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# Quality Improvement

Quality improvement in public health is the use of a deliberate and defined improvement process focused on activities that respond to community needs and improve population health

*(Accreditation Coalition Workgroup, 2009).*

**The role of the local health department (LHD) focuses on prevention strategies, health promotion efforts and protection policies**

*(New York State Association of County Health Officials, n.d.)*

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## CDC National Notifiable Disease Surveillance System (NNDSS)

The CDC National Notifiable Diseases Surveillance System (NNDSS) is a nationwide collaboration that enables all levels of public health—local, state, territorial, federal, and international—to share notifiable disease related health information

Provides disease specific clinical descriptions, lab criteria for diagnosis, case classification and other data

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## CDC Lyme Classification

Includes:

- Clinical Description
- Definitions of Exposure
- Endemicity
- Laboratory criteria for diagnosis
- Case definitions

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## CDC Lyme Case Definitions

**Suspected:** A case of EM where there is no known exposure and no lab evidence of infection OR a case with lab evidence of infection but no clinical information available - *not counted as a case in NYS*

**Probable:** Any other case of physician diagnosed Lyme disease that has laboratory evidence of infection

**Confirmed:** A case of EM with a known exposure OR a case of EM with laboratory evidence of infection WITHOUT known exposure OR a case with at least one late manifestation that has lab evidence of infection

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## Provider Diagnosis VS Case Definition

### Provider Diagnosis

Providers may diagnose Lyme disease-but without the appropriate laboratory testing or clinical descriptions these cases are not counted

### Case Definition

Classify incidence and prevalence of cases and provide data that can guide public health resources in disease prevention and health promotion efforts

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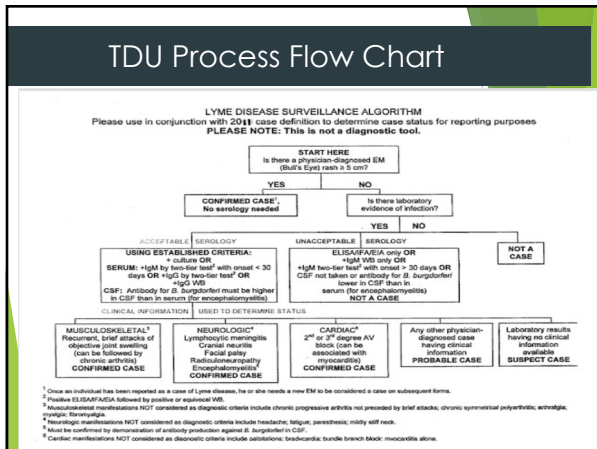
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## TDU Process Flow Chart




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## Westchester County Data Analysis in 2014

>3000 unduplicated Lyme laboratory tests and incomplete provider reports received

Generated 690 Lyme investigations

Led to 91 cases of Lyme disease reported (confirmed and probable)

The number of cases were small in comparison to the number of reports and laboratory tests received

Why?

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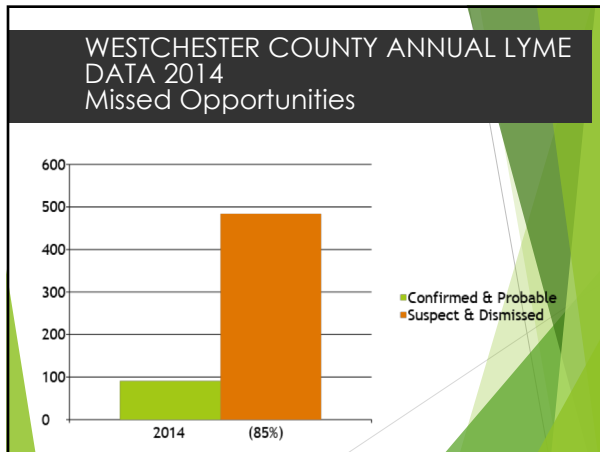
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### Assessment of LHD Lyme Reporting and Surveillance System

**Quality Gaps**

- Inappropriate testing led to a disproportionate number of Lyme cases
- incomplete reporting led to the lack of Lyme case confirmation

This resulted in a disproportionately fewer number of cases

We questioned if the data accurately reflected the health of our population?

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### Common Themes

- Physician's lack of knowledge and negative attitude towards testing and reporting practices
- Physician's lack of understanding related to reporting
- LHD's nurses and their lack of knowledge of Lyme disease related to symptoms, case definition, reporting requirements testing, treatment and personal protection.

**EDUCATION IS THE ANSWER**

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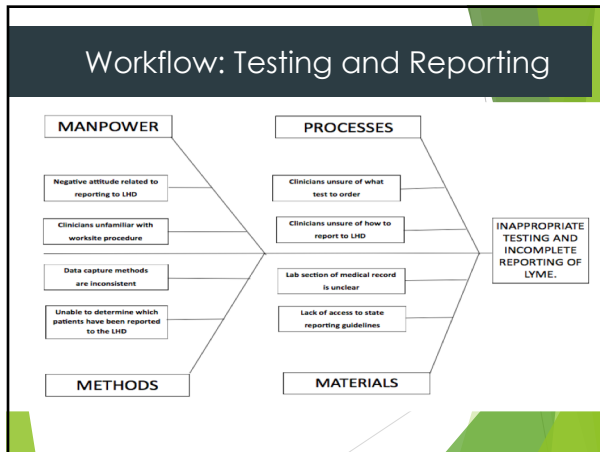
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### AIM Statement

An AIM Statement is a description of a team's desired outcomes, expressed in a measurable and time specific way. It answers the question:

**What are we trying to accomplish?**

Working with the TDU we will increase the rate of appropriate testing and complete reporting of Lyme disease by 10% by October 31, 2015.

