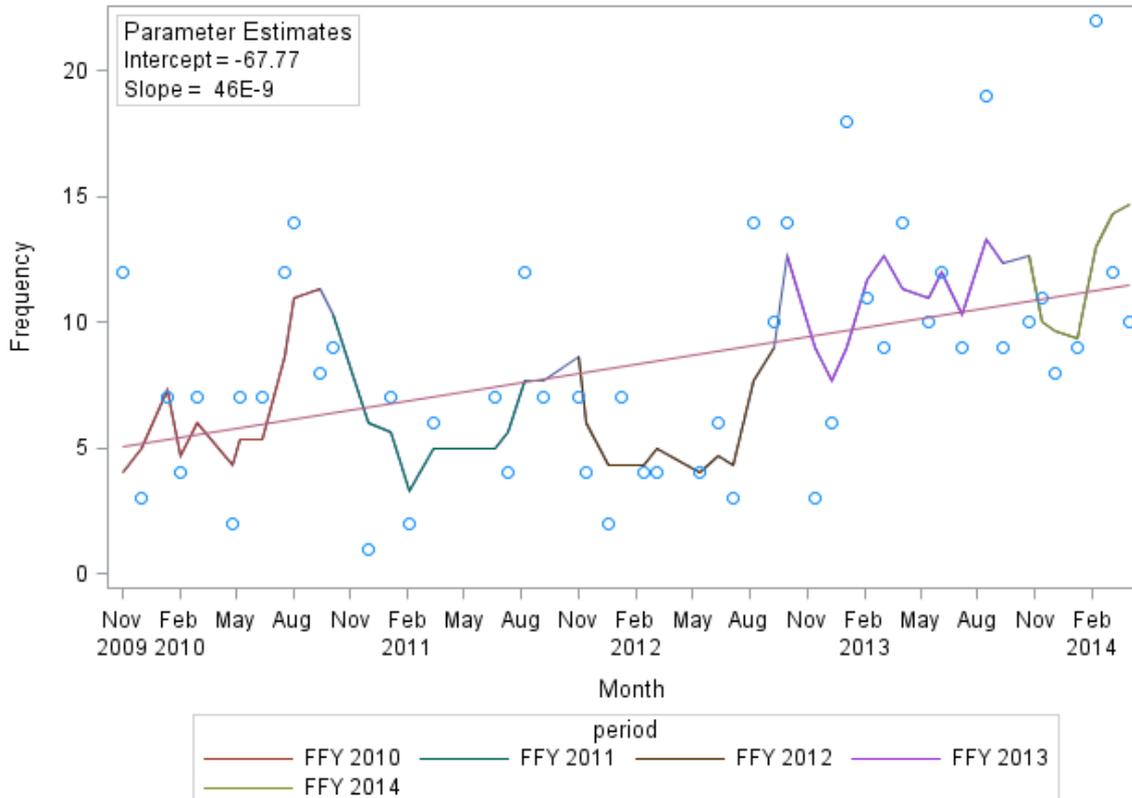
Federal Citations



- Infection control related citations have increased

Federal Infection Control Citations

Federal IC Trend



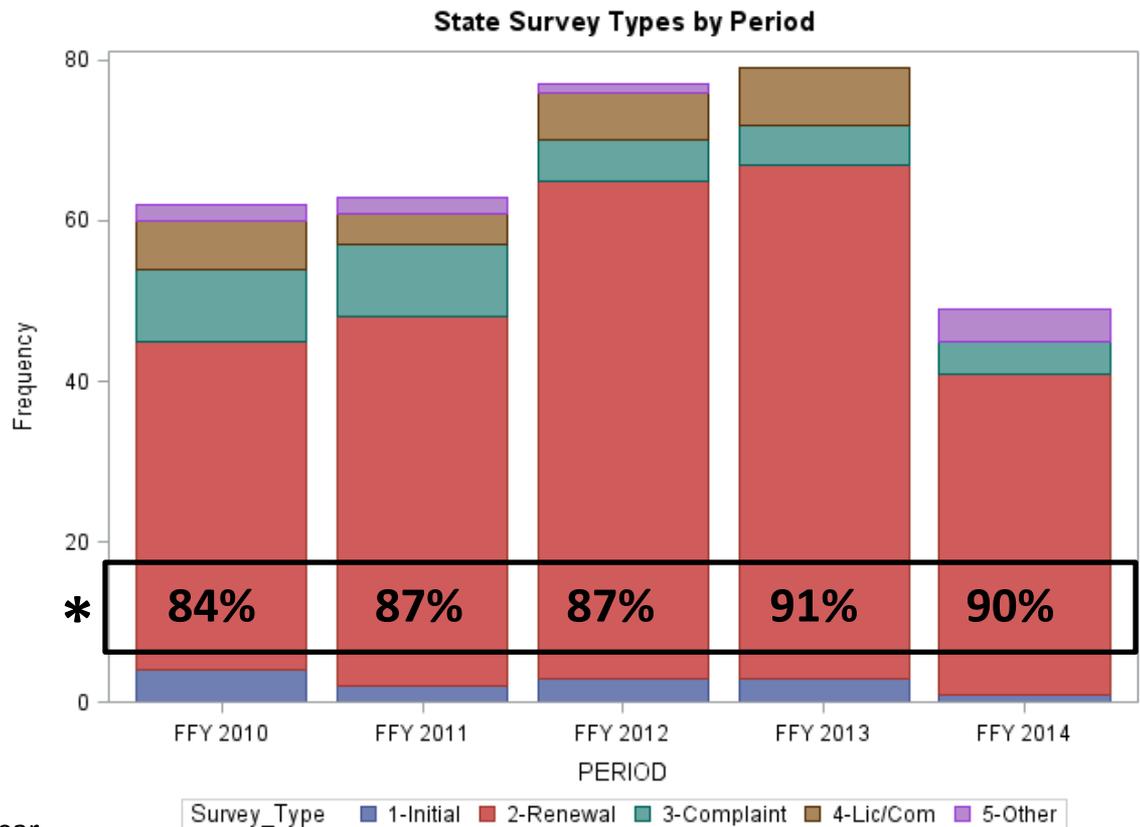
- Number of infection control citations almost doubled between FFY 2012 and FFY 2013
- Current FFY 2014 numbers suggest a new record high

Key Points

- Federal infection control citations are on the rise
- There is no increase in total federal citations or surveys during the same time period

Number of State Surveys: Dialysis Facilities

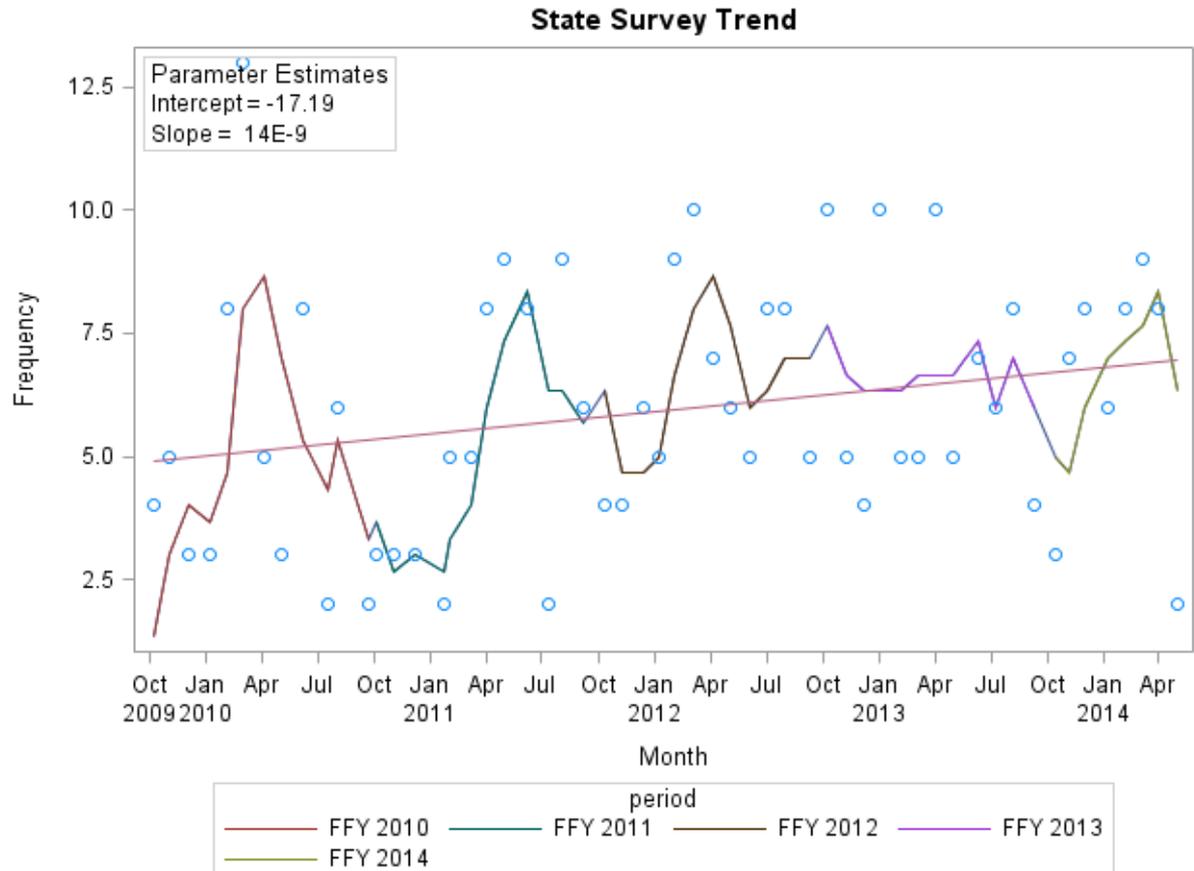
- 100 Federal certified and state licensed facilities
- 332 Surveys since FFY 2010 (4.5 year period)
- State renewal surveys are on an annual cycle.



