

Implementing Province-wide Surveillance for IPC

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Outline

- Components of a surveillance program
- Our Process for implementing surveillance province-wide
- Ensuring data quality
- Our timeline
- Our progress

Purposes of Surveillance

- Establish baseline rates
- Establish if there's a problem
- Identify epidemics/find cases so immediate action can be taken
 - Polio in N. America: 1 case = epidemic
- Monitor effectiveness of control measures
- Meet regulatory requirements
- Convince others to adopt recommended preventive practices

Attributes of Surveillance Program

- Simple
- Flexible
- Acceptable
- Sensitive
- Representative of population
- Timely
- Cost-effective
- Useful

Components of Surveillance Program

- Case definitions
- Population under surveillance
- Type of information needed
- Data sources
- Mechanisms of data storage
- Data analysis
- Reporting

Assessing Data

Validity	Does it measure what you want it to?
Reliability	Can you trust the data?
Accessibility	Is it easily available?
Accuracy	Does it have the same meaning all the time?
Cost efficiency	Is it expensive to extract?
Completeness	Is there missing information or errors?
Timeliness	Is it available when you need it?
Relevance	How well does it meet your needs?
Interpretability	Can you understand, properly use and analyze the data?

Mechanisms for Maintaining Data Quality

- Setting meaningful objectives
- Use standard definitions
- Collect only data needed
- Mentoring new ICPs
- Inter-rater reliability testing
- Routine data audits
- Regular evaluation of surveillance programs

Our Process

The IPC Surveillance Plan

ROLES AND RESPONSIBILITIES

- Provincial IPC Surveillance Committee
 - Prioritizing and oversight
 - Public Reporting (Data integration, Measurement and Reporting Dashboard)
- North and South Operations/Covenant Health IPC
 - Frontline implementation of surveillance
 - Dissemination of results to stakeholders
- South Operations and IPC Surveillance
 - Responsibility for compiling, reporting, and dissemination of data.

ROLES AND RESPONSIBILITIES (2)

- Laboratory System(s)
 - providing diagnostic services
 - appropriate diagnostic outputs.
 - retention of pathogens and strain typing
 - Core members of surveillance initiatives.
- All IPC - maintaining the security of information
- Interventions - collaborative effort
- Data Quality Working Group and Forum
 - Protocol development
 - Standardization of surveillance methods
 - Data quality activities including inter-rater reliability testing and data audits

Action Plan

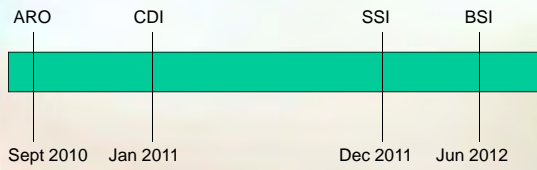
- Establish Surveillance Committee
- Establish Data Quality Working Group and Forum
- Surveillance Plan approval
- Prior surveillance activities will continue.
- Public Reporting working group incorporated
- Develop timelines for province-wide indicators

Action Plan (2)

Infrastructure required

- Create a centralized data management system.
- Develop standardized reports.
- Develop a dissemination plan for reporting
- Evaluation plan for IPC surveillance activities

Proposed timeline for surveillance implementation



Centralized Data Management System

Antibiotic Resistant Organisms

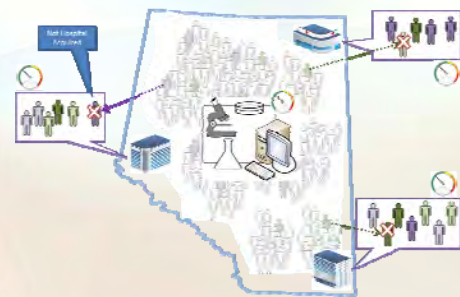
Goals

AHS Surveillance Data Management Main Goals

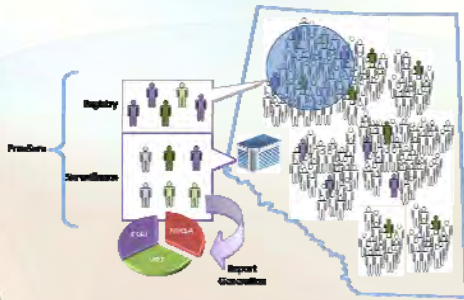
- Providing accurate and comparable infection rates across province,
- Enhancing the decision making and case management by facilitating access to all available information about known cases,
- Preventing cases being recounted or missed at different sites,
- Facilitating the collaboration among IPC members who are active in surveillance, and
- Providing almost real-time provincial, zonal, and site reports for under surveillance infections.



