Cook County Department of Public Health

First Quarter Report 2020

January 31, 2020
Cook County Department of Public Health

Quality Initiatives 2019

January 24, 2020
CCDPH Quality Program

- CCDPH Quality Committee meets monthly, chaired by Dr. Rachel Rubin

- Representatives from all units and programs and senior administration (20-25 members)

- Expectation is one QI project per unit/program per year

- Project storyboards are presented yearly at all-staff meeting

- On-going periodic training of all staff and working to incorporate more staff into QI projects

- CCDPH QI Plan is updated periodically as is required by Public Health accreditation Board (PHAB)
Quality Improvement Projects

Methodology—PDSA Cycle
**PDSA: The Improvement Cycle**

**P** is for **PLAN**: the first phase of the cycle, usually the longest and the most important!

- During **PLAN**, the goal is to **understand** and **analyze** the problem.
- There are four steps to effective **PLANNING**:
  - Step 1 - Set a goal
  - Step 2 - Pick appropriate measures to monitor progress
  - Step 3 - Collect information and data about the current situation
  - Step 4 - Analyze and identify potential solutions
PDSA: The Improvement Cycle:

D is for DO

- This is the testing phase
- During this phase, the potential solution(s) discovered during the planning phase are pilot tested.
The Improvement Cycle:

**S** is for STUDY

- This is the evaluation phase.

- During this phase, you **analyze** the results of your pilot test 
  **Evaluate** whether the solution you tested in **DO** truly **addresses your problem**
  and helps you **reach your goal**.
PDSA The Improvement Cycle:

The final phase in PDSA is **ACT**

- During this phase, you **implement** the new process that you’ve been testing. It becomes a part of your everyday workflow.

- Remember to continuously monitor your measures and begin a new improvement cycle to address any new or recurring issues.

- It is all about continuous quality improvement!
Outline of Project Process

- Identify team members
- Identify and describe the problem, issue, or opportunity to be addressed
- Develop a goal statement
- Set a timeline for completing the stages of the PDSA cycle
- Set measures of success and identify as efficiency, outcome or output metrics
- Determine the internal and external stakeholders
- Develop a storyboard using the template provided
- Communicate progress to the CCDPH Quality Committee at least quarterly
- Communicate results and measures to stakeholders as appropriate
- Other QI methodologies and techniques may be employed and are encouraged as appropriate to the project
2019 CCDPH Quality Projects

8 projects completed

- Investigation of Food-borne Diseases and Outbreaks
- Promotion of Smoke-Free Multi-Unit Housing
- Improving Tuberculosis Direct Observation Therapy
- Annual School Health Conference Check-Out Process
- Improving Access to Services in the Illinois Breast and Cervical Cancer Program (IBCCP)
- Environmental Health Services (EHS) Digitization: Forms
- Improving Perinatal Hepatitis B (PHB) Post Exposure Prophylaxis
- Adverse Pregnancy Outcomes Reporting System (APORS) Program Face-to Face Contacts
Investigation of Food-borne Diseases and Outbreaks

GOAL STATEMENT
To reduce the time it takes to collect the necessary information to conduct enteric case investigations for the benefit of the community we serve by standardizing and expediting the investigation process so that we can reduce the transmission of enteric diseases and potential outbreaks in suburban Cook County.

METRICS TO MEASURE SUCCESS
• 1 day from case report (INEDSS, phone call, email) is received until investigation is initiated
• 5 days between case is received until investigation is completed
• 3 days between case report is received until CD staff sends food-borne illness (FBI) form to environmental health for inspection
• 30 days max from time case report is received and investigation is closed
Promotion of Smoke-Free Multi-Unit Housing

GOAL STATEMENT
To examine and improve our outreach strategies and ensure educational messages were reaching our target audience that would result in an increase in the number of units with smoke-free protections, and in turn protecting SCC residents from exposure to the negative health effects of second and third-hand smoke.