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### Intervention

**Nursing Education**

An educational session was held for the PHNs who participated in these field visits- although knowledgeable about Lyme disease, surveillance and reporting, content review assured a uniform knowledge base that delivered consistent messaging

*PHNs are a source of knowledge for clinicians throughout the community*

**Provider Education**

21 provider office locations were identified, (hospitals, private practice, urgent care and family health centers) contacted by phone and visited by a public health nurse and epidemiologist

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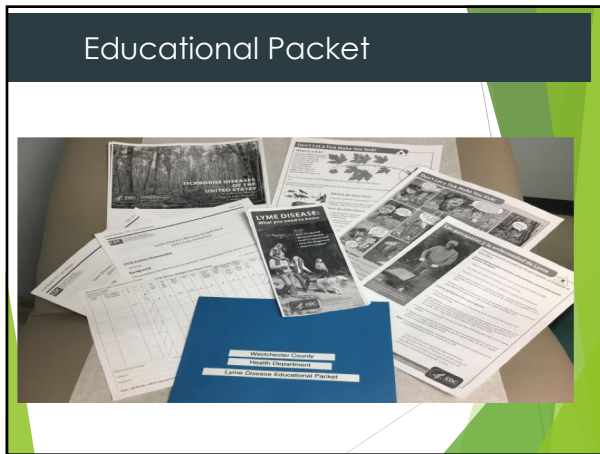
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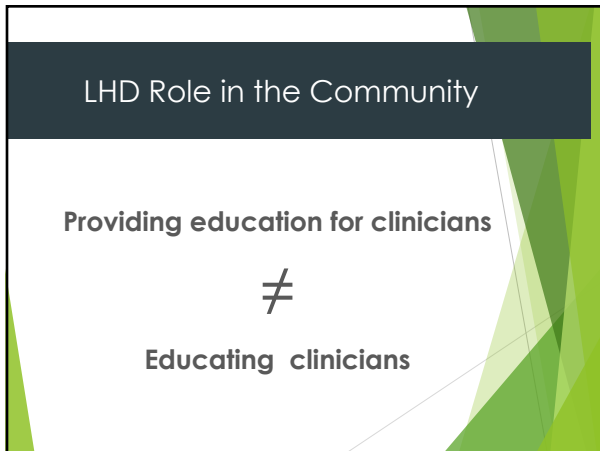
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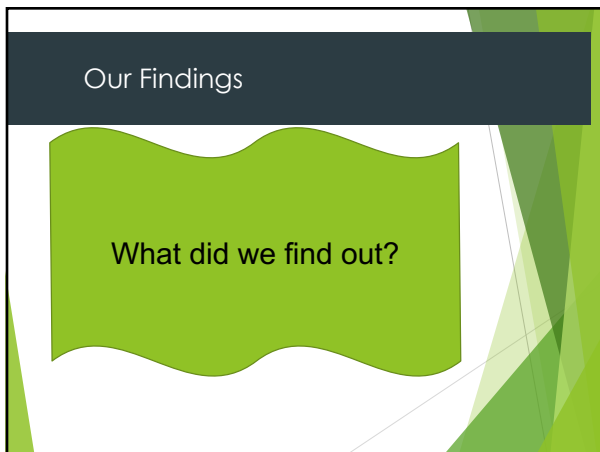
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### Cases of EM only

2013	2014	2015
24 (EM only)	31 (EM only)	67 (EM only)

The educational sessions informed staff that those individuals who presented with an EM met the **confirmed case definition** and did not require additional confirmatory lab testing- These individuals should be reported to the LHD as confirmed cases and clinicians could report via the Lyme disease multiple case report form

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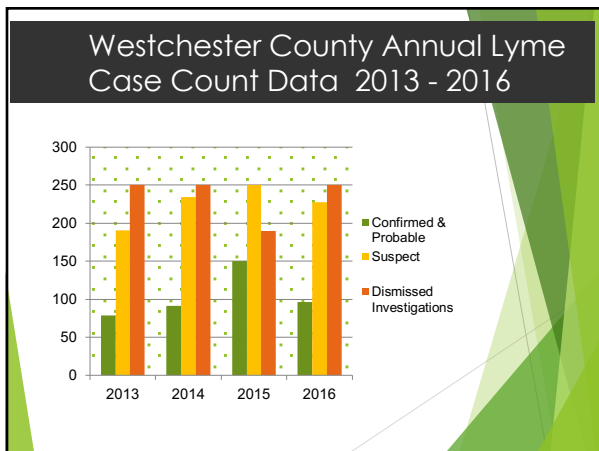
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### Leadership Strategies (Studor Model)

- Commitment to excellence
- Measure the important things
- Build a culture around service
- Create and mentor leaders
- Focus on employee satisfaction
- Build individual accountability
- Align behaviors with goals and values
- Communicate on all levels
- Recognize and reward success

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## Lessons Learned

- Don't stop asking if there's a better way
- Take time to analyze the data-
- Make time to be a leader in nursing
  - Inspire others
  - Identify the need for further work
  - Determine where to focus resources
  - Identify stakeholders
- Participate in ongoing evaluation of quality improvement strategies to assure a culture of safety based on best practice

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## Outcome Measures

**AIM Statement:**

Working with the TDU we will increase the rate of appropriate testing and complete reporting of Lyme disease by 10% by October 31, 2015.

Our provider education *was a successful* intervention

We increased the rate of appropriate testing and complete reporting of Lyme disease by 10% by October, 2015

We surpassed our goal and experienced a 42% increase in the number of confirmed and probable case counts of Lyme disease

We decreased the numbers of dismissed investigations  
*This resulted in a more productive, cost effective process with a more accurate representation of the health status of the population*

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Susan Leone, MPH, BSN,RN	

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Thank you !



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