*Percent of facilities surveyed only once in the fiscal year

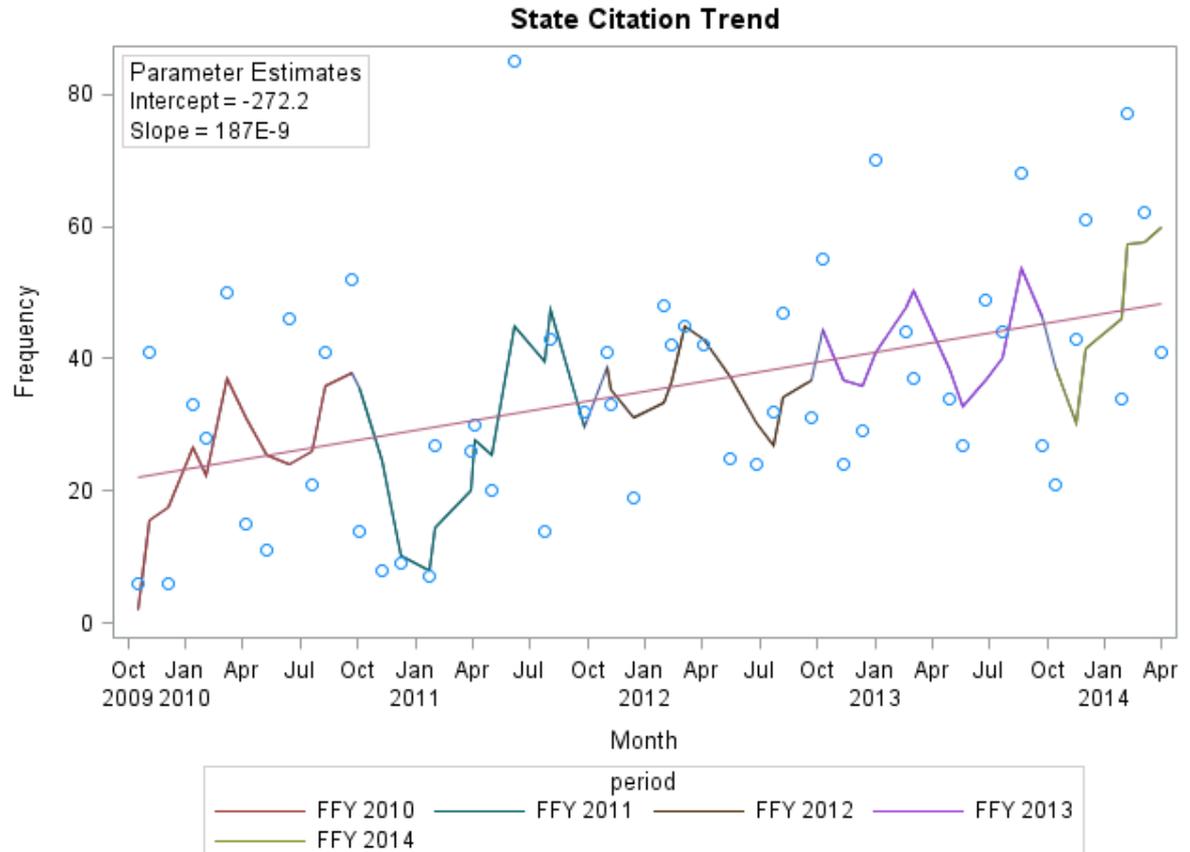
State Dialysis Surveys

- Slight increase in the number of state surveys



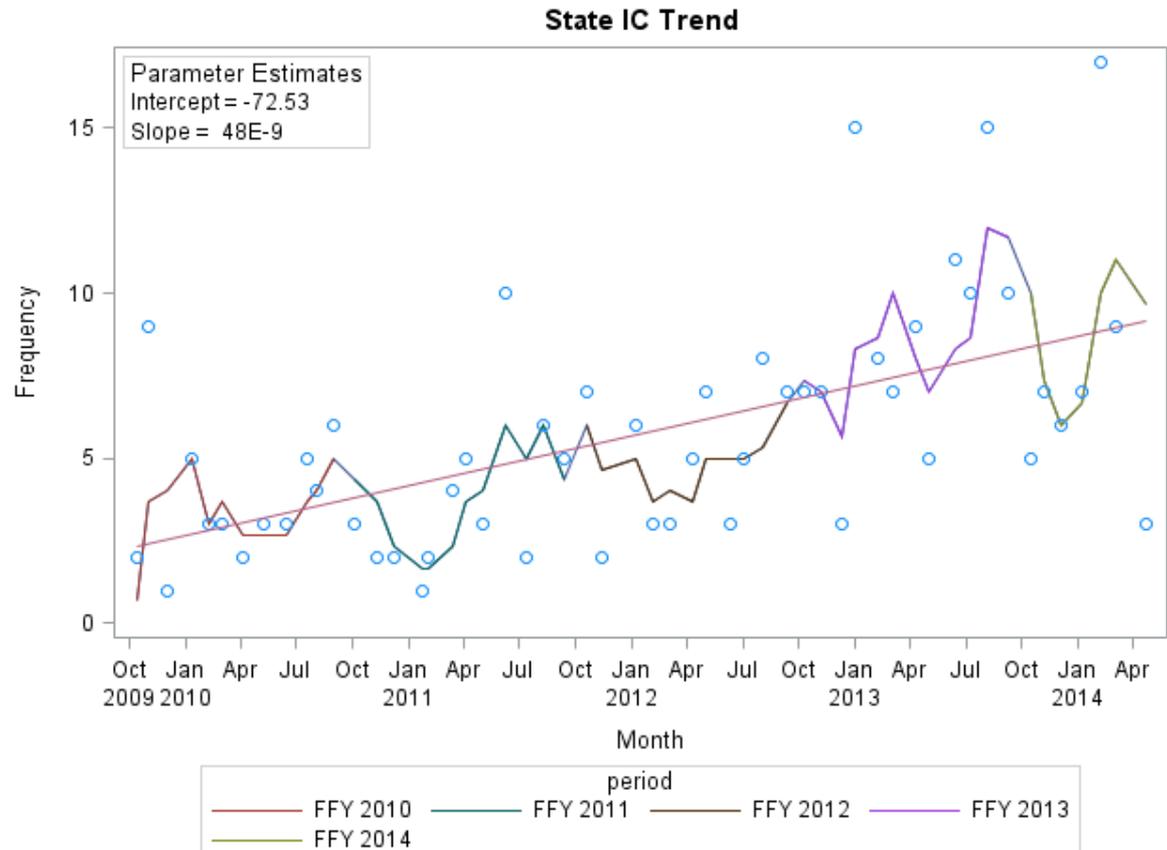
State Citations

- Noteworthy increase in the number of state citations

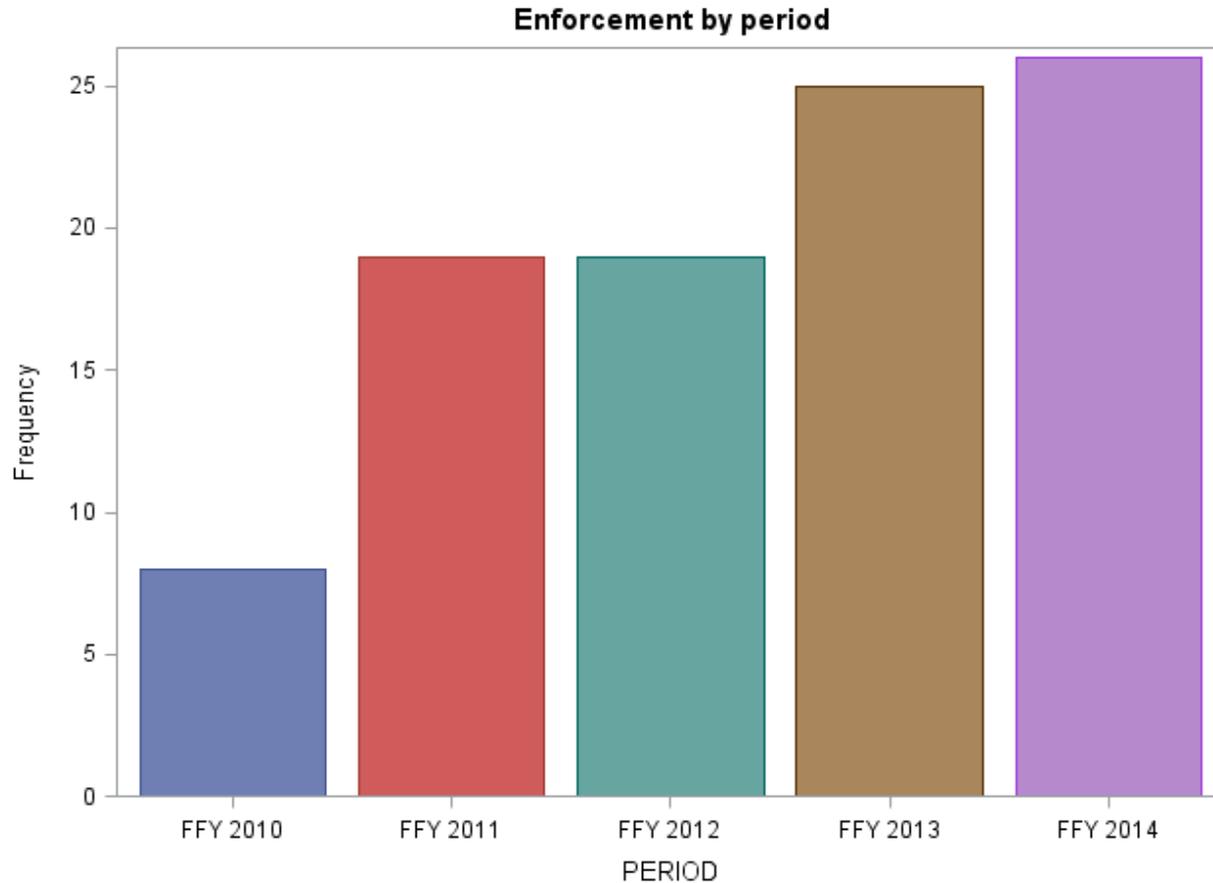


State Infection Control Citations

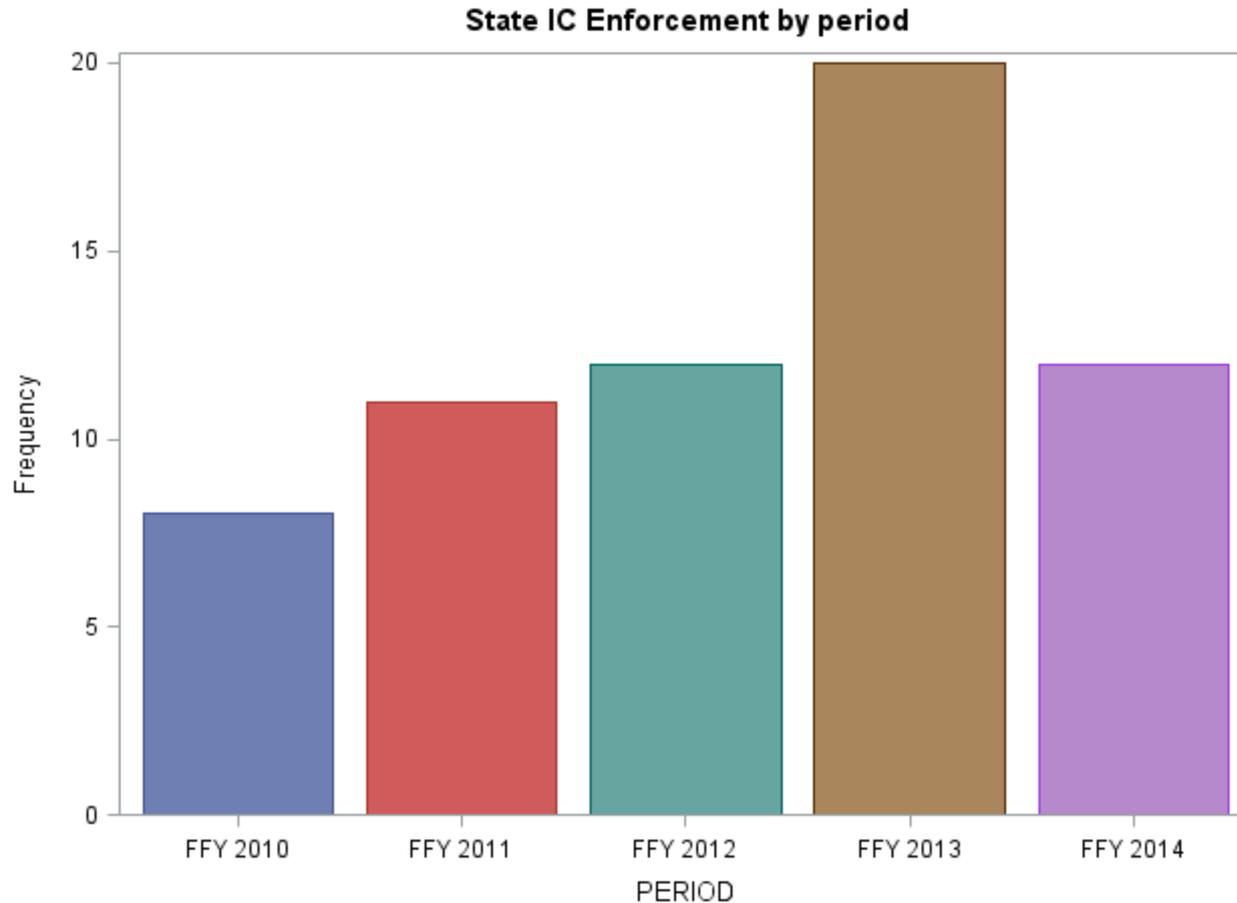
- # of infection control citations almost doubled between FFY 2012 and FFY 2013
- Current FFY 2014 numbers appear to be approaching a record high



State Enforcement



State Infection Control Enforcement



Key Points

- State infection control citations are on the rise, along with enforcements
- There is a slight increase in state surveys and state citations

Key Question

- Can the rise in state infection control citations be explained by the rise in state citations or state surveys?