METRICS TO MEASURE SUCCESS
• Measure visits to CCDPH’s Healthy HotSpot website during peak times of digital message dissemination.

• Increase in the number of suburban Cook County units that implement smoke-free protections by 5,312 over a three-year period.
Improving Tuberculosis Direct Observation Therapy

**GOAL STATEMENT**
The use of Video Directly Observed Therapy (vDOT) will improve our ability to provide DOT to more cases of TB without a decrease in patient compliance, patient satisfaction or an increase in cost.

**METRICS TO MEASURE SUCCESS**
- Percent of TB cases who receive direct observation therapy: Goal 80%
- Patients receiving video direct observation therapy are compliant with VDOT: Goal 90%
- Patients will rate their satisfaction with VDOT as a “satisfied” or “very satisfied”: Goal 80%
Annual School Health Conference Check-Out Process

GOAL STATEMENT
Impact Objective: By 2020, reduce the number of negative comments made on the evaluation regarding the check-out process.

Process Objective: By April 2019, revise and implement a new check-out process.

METRICS TO MEASURE SUCCESS
• Include questions on evaluation measuring satisfaction with the check-in check-out process. These responses will allow measuring improvement in check-out process

• Fewer negative comments on future evaluations
Improving Access to Services in the Illinois Breast and Cervical Cancer Program (IBCCP)

GOAL STATEMENT
By November 1st, 2020, 80% of activated IBCCP clients will be scheduled for their first IBCCP service within three business days.

METRICS TO MEASURE SUCCESS
Data will be obtained monthly, from the 1st through the last business day of each month for all eligible activated clients.

Data to be collected:
- Date of activation
- Date the first payable service is scheduled
- Time from the date of activation to the date the first payable service is scheduled measured in business days
- Total clients scheduled within 3 business days
- Percentage of clients scheduled - obtained by taking the total clients scheduled within 3 business days divided by the total number of activated clients.
EHS Digitization: Forms

**GOAL STATEMENT**
1. Create forms that reduce the total number of forms needed.
2. Create forms that capture data we currently need and/or have real public health value.
3. Create forms with the intent of having them used digitally.

**METRICS TO MEASURE SUCCESS**

Output – Eliminate forms and sections within forms that are no longer needed.
   Reduce number of forms used by 10%

Outcome – Have forms capture current required data and public requests.
   Scoring a 4 or better on the reviewer’s survey.
Improving Perinatal Hepatitis B (PHB) Post Exposure Prophylaxis

GOAL STATEMENT
By October 2020, the percentage of infants who complete the recommended PHB post-exposure prophylaxis will increase to 70%.

METRICS TO MEASURE SUCCESS
• 70 % of infants born to HBsAG+ mothers will complete the Hepatitis B vaccine series by 6 months of age

• 70 % of infants born to HBsAG+ mothers will complete post-vaccine serology testing (PVST) 1-2 months after their last dose of Hep B vaccine and between the ages of 9-12 months
Adverse Pregnancy Outcomes Reporting System (APORS) Program Face-to Face Contacts

GOAL STATEMENT
FY20: Improve number of APORS children 0-24 months face-to-face contacts within specific intervals.

METRICS TO MEASURE SUCCESS
FY20: Ensure 90% of APORS children 0-24 months of age have completed six face-to-face contacts within specific intervals.
Example
BACKGROUND
In the US there is growing concern around XDRO and the public health threat they represent due to the emergence of Carbapenem-resistant Enterobacteriaceae (CRE) and Candida auris, both pathogens resistant to various antimicrobial therapies leaving few therapeutic options of treatment. XDRO spread rapidly in healthcare settings, especially in long term care facilities (LTCFs) through contact with infected or colonized people. XDRO have high mortality rate associated with invasive infection. There are at least 200 LTCFs in suburban Cook County. Despite severe under-reporting, around 500 XDRO cases are reported every year to the XDR registry.

