Interpreting Surveillance Data

Summary of Notifiable Diseases - United States, 2011
Available at: http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6053a1.htm

Summarizing Statement Examples

- During the time period of 1922-2014, the highest incidence of pertussis, approximately 275,000 cases, was in the mid 1930’s.
- After the DTP vaccine was introduced in the late 1940’s, the incidence of pertussis declined from approximately 160,000 cases to approximately 70,000 cases in 1950, during the time period of 1922 to 2014.
- Between the early 1990’s-2014, the highest incidence of pertussis has occurred in 2013.

Examples of Theorizing Statements

- Perhaps the reason for the large number of pertussis cases in persons < 1 yr. of age was that these cases were exposed to pertussis before they could be immunized.
- Perhaps the reason for the large numbers of cases in the 10-17 year age group is from early waning of immunity after Dtap vaccination.
- The lowest number of cases in those >20 years may be due to a reporting anomaly, as clinicians may NOT suspect pertussis in persons over that age & may miss cases.

See example of incorrect statement in transcript
Now You Try…

- Summarizing statements
- Theorizing statements

Assignment #3

Botulism, foodborne. Number of reported cases, by year - United States, 1992-2012

Viral Hepatitis. Incidence, by year – United States, 1982-2012


Hansen Disease (Leprosy). Number of reported cases, by year - United States, 1992-2012


Fishbone Diagram

Policies not followed

Delegation

Nurse manager

Level 1 cues

Level 2 cues

Pareto Diagram

Figures 1. Diagnosis pertaining to urinary tract infection among patients (excluding inpatient and emergency room) (all patients aged less than 1 year.)

Problems to be resolved include:

- HIGH urinary tract infection rate
- Staff not trained to insert catheters
Table of Data Categorizing Medication Errors

<table>
<thead>
<tr>
<th>Category</th>
<th>Frequency</th>
<th>Percent of total</th>
<th>Cumulative %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wrong dose</td>
<td>100</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>Wrong time</td>
<td>70</td>
<td>35</td>
<td>85</td>
</tr>
<tr>
<td>Wrong medicine</td>
<td>15</td>
<td>7.5</td>
<td>92.5</td>
</tr>
<tr>
<td>Wrong patient</td>
<td>8</td>
<td>4</td>
<td>96.5</td>
</tr>
<tr>
<td>Medicine dc’d</td>
<td>4</td>
<td>2</td>
<td>98.5</td>
</tr>
<tr>
<td>Missed dose</td>
<td>3</td>
<td>1.5</td>
<td>100</td>
</tr>
<tr>
<td>Grand Total</td>
<td>200</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Pareto Diagram

Statistical Process Control (SPC) Chart

Supplemental Reading #2

Flow-Charts