State Infection Control Citations

- Percent of infection control citations among all citations for that FFY

2010	2011	2012	2013
13%	13%	14%	20%

- Percent of surveys with at least one infection control citation among all surveys for that FFY

2010	2011	2012	2013
93%	91%	92%	97%

Key Points

- Overall, infection control citations are increasing faster than can be explained by increases in the number of surveys, or the total number of citations.
- Increasing infection control citations is continuing in both federal and state surveys

NHSN Dialysis Outcomes Baseline data

NHSN Infection Events for Arizona	2013
# of Fistulas	1208
# of Grafts	338
# of Other Access Device	19
# Catheter graft H1 bird	2
#Tunneled Central Line	1233
# Non Tunneled Central Line	22
IV Antimicrobial Start	1251
IV Vancomycin Start	1636
Positive Blood Culture	493
Pus, Redness, Swelling Event	792
Pus, Redness, Swelling Event Fistula	260
Pus, Redness, Swelling Event Graft	101
Pus, Redness, Swelling Event Other Access Device	7
Pus, Redness, Swelling Event Tunneled CL	420
Pus, Redness, Swelling Event Non Tunneled CL	6
Local Access Site Infection	675
Access Related Bloodstream Infection	397
Vascular Access Infection	1072
Fever	684
Chills or Rigors	446
Wound with Pus or Redness	121
Cellulitis	212
Pneumonia or Respiratory Infection	70
Other Problem	828
Hospitalization Outcome	549
Death Outcome	22
Loss of Vascular Access	5

- Potential areas of improvement of dialysis processes
- Evaluation and development of preventative practices/policies
- How do individual facilities compare?

Update Summary

- There is an upward trend in infection control related citations
- The trend is continuing, not reversing. Efforts undertaken to date have not reversed the trend.
- NHSN Outcomes – baseline data show opportunities for improvement in infection control policy and practice

Thank you!

Claudia Montes, MPH

Claudia.Montes@azdhs.gov



Health and Wellness for all Arizonans

Teamwork

- Dialysis Providers
- Arizona Department of Health Services- Public Health Licensing
- ESRD Network 15
- Arizona Department of Health Services- Public Health Epidemiology and Disease Control
- Arizona Healthcare Associated Infection (HAI) Advisory Committee

Improvement Strategy

- Meet or exceed internal and external customers expectations aka “Voice of the Customer”
- Use of everyone's data and measurement
- Plan and design **prevention** activities in addition to quality assurance activities
- Reframe Efforts- Working together to achieve “excellence”

Celebrate Success

CELEBRATE SUCCESS

- Colorado Department of Public Health Projects
- HAI ESRD Subcommittee
- Provider Storyboards Examples
 - Daily Hand Hygiene
 - Reducing deficiencies
 - Reducing the incidence of access site related infection



Afternoon Breakout Sessions

TIME	ROOM	TOPIC
12:45-1:30	Arizona Room	Infection Prevention Best Practices
1:40-2:25	Boulder Room	Use of Current HAI Projects
2:35-3:10	Library	The Role of State Public Health and ESRDs

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Use and Implementation of Current Healthcare-Associated Infections (HAI) Projects



www.preventHALaz.gov

Eugene Livar, MD

HAI Program Manager
Office of Infectious Disease Services
Arizona Department of Health Services

What are the current HAI projects?

- Infection control checklist
- Influenza Vaccination of Healthcare Workers - Arizona 2014 Survey
- ESRD Needs Assessment – Arizona 2014 Survey
- Patient and Caregiver Resource Fact Sheet
- Patient Orientation to ESRD and Services Pamphlet
- Arizona State Immunization Information System (ASIIS)/ESRD Subcommittee Project
- Healthcare Worker Influenza Vaccination Campaign 2014-2015

Challenges and Roadblocks

- “C” suite and administrative buy-in
- Healthcare worker support
- Patient understanding
- Dissemination of information and educational material
- Evaluation of the project
- Sharing best practices



Surveys

- Influenza Vaccination of Healthcare Workers - Arizona 2014 Survey
- ESRD Needs Assessment – Arizona 2014 Survey



Patient Educational Materials

- Patient and Caregiver Resource Fact Sheet
- Patient Orientation to ESRD and Services Pamphlet



Healthcare Worker (HCW) Projects

- Infection control checklist
- Healthcare Worker Influenza Vaccination Campaign 2014-2015



Arizona State Immunization Information System (ASIIS)/ESRD Subcommittee Project



Final Thoughts?

- Open discussion on any topic or need



HAI Program Pamphlets and Toolkits

NOROVIRUS OUTBREAK DETECTION AND MANAGEMENT

GUIDANCE FOR LONG-TERM CARE FACILITIES
Arizona

What Is Norovirus?

Learning how to control the spread of norovirus

Hand Hygiene is everyone's responsibility, from visitors to physicians!

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Your Hand Hygiene Journey in a Healthcare Facility
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Sing the "Happy Birthday" song twice during hand washing!

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No soap or water? Hands do not look dirty? Use hand sanitizer to clean your hands!

How should I wash my hands with soap and water?

- Wet your hands with clean, running water and apply soap.
- Rub your hands together to make a lather and scrub them well.
- Continue rubbing your hands for at least 15-20 seconds.
- Rinse your hands.
- Dry your hands using a clean towel or air dry them.

How should I use alcohol-based hand sanitizer?

- Apply the product to the palm of one hand.
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www.azdhs.gov

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Learning how to control the spread of *Clostridium difficile* (C. diff)

This can be serious. I need to do something about this now!

Living with VRE

Learning how to control the spread of Vancomycin-resistant enterococci (VRE)

What is whooping cough (pertussis)?

Information and Prevention

Interfacility Infection Prevention Transfer Tool*

Name: _____

Date of transfer: _____ No known active resistant MRSA

Was the patient in isolation on date of discharge/transfer? Yes No

Type of patient isolation: _____

Contact Droplet Airborne

MRSA-resistant Staphylococcus aureus (MRSA)	MRSA-resistant Enterococcus faecalis (MRE)
MRSA-resistant Staphylococcus aureus (MRSA)	MRSA-resistant Enterococcus faecalis (MRE)
MRSA-resistant Staphylococcus aureus (MRSA)	MRSA-resistant Enterococcus faecalis (MRE)
MRSA-resistant Staphylococcus aureus (MRSA)	MRSA-resistant Enterococcus faecalis (MRE)

Other active resistant MRSA: _____

Comments: _____

*This tool is for use only in the event of a patient transfer. It is not intended to be used for patient admission. It is not intended to be used for patient admission. It is not intended to be used for patient admission.

*This tool should be used with every patient transfer.

*Include the location name of the patient's origin facility.

*Place the tool in the very top of your patient's personal folder.

Arizona Department of Health Services

Clostridium difficile Infections (CDI) Prevention Toolkit

Arizona Healthcare Associated Infections (HAI) Program

Carbapenem-resistant Enterobacteriaceae (CRE) Infection in Skilled Nursing Facilities

Who helped you fight infection?

Who was your shining star today?

Arizona Department of Health Services

Living with MRSA

Learning how to control the spread of *Methicillin-Resistant Staphylococcus aureus* (MRSA)

Thank You for Your Time and Support!



www.preventHAaz.gov

Eugene Livar, MD

Tori Reaves, MPH

Dialysis Associated Infections and Role of the Local Health Department

*Rebecca Sunenshine, MD CDR, US Public Health Service
Medical Director, Disease Control Division*



WeArePublicHealth.org twitter.com/Maricopahealth facebook.com/MCDPH



What is Public Health?

- **Public health:** the science and art of preventing disease, prolonging life and promoting **health** through the organized efforts and informed choices of communities and individuals." ¹
- Concerned with threats to the overall health of a community based on population health analysis
 1. It deals with preventive rather than curative aspects of health
 2. It deals with population-level, rather than individual-level health issues
 3. Local-State-National-Global



Public Health and Clinical Practice

Clinical Practice

- Patient
- Disease
- Diagnosis

- Treatment

- Follow up

Public Health

- Population
- Health
- Case definitions for surveillance
- Prevention, health promotion, policies and recommendations
- Ongoing surveillance and evaluation



Infections in dialysis settings

- Patients at higher risk due to:
 - Frequent use of catheters or insertion of needles to access bloodstream
 - Weakened immune systems
 - Frequent hospital stays and surgery
- Hepatitis B and C
 - Can live on surfaces and be spread without visible blood
- Bloodstream infections



Bloodstream infections (BSI) in dialysis patients

- 370,000 people in the US rely on hemodialysis
- 75,000 receive dialysis through a central line
- Central lines have a higher risk of infection than a fistula or graft
- CDC estimates 37,000 central-line associated BSI occurred in US HD patients in 2008
 - Up to 1 in 5 patients with a BSI dies within 12 weeks
 - \$36,441 estimated cost per episode



Hepatitis B and C Outbreaks in Dialysis Facilities

- 38% of CDC-investigated HA-HCV outbreaks occurred in outpatient dialysis settings
- 6 CDC-investigated outbreaks since 2008
- 50 cases, 1353 notified patients
- Issues
 - “Failure to maintain separation between clean and contaminated workspaces.”
 - “Breaches in medication preparation and environmental cleaning and disinfection.”
 - “Failure to consistently change gloves and perform hand hygiene between patients.”



What is an outbreak?