GOAL STATEMENT
Our ultimate goal is to reduce the transmission of XDRO in healthcare settings with focus on LTCFs. To better characterize the problem and achieve control of transmission our phase one goals are to increase awareness of XDRO, improve Infection Control (IC) practices and increase compliance in XDRO registry utilisation.

METRICS TO MEASURE SUCCESS
- Output metrics: % of XDR registry
  - 75% of SNFs with active account in the XDR registry
  - 100% of LTCFs with active account in the XDR registry
  - 100% of LTachs with active account in the XDR registry
  - 75% of LTCFs querying the XDR registry for admissions
  - 75% of LTachs aware of XDR
  - 75% of patients admitted to LTCFs with XDR infection or colonization in contact precautions

PROCESS MAPPING

ROOT CAUSE ANALYSIS - THE 5 “WHYS”

Why
Why
Why
Why
Why

Lack of awareness of XDRO: XDRO are emergent organisms    deficient understanding of mode of transmission difficult to identify with standard lab methods lack of training opportunities

Access to XDR registry: Lack of awareness Portal PRA agreement account deactivated for inactivity account for specific individual staff turnover

Gaps in IC practices: Asymptomatic carriage cases are not recognized availability of private rooms inefficient hand hygiene monitoring challenges implementing contact precautions deficient environmental cleaning and disinfection

PILOT PROJECT TO TEST A SOLUTION
Survey designed to collect information about XDRO awareness, XDRO registry utilization and infection control practices delivered to LTCF (Long Term Acute Care Hospitals LTACHs, Ventilator Skilled Nursing Facilities vSNFs, Skilled Nursing Facilities SNFs).

Data collected in survey analyzed to characterize magnitude of the XDRO awareness, XDRO registry utilization and IC practices.

Data extracted from the XDRO registry analyzed and summarized to create Surveillance reports to monitor facilities with higher burden.

Periodic site visits for capacity building and quality improvement to prioritize facilities.

Training opportunities offered in strategic locations through our jurisdiction to LTCFs staff.

WASTE ANALYSIS

Wastes/Opportunities
- XDRO registry running since 2013
- Testing sponsored by CDC and/or IDPH
- In service availability as needed

Most frequent

Least frequent

Most Impact

Least Impact

Access to XDRO registry
Lack of awareness of XDRO
Gaps IC practices (hand washing, Contact precautions)

Delayed point prevalence surveys (PPS)
Delayed contact tracing

SOLUTIONS IDENTIFIED
1. Creation and periodic update of a Listserve of Directors of Nursing (DONs)/Infection Preventionists (IPs) for all LTCFs in our jurisdiction.
2. Encourage LTCFs to create an XDRO account and utilize the registry to check status of new admissions.
3. Prioritized PPS in facilities with higher burden.
4. Survey to determine baseline information about XDRO awareness, XDRO registry utilization and IP practices.
5. Generation of surveillance reports to monitor transmission and success of IC in facilities with higher burden of XDRO.
6. Training for DONs and IPs in Infection Prevention best practices with focus in hand hygiene, contract precautions and environmental cleaning and disinfection.

CONCLUSION: SUCCESSES & NEXT STEPS

IDPH is creating a new module in INEDSS to report and investigate Extensively Drug Resistant Organism.

CSTE position statement to make C. auris a reportable condition in US is being developed.
GOAL STATEMENT

To reduce the transmission of **Extensively Drug Resistant Organisms (XDRO)** in healthcare settings with focus in Long-term Care Facilities (LTCFs).

To better characterize the problem and achieve control of transmission our phase one goals are:

- Increase awareness of XDRO
- Improve Infection Control (IC) practices and
- Increase compliance in XDRO registry utilization.

