



LAC DPH Outpatient Dialysis Validation Summary

Ambulatory & Outpatient Dialysis Team

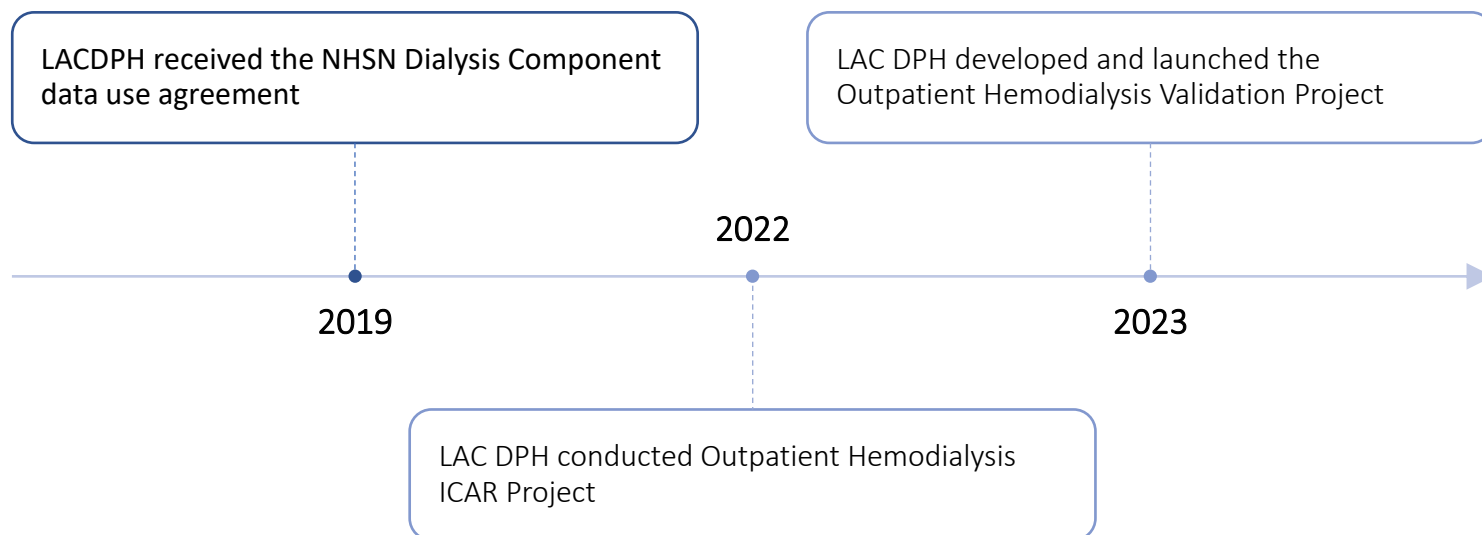
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Acute Communicable Disease Control Program

Los Angeles County Department of Public Health



Background



Objectives

UNDERSTAND

- Understand collection, processing, and uploading of dialysis events

EDUCATE

- Educate facility administrators and clinicians

VALIDATE

- Validate existing NHSN Dialysis events



NHSN Reporting Methods

Individual

- Events logged onsite
- Assigned reporter

Batched

- Data collected from EMR
- Organization submits for all facilities

Methods

- January 2022-March 2022
- Medical Record Review
 - In-person
 - Remote access
 - Secured portal PDFs

400
medical
records

- 20 facilities
- 20 medical records per facility



Methods

- Identify all patients that meet the following criteria (1/2022-3/2022)
 1. Received any hemodialysis treatment
 - A. **Received any intravenous antimicrobials (IVAM)**
 - B. **Had any positive blood cultures (PBC)**
 - C. **Had any pus, redness, or swelling at vascular access sites (PRS)**
- Conducted Survey

List 1. All patients who had one or more in-center hemodialysis treatment(s) between January 1, 2022 – March 31, 2022.									
Patient Medical record number	First Name	Last Name	Date of Birth	Gender	Comments				

Process - Validation

Two methods of medical record validation available:

Onsite

- 2 days
- Faster communication
- Onsite education

Remote

- Remote access or secured portal PDF
- Flexible time
- Electronic communication



Process – Validation

Table 1. Example of Validation Results

	Event – Defined by Facility	Event – Submitted into NHSN	LACDPH Staff Validation	Result
Patient 1	1	1	1	Correct Submission
Patient 2	0	0	0	Correction non-submission
Patient 3	1	1	0	Overreport
Patient 4	0	0	1	Underreport



Results (Preliminary)

- As of 3/7/24
 - 8 completed validation
 - 3 in progress (PDF records)
 - 9 approved by facility administrator
 - Total of 157 medical records reviewed

Results (Preliminary)

Table 2. Accuracy and precision of Validations

	IV antimicrobial starts	Positive blood cultures	Pus, Redness, or Swelling	Total
Found in chart review	40	15	10	65
Correctly Reported in NHSN	36	12	5	53
Underreported	4 (10%)	3 (20%)	5 (50%)	12 (19%)
Overreported	1	0	3	4 (6.2%)

Results (Preliminary)

Table 3. Comparison of Similar Validation Data

	IVAM starts	PBC	Pus, Redness, or Swelling	Total
Underreported (Los Angeles County 2024)	4 (10%)	3 (20%)	5 (50%)	12 (19%)
Underreported (Washington 2007)	2 (2%)	10 (50%)	15 (41%)	27 (18%)
Underreported (Florida 2013)	N/A	N/A	N/A	N/A(28%)

Results (Preliminary)

Table 4. Validation Summary Data

	Validator "Golden Standard"		
Facility "Observed"		Yes	No
Yes		53	4
No		12	88

Sensitivity: 81.5%

Specificity: 95.7%

Positive Prediction Value: 93%

Negative Prediction Value: 88%



Results – Survey

- Knowledge Assessment
 - Dialysis Events – 57%
 - Vascular access category – 57%
 - 21 Day Rule
 - Automation led to more unfamiliarity
 - Lack of training resources



Results – Discussion cont.

- Facilities are willing to participate!
- Common Errors
 - Incorrect IV antimicrobial reported
 - Multiple dialysis access sites reported
 - PRS events are missed
- Improvements in documentation



Results – Discussion cont.

- Facility algorithm event detection
 - PRS relies on the observer
 - Free-text notes
- Floor staff
 - Knowledge of Dialysis Event Surveillance
 - Training
- Onsite dialysis event logs



Sample Facility Performance Results

	Facility A	Facility B
Adherence	88%	50%
Knowledge Assessment	100%	83%



Results - Limitations

- Preliminary, small sample so far
- Did not evaluate hospital visits
- Time period
- Facility Administrator turnover
- Unfulfilled medical records request



Resources Used

- CDC NHSN
Validation <https://www.cdc.gov/nhsn/validation/2023.html>
- CDC NHSN Dialysis Event External Validation toolkit and
appendices <https://www.cdc.gov/nhsn/pdfs/validation/2022/dialysis-event-external-validation-toolkit-and-appendices.pdf>



Acknowledgements

LA County Outpatient Dialysis Facility Participants

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Questions?

Email us anytime!

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