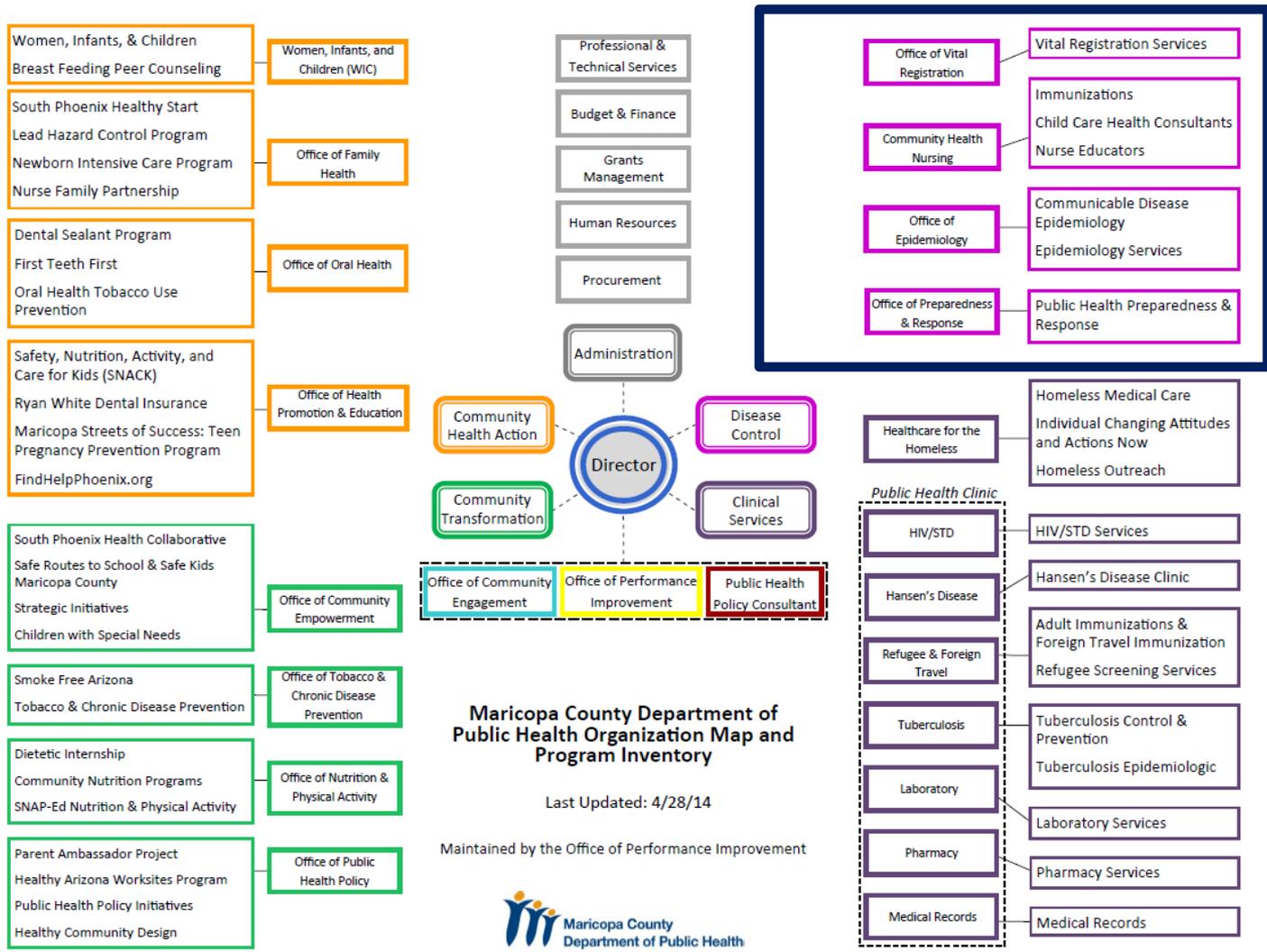
- WHO definition
- A disease **outbreak** is the occurrence of cases of disease in excess of what would normally be expected in a **defined** community, geographical area or season
- How do you know what's normally expected?
- Surveillance: ongoing systematic collection, recording, analysis, interpretation, and dissemination of health related data



Who do we call if we identify a potential problem?

- First, notify your Infection Preventionist if you have one
- Local health department
- Maricopa County Department of Health has a 24/7 number for healthcare providers 602-747-7111
- Or notify ADHS Licensing if there is a licensing concern

Maricopa County Department of Public Health



MCDPH Disease Control Division





What will local public health do when you call?

- Find out the nature of the issue
- Discuss potential options to investigate the source of the issue
- Provide technical assistance either via telephone or on-site if needed
- Notify ADHS that we are working together
- Link you to state and federal resources if requested via ADHS if needed/requested



What resources are available?

- Technical assistance from local, ADHS & CDC
- Laboratory support
- Epidemic Intelligence Service (EIS) Officers
 - EIS - 2 year CDC fellowship for graduate level epidemiologists to get field experience
 - 2 officers stationed at ADHS and MCDPH
 - Available to assist FULL –TIME with outbreak investigations
 - They receive guidance from subject matter experts at CDC, ADHS and MCDPH



Discretion is paramount

- We won't do this...



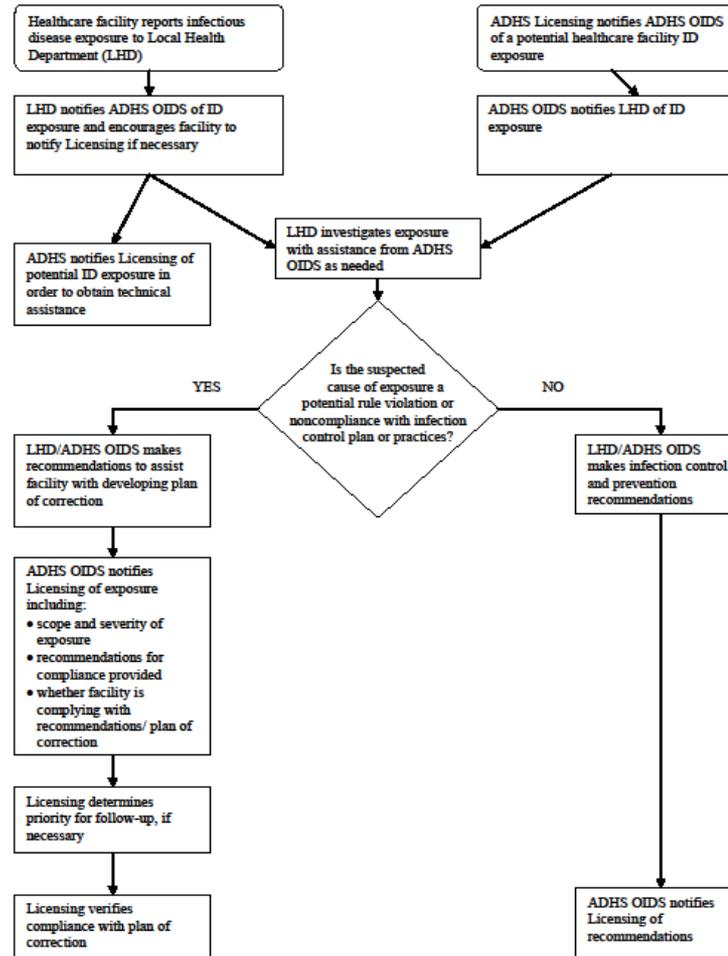


What does on-site mean?

- We will work with you discreetly
- No armies
- No uniforms
- No media
- Just dedicated epidemiologists to
 - Review case records
 - Identify potential risk factors
 - Perform an environmental investigation including review of infection control protocols
 - Make recommendations based on findings

How Local and State Public Health work together

Arizona Department of Health Services (ADHS) Healthcare Facility Infectious Disease (ID) Exposure Investigation Protocol: Coordination between Office of Infectious Disease Service (OIDS) and Licensing





Resources

Harbarth S, Sax H, Gastmeier P. The preventable proportion of nosocomial infections: an overview of published reports. *J Hosp Infect* 2003;54:258-266.

Centers for Disease Control and Prevention: Press Release, March 2000.

Available at:

<http://www.cdc.gov/od/oc/media/pressrel/r2k0306b.htm>

Klevens et al. Estimating Health Care-Associated Infections and Deaths in U.S. Hospitals, 2002. *Public Health Reports*. March-April 2007. Volume 122.



Role of the Arizona Department of Health Services Office of Infectious Disease Services

ADVISE Collaborative
Black Canyon Conference Center
May 16, 2014
Ken Komatsu

Health Department

- Executive branch
- Designated legal authorities
 - Programs, policy, enforcement, resources
- Liaison to Federal agencies: IHS, CDC, FDA, USDA, NIOSH, EPA
- Tribal

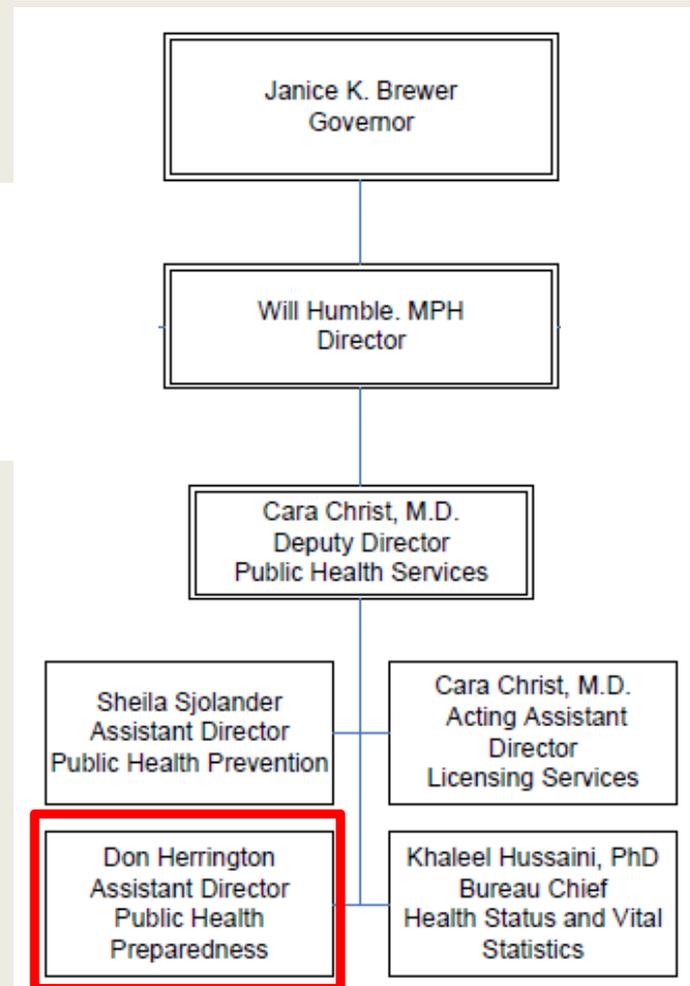
Mission

- To promote, protect, and improve the health and wellness of individuals and communities in Arizona
- Vision – Health and Wellness for all Arizonans