METRICS TO MEASURE SUCCESS

- 75% of Skilled Nursing Facilities (SNFs) with active account in the XDRO registry
- 100% of Ventilator SNFs (vSNFs) with active account in the XDRO registry
- 100% of Long-term Acute Care Hospitals (LTACHs) with active account in the XDRO registry
- 75% of LTCFs querying the XDRO registry for admissions
- 75% of LTCFs aware of XDRO
- 75% of patients admitted to LTCFs with XDRO infection or colonization in transmission-based precautions
### WASTE ANALYSIS

**Wastes/Opportunities**
- XDRO registry running since 2013
- Testing sponsored by CDC and/or IDPH
- In service availability as needed

<table>
<thead>
<tr>
<th>Least frequent</th>
<th>Most frequent</th>
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| **Most Impact** | Rapid turnover of staff  
No staff devoted to Infection control (IC)  
Lack of communication between facilities | Access to XDRO registry  
Lack of awareness of XDRO  
Gaps IC practices (hand washing, Contact precautions) |
| **Least Impact** | Delayed report (lab, hospital, LTACH)  
No XDRO registry utilization (querying)  
Duplication of investigation efforts among LHD | Delayed point prevalence surveys (PPS)  
Delayed contact tracing |
ROOT CAUSE ANALYSIS - THE 5 “WHYS”

Why                      Why                        Why                      Why                      Why
Lack of awareness of XDRO: XDRO are emergent organisms  ➔  deficient understanding of mode of transmission ➔  difficult to identify with standard lab methods ➔  lack of training opportunities

Access to XDRO registry: Lack of awareness ➔  Portal PRA agreement ➔  account deactivated for inactivity ➔  account for specific individual ➔  staff turnover

Gaps in IC practices: Asymptomatic carriage ➔  cases are not recognized ➔  availability of private rooms ➔  inefficient hand hygiene monitoring ➔  challenges implementing contact precautions ➔  deficient environmental cleaning and disinfection
1. Creation and periodic update of a Listserv of Directors of Nursing (DONs)/Infection Preventionists (IPs) for all LTCFs in our jurisdiction.

2. Encourage LTCFs to create an XDRO account and utilize the registry to check status of new admissions.

3. Prioritized PPS in facilities with higher burden.

4. Survey to determine baseline information about XDRO awareness, XDRO registry utilization and IP practices.

5. Generation of surveillance reports to monitor transmission and success of IC in facilities with higher burden of XDRO.

6. Training for DONs and IPs in Infection Prevention best practices with focus in hand hygiene, transmission-based precautions and environmental cleaning and disinfection.
PILOT PROJECT TO TEST A SOLUTION

- Design survey to collect information about XDRO awareness, XDRO registry utilization and Infection Control practices delivered to LTCFs (Long Term Acute Care Hospitals (LTACHs), ventilator Skilled Nursing Facilities (vSNFs), Skilled Nursing Facilities (SNFs)).

- Data collected in survey to be analyzed to characterize magnitude of the XDRO awareness, XDRO registry utilization and IC practices.

- Data to be extracted from the XDRO registry analyzed and summarized to create surveillance reports to monitor facilities with higher burden.

- Plan periodic site visits for capacity building and quality improvement to prioritized facilities.

- Offer training opportunities in strategic locations throughout our jurisdiction to LTCFs staff.
ANALYSIS OF PILOT

87 (72%) out of our 121 SNF responded to our survey by February 2018

76 (87%) facilities that responded do not have a devoted Infection Preventionist

49 (57%) facilities do not even know what the XDRO registry is, only 12

12 (14%) facilities use the XDRO as intended

20 (23%) facilities do not have measures in place to prevent spread of XDROs among patients and staff
CONCLUSION: SUCCESSES & NEXT STEPS

- Surveillance reports with data extracted from the XDRO registry are now created every six months to monitor 12 facilities with the highest burden.

- Site visits for capacity building and quality improvement are conducted with 12 prioritized facilities, frequency of visits depends in transmission, team capability and resources.

- Round table meetings under Public Health leadership are organized every quarter with experienced presenters and moderators. Attendance varies from 20 to 50 attendees.

- Infection Prevention and Control 101 training modules were developed in partnership with other LHDs and IDPH, this training is offered at corporate offices with mandatory attendance of member facilities. Thus far only 3 of such events have been held with around 30 attendees each.