Target Population



Surveillance & Registry



ProvSurf Sample Screens

ProvSurf

Viewing record: 1 - 19 of 8

Search: [] To All Fields [X] Returns: Search

ID	Last Name	First Name	DOB	Sex	Age	Last Last Name	Age First Name	ICD	ICD	ICD	ICD	ICD
1	KAYN	FRANCIS	1984/11/12	M	45							100444197
10	ANDERSON	CARLA	1977/01/29	F	38							100471412
18	HOLLOWAY	ANNA	1974/04/14	F	34	SMITH	AMY					100429227
24	RAMOS	SANDRA	1980/08/14	F	30							100424894
26	MIDDLEBURY	KEAN	1987/04/01	M	24							100222952
27	KUSHNAR	WILMA	1961/11/01	F	42							101442434
28	ACHENBACH	SARAJA	1982/10/01	F	29							100049214
33	SMITH	JAMMAN	1946/11/11	F	57							100119324
40	ANDERSON	ANGELA	1980/07/28	F	31							100442042

Please search for a "portion" of patient's Last Name before adding that patient.
Example: last name: DOODENOROSE → search: DOOD

[Add a New Patient](#)

The presented patients' identification information is unreal.

ProvSurf Sample Screen

ProvSurf

Last Name: GOLDSCHEIDT

First & Middle Name: ANNA

Birth Date: 1974/04/14

Gender: FEMALE

Age Last Name: SMITH

Age First Name: AMY

Age First: 07/21/2020

System ID: 18

Facility ID: AB

Patient Status: ALIVE

MR Number Program: 00

Category ID: 100429227

MSA (1)

VLR (1)

Entered By/For: ANDREA_BOCCELLI

Entered On: 2015/08/19 14:32

Last Modified By/For: ANDREA_BOCCELLI

Last Modified On: 2015/08/19 14:32

The presented patients' identification information is unreal.

ProvSurf Sample Screen

ProvSurf | ANNA GOLDSCHEIDT | 2015/08/19 | 07/21/2020

Viewing record: 19 of 19

ID	MSA	Enr. Date	Enr. Type	Status	Reason	Culture Data	Assessment #	Collected Date	Enr. Type	Enr. Date	Enr. Date	Enr. Date
18	39	2015/08/19	INITIAL	ACTIVE	POSITIVE			2015/08/19	SKIN	SMITH/AMY	SMITH/AMY	SMITH/AMY
18	40	2015/08/19	FOLLOWUP	ACTIVE	NEGATIVE			2015/08/19	SKIN	SMITH/AMY	SMITH/AMY	SMITH/AMY
18	41	2015/08/19	FOLLOWUP	ACTIVE	NEGATIVE			2015/08/19	RECTAL/STOOL	SMITH/AMY	SMITH/AMY	SMITH/AMY
18	42	2015/08/19	FOLLOWUP	ACTIVE	NEGATIVE			2015/08/19	NOSE/THROAT	SMITH/AMY	SMITH/AMY	SMITH/AMY
18	43	2015/08/19	FOLLOWUP	ACTIVE	NEGATIVE			2015/08/19	SKIN	SMITH/AMY	SMITH/AMY	SMITH/AMY

[Add a New Exam](#)

The presented patients' identification information is unreal.