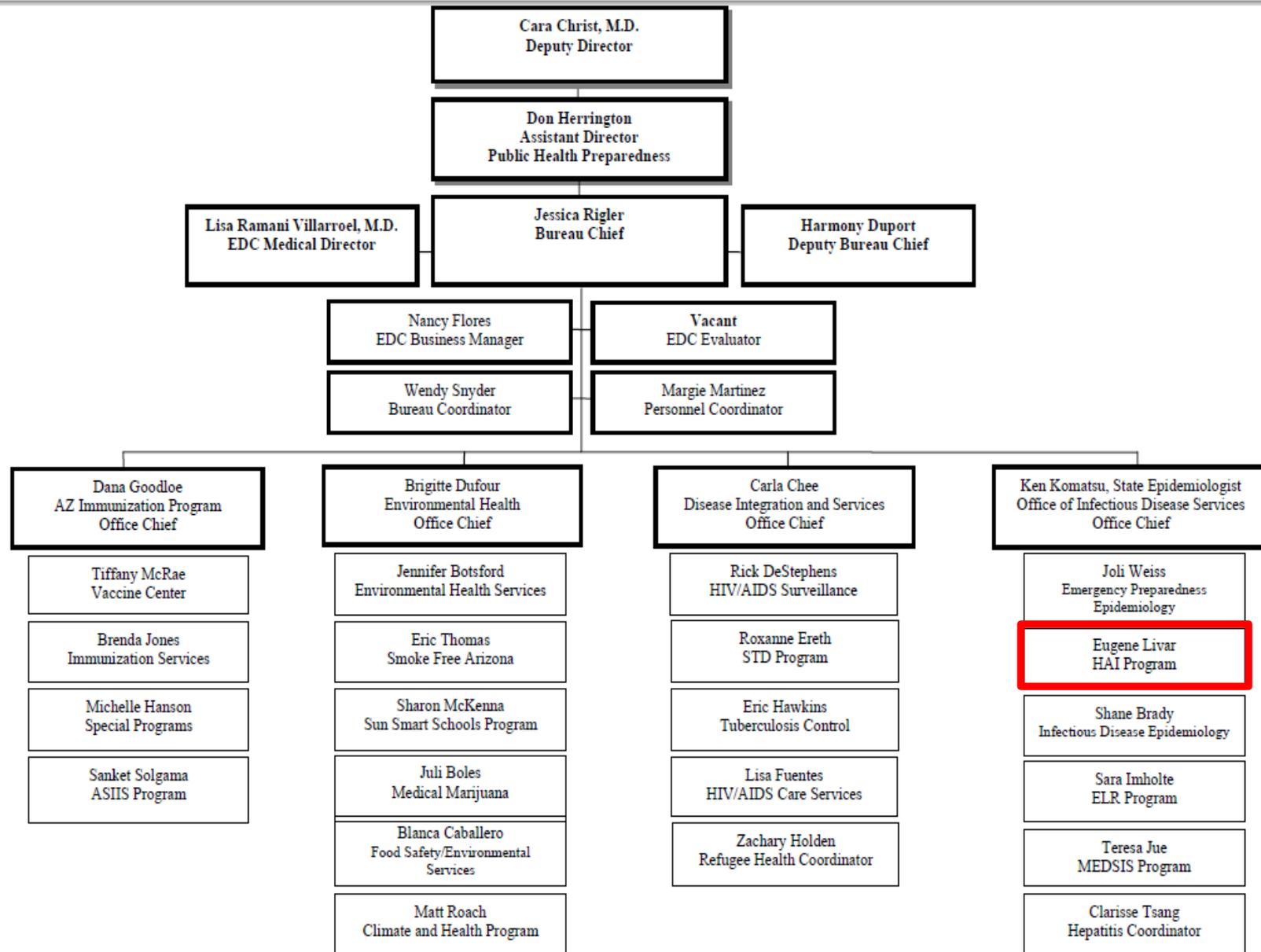


ADHS Roles

- Provide resources
- Provide services
- Provide policy and guidance
 - Arizona Revised Statutes
 - Arizona Administrative Code
 - Title 9 Health Services (34 chapters)
 - Chapter 6. Communicable Diseases (12 articles)
- Enforce rules and statutes
- Maintain state registries, health data



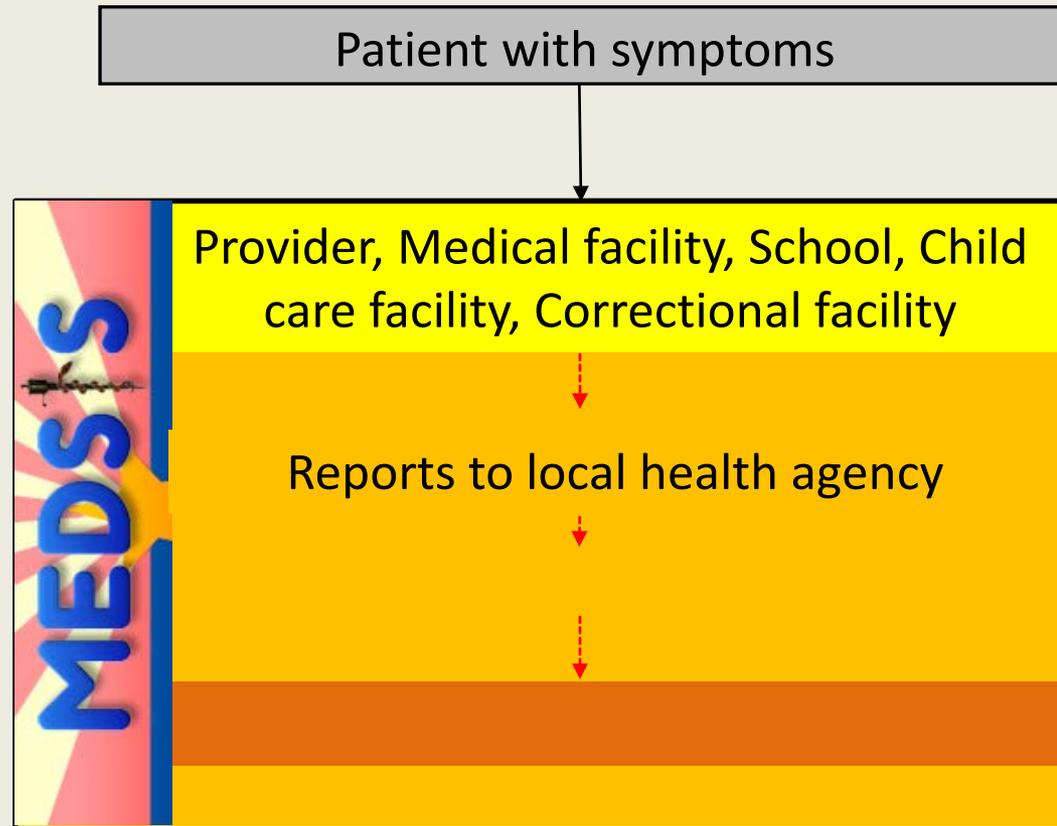
Organizational Chart



Office of Infectious Diseases

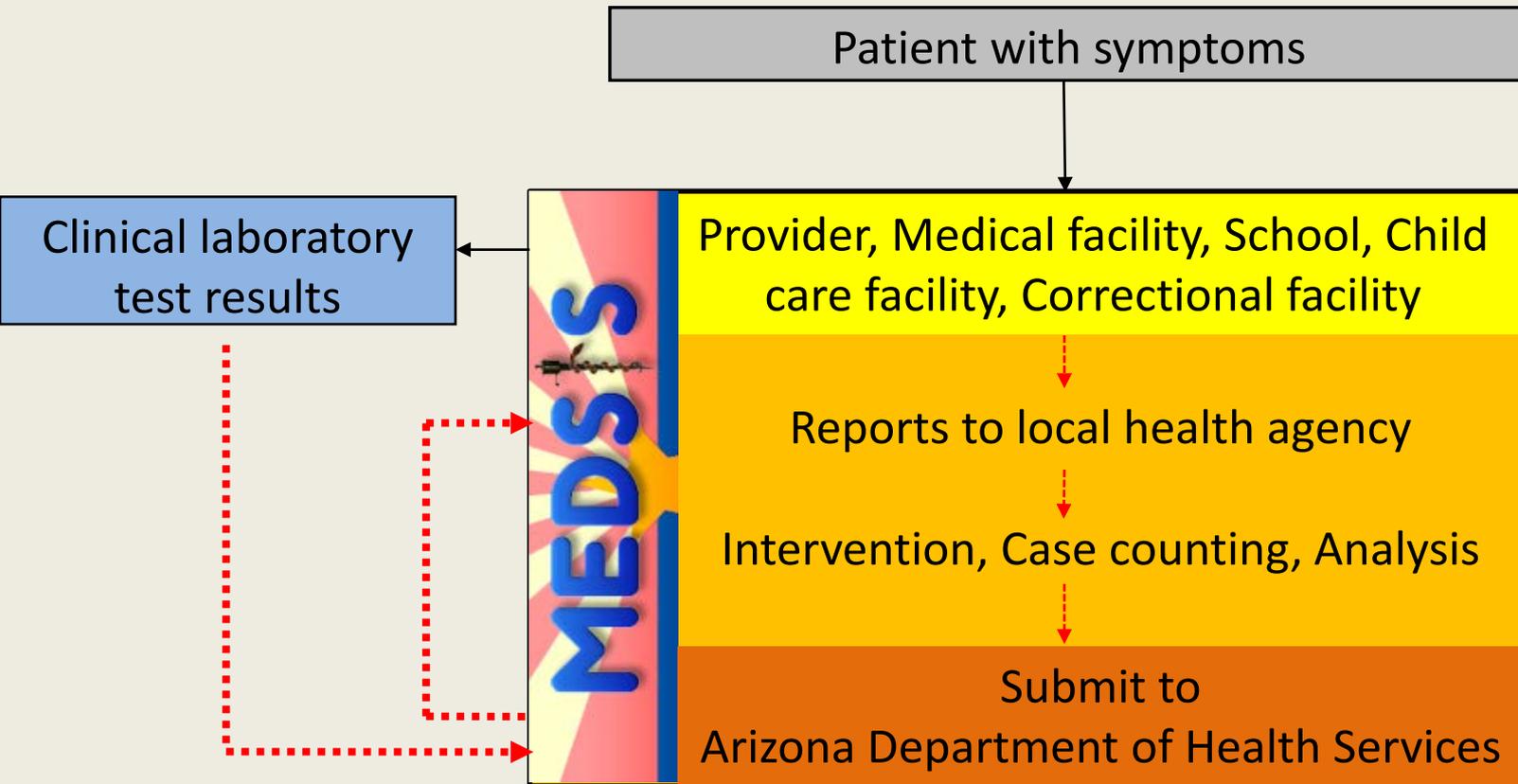
- Technical assistance on infection control practice
- Assistance to local and tribal health agencies
- Supported by the Arizona State Public Health Laboratory for clinical and environmental testing
- Monitor state surveillance for infectious diseases
- Liaison to Federal agencies (e.g. CDC, FDA), other states, Sonoran Health Officials
- Coordinate the statewide Healthcare Associated Infection Prevention Advisory Committee and subcommittees
- Serve as subject matter experts on infectious diseases

Disease Surveillance Flow Chart



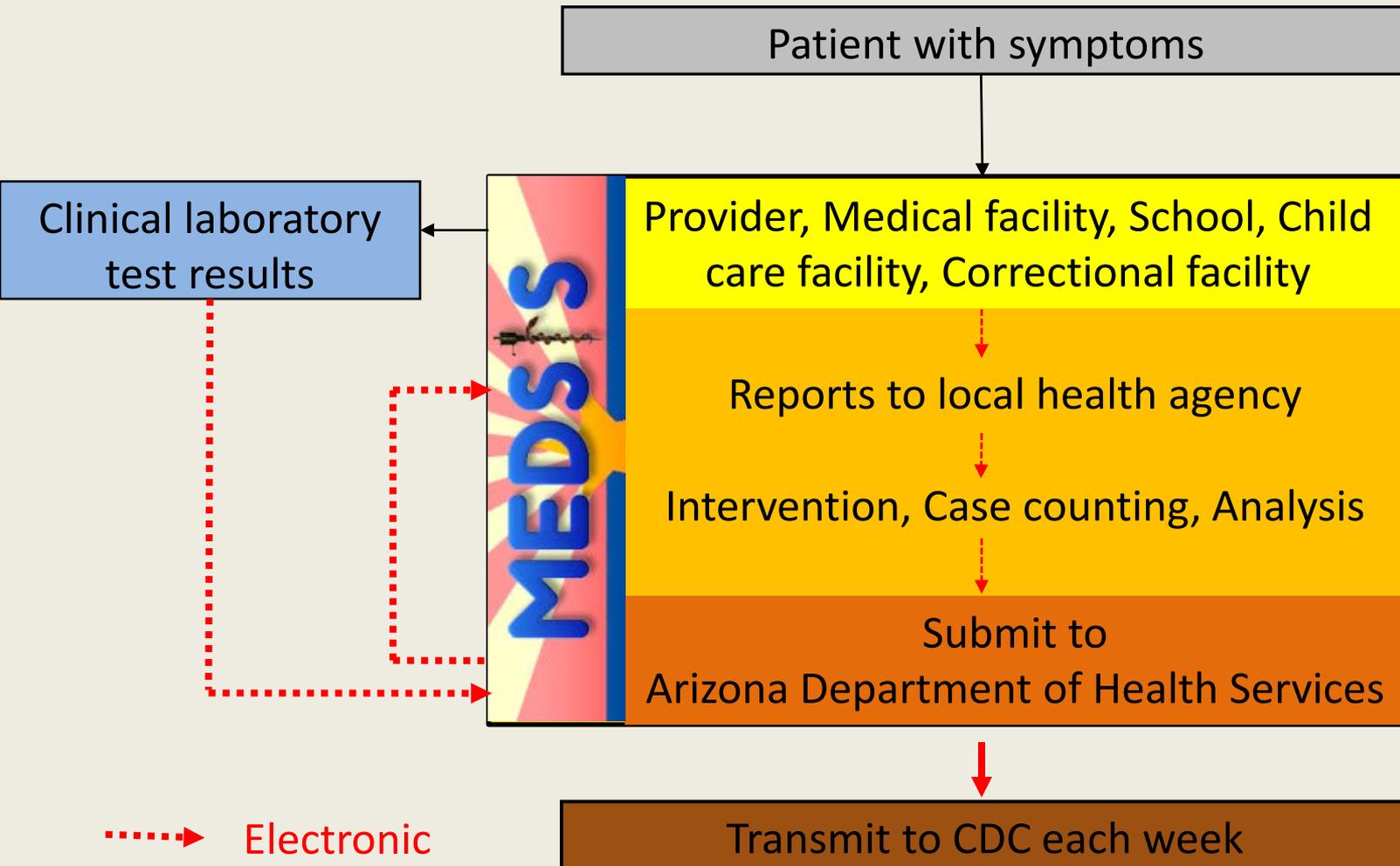
.....➔ Electronic

Disease Surveillance Flow Chart

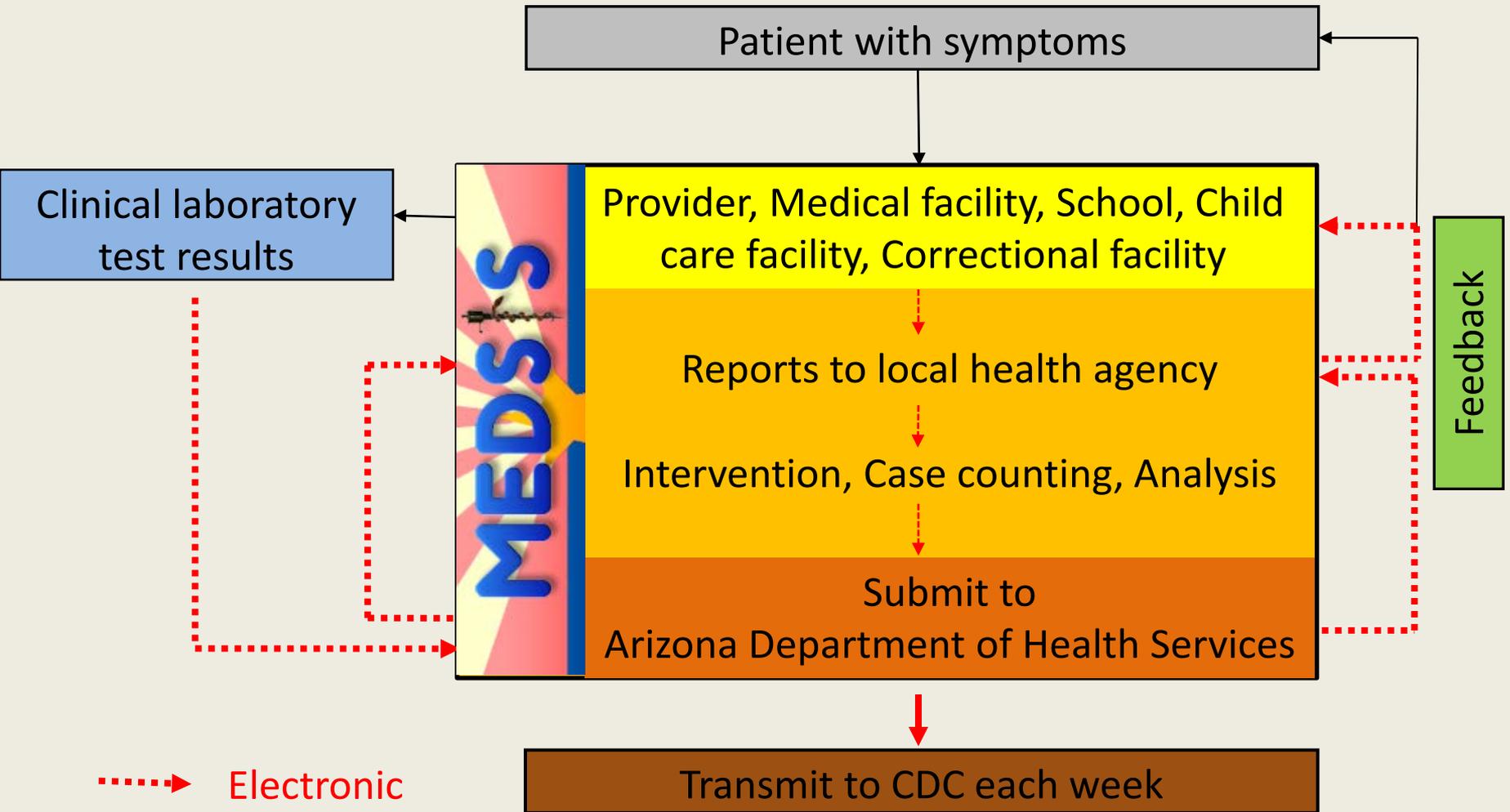


.....> Electronic

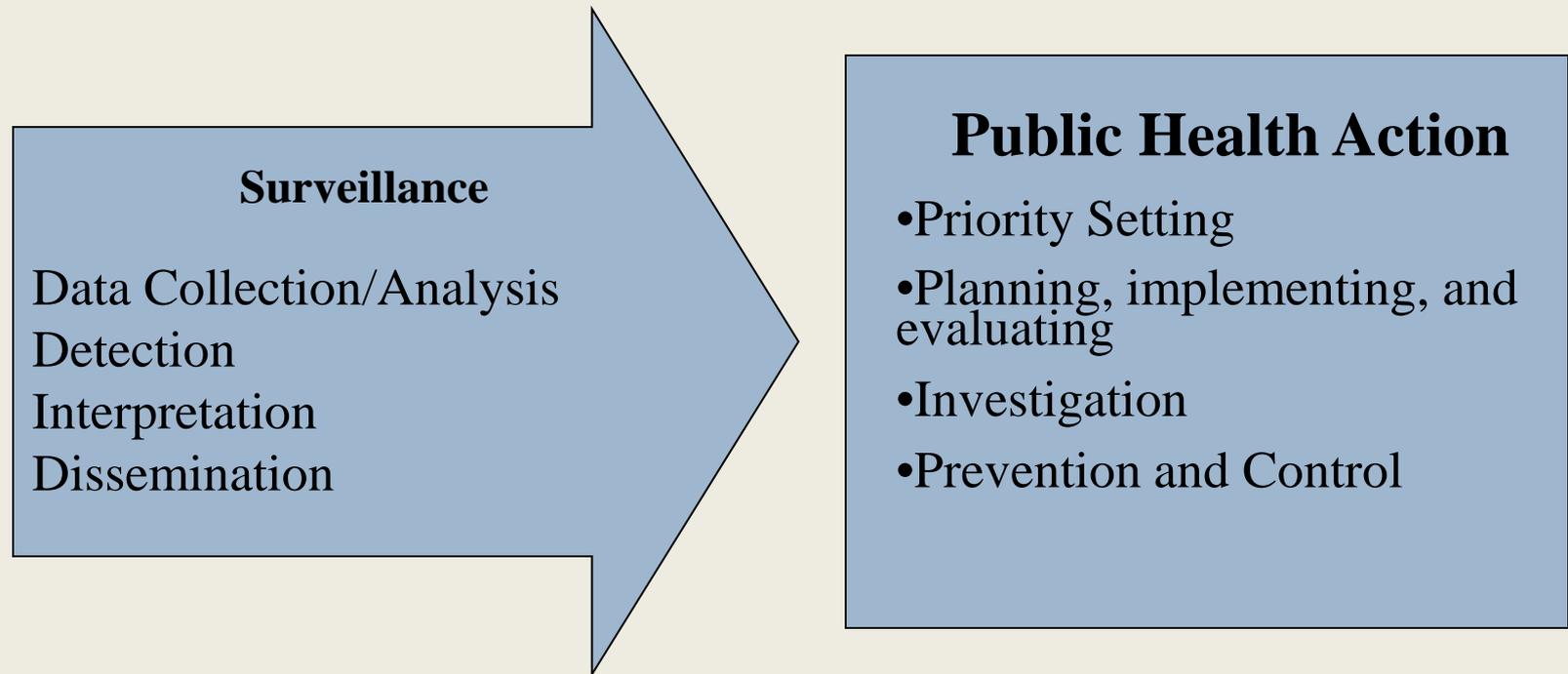
Disease Surveillance Flow Chart



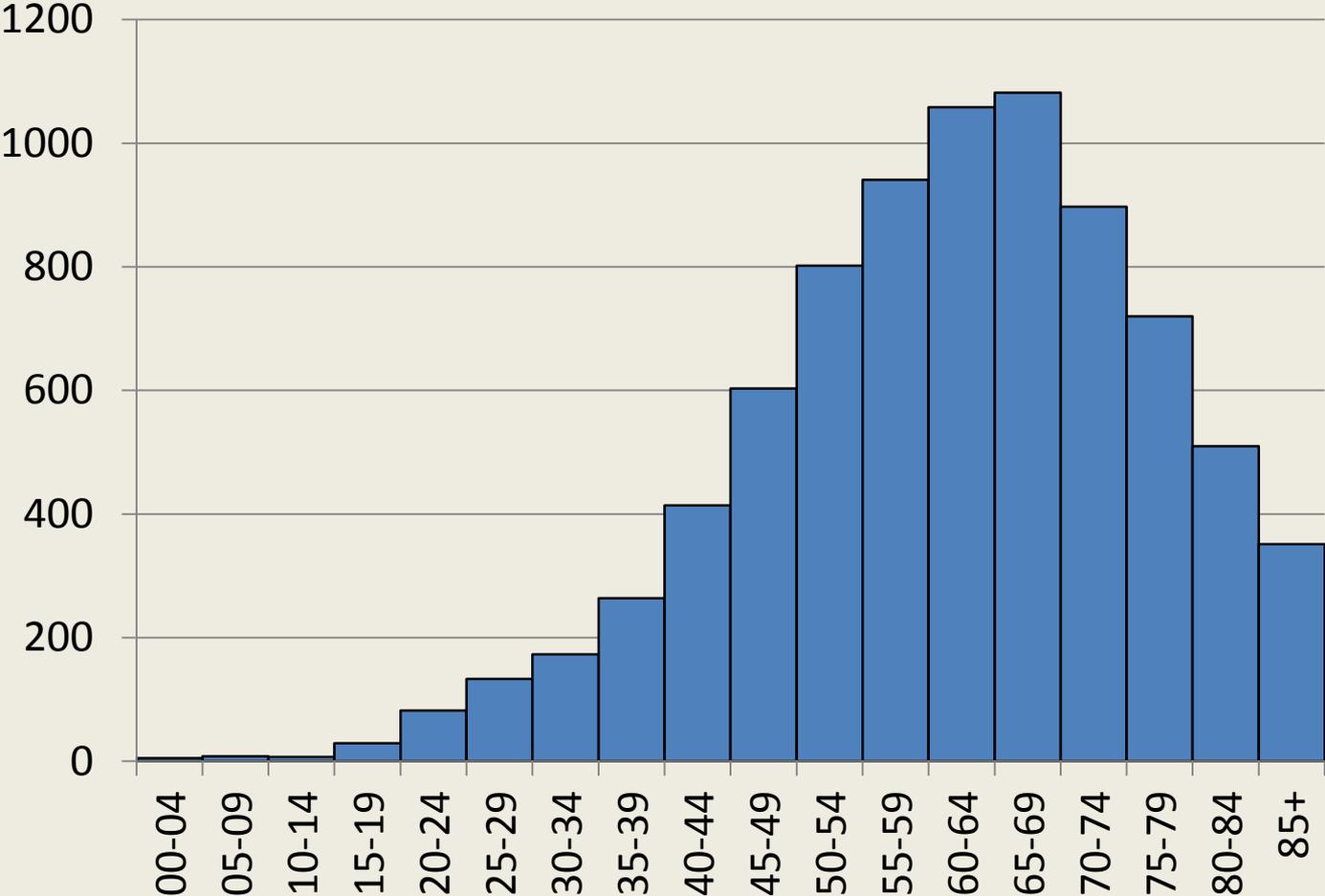
Disease Surveillance Flow Chart



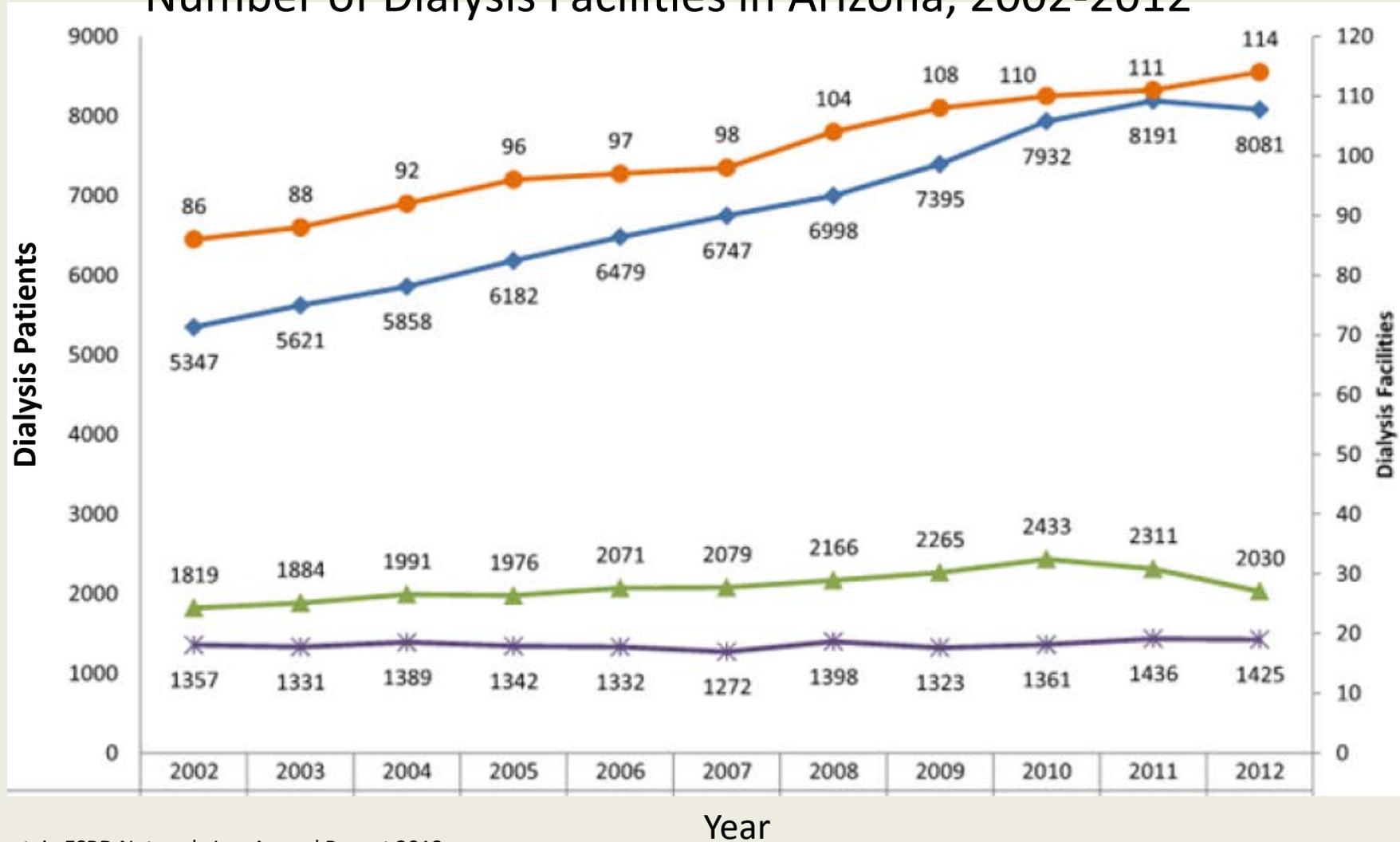
SURVEILLANCE



Dialysis Patients by Age Group in Arizona, 2012

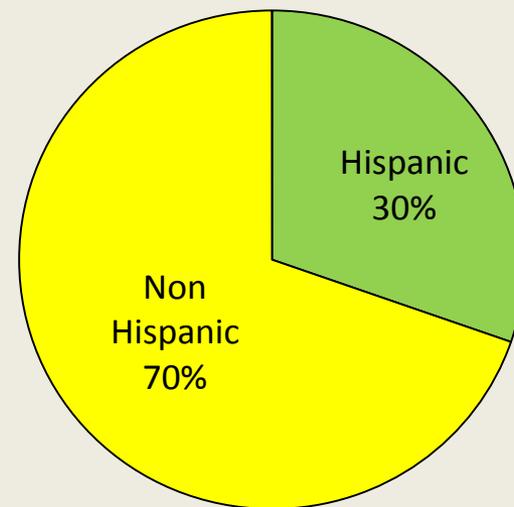
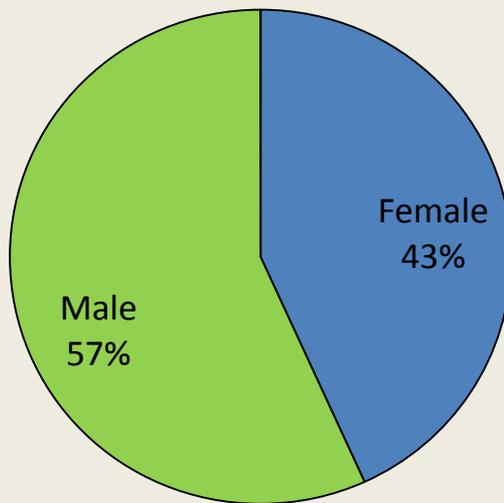


Prevalence, Incidence, and Deaths among Dialysis Patients and Number of Dialysis Facilities in Arizona, 2002-2012



Prevalent Dialysis Patients in Arizona, 2012

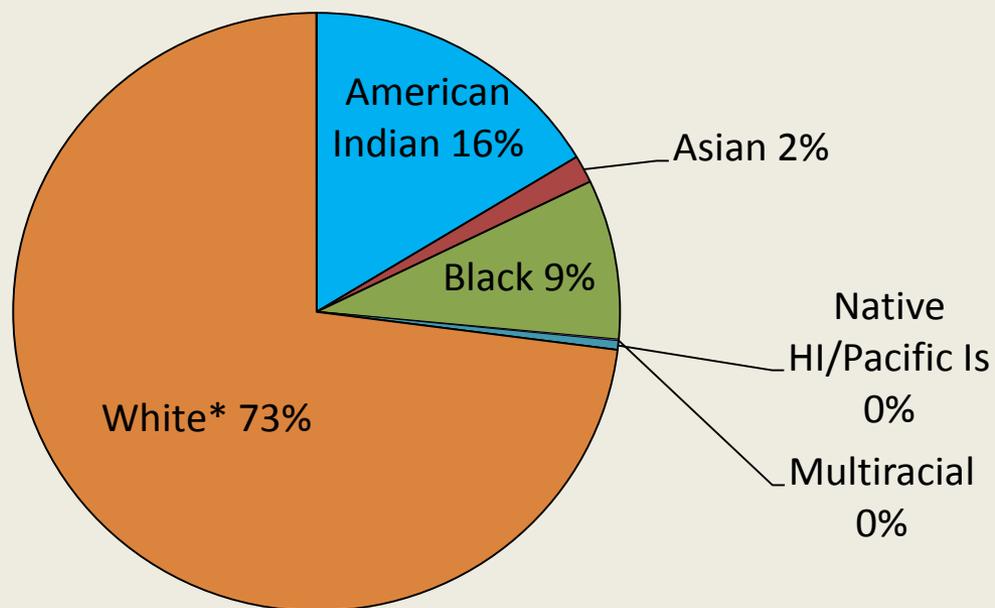
N = 8,079 patients





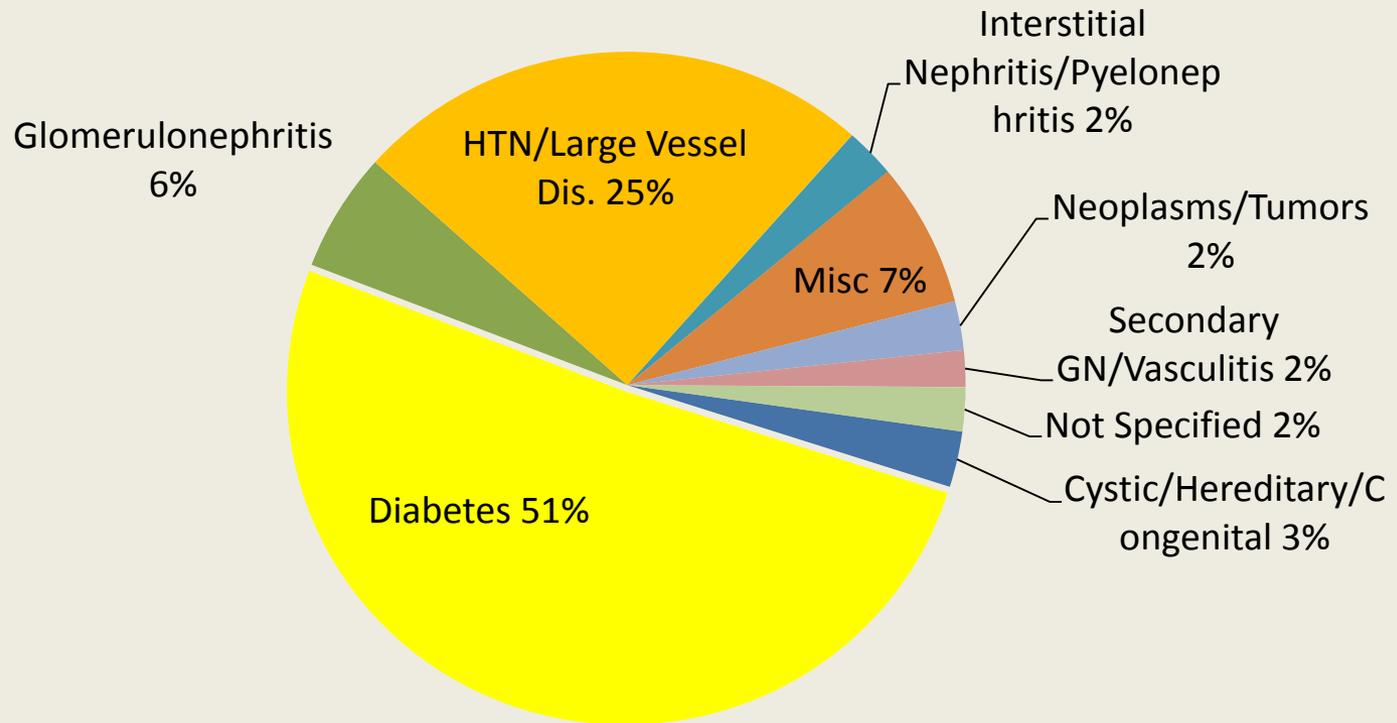
Prevalent Dialysis Patients in Arizona, 2012

N = 8,079 patients



Incident Dialysis Patients in Arizona, 2012

N = 2,028 patients

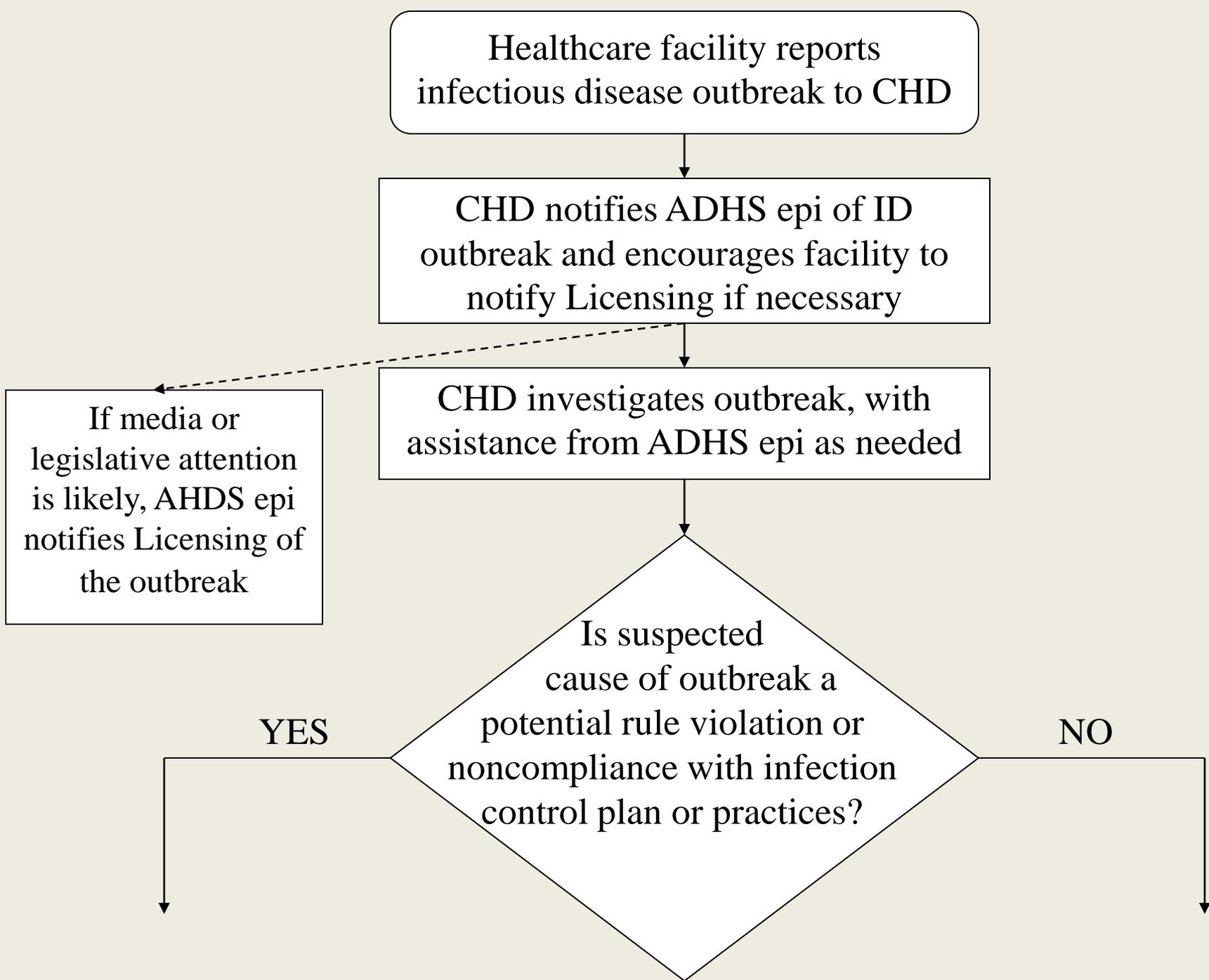


HAI Outbreak Investigation Process: Coordination between Epidemiology and Licensing

Connie Belden, RN

Bureau Chief Medical Facilities Licensing

May 16, 2014



Is suspected cause
of outbreak a potential rule
violation or noncompliance with
infection control plan
or practices?

YES

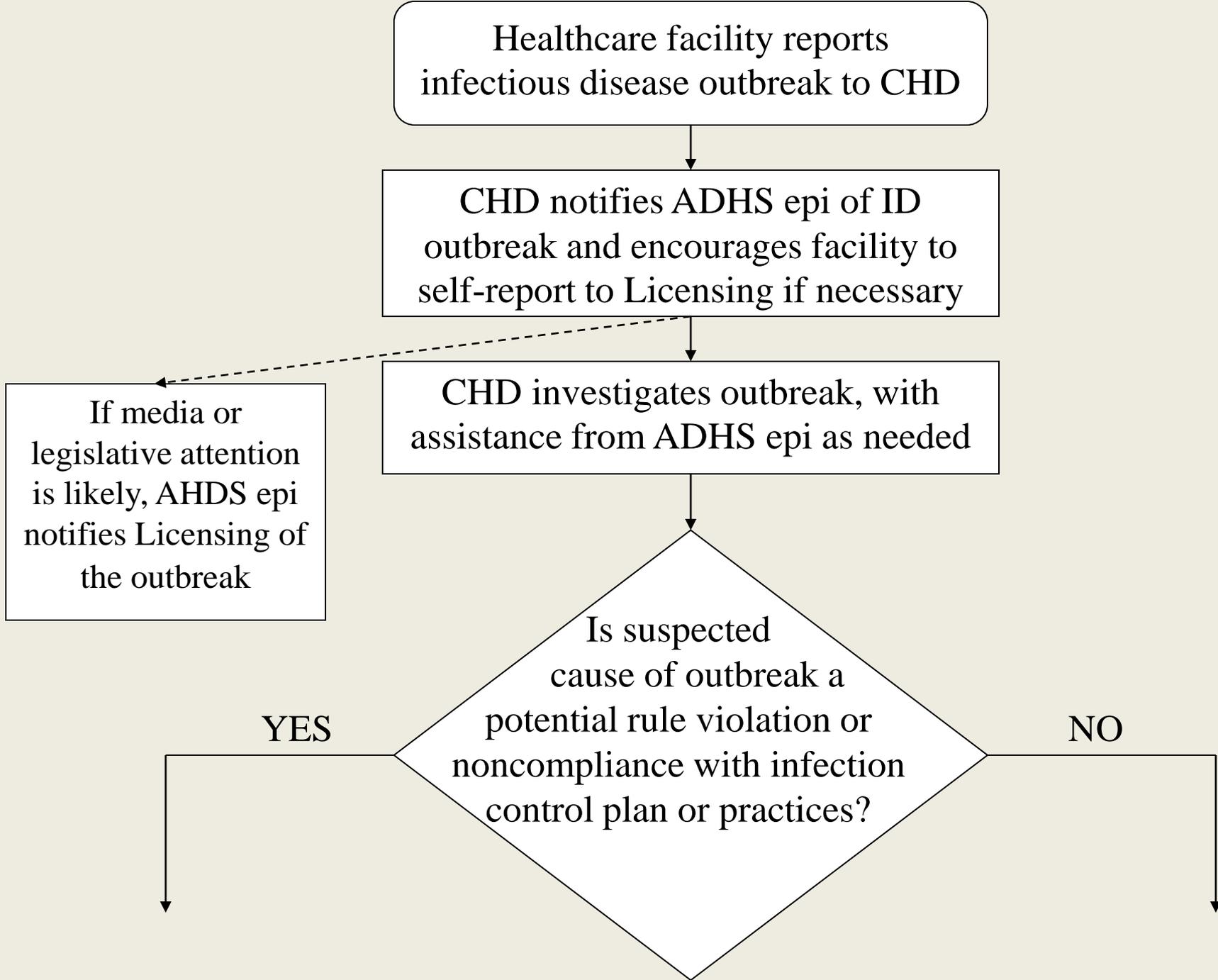
CHD/ADHS epi makes
recommendations to assist facility with
developing plan of correction

ADHS epi notifies Licensing of
outbreak including:

- scope and severity
- recommendations for compliance
- whether facility is complying with
recommendations/plan of correction

Licensing determines priority for
follow-up if necessary

Licensing verifies compliance with plan
of correction



Is suspected cause
of outbreak a potential rule
violation or noncompliance with
infection control plan
or practices?

NO

CHD/ADHS epi makes
infection control and
prevention recommendations

ADHS epi notifies Licensing
of recommendations