ProvSurv Sample Screen

ProvSurv Sample Screen

MRNAMMARIEM | 155014425 | 748294238

MRN: 155014425

Facility Type: INTNL

Case Status: ACTIVE

Age (at admission): 52 YR

Case Classification: HEALTHCARE ASSOCIATED

Culture Date: 2016/04/22

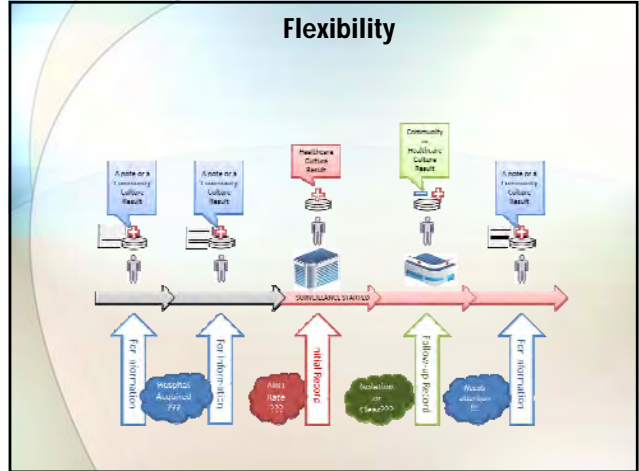
Specimen Number: 49511113357

Culture Result: POSITIVE

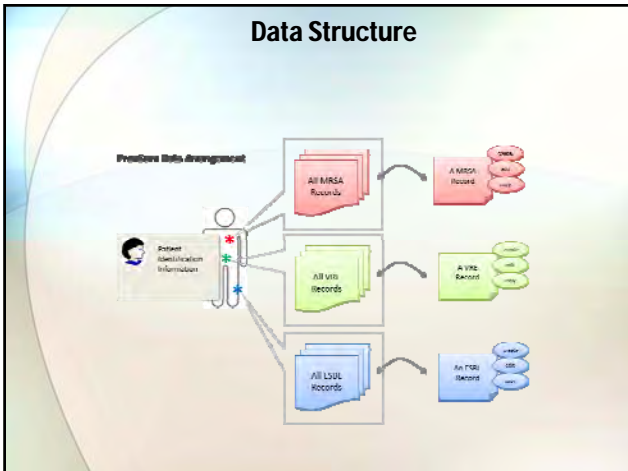
Date Received: 2016/04/22 13:04

Callout: The presented patient's identification information is unusual.

Flexibility



Data Structure



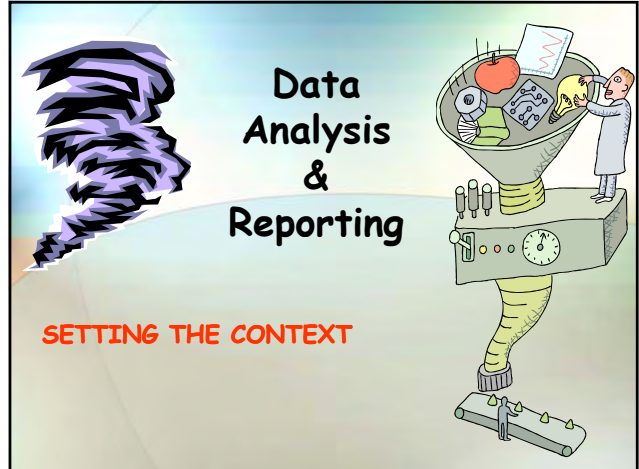
ProvSurv Sample Screen Communication Tool

ProvSurv Sample Screen Communication Tool

The screenshot shows the same patient information as the first screen, but with a communication tool overlay. The tool displays a list of records with columns for "Facility Type", "Case Status", "Culture Date", "Specimen Number", "Culture Result", and "Date Received". A callout box at the bottom right states: "The presented data/ records are unusual."

Choosing a Denominator

- Keep it as simple as possible
- Balance accuracy and amount of work required
- Must be appropriate to the condition or problem you are investigating or monitoring.
- Use data that is already collected or available



Data Analysis & Reporting

SETTING THE CONTEXT

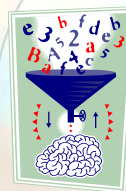
The illustration shows a scientist in a white lab coat standing next to a large, funnel-shaped machine. The machine has a clock face and a dial. Inside the funnel, there are various items including a red apple, a green leaf, a yellow lightbulb, and a small chart. A purple tornado is depicted on the left side of the machine. The background is a light blue and green gradient.

Data Analysis

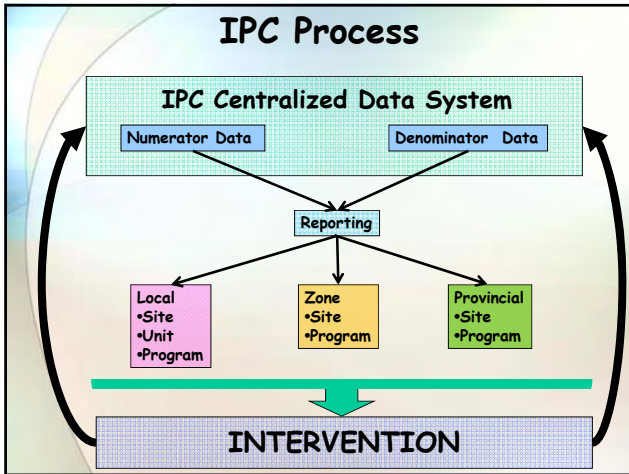


- Consolidate, tabulate and collate data
- Decide on the frequency to analyze data
- Use basic statistics (ratio, proportions, rates)

Data Analysis-Displaying Data:



- Charts and tables
- Comparison of rates (numerator & denominator)
- Stratify data
- Statistical significance
- Compare with clinical picture & biological significance



**When you think surveillance,
think action, not counting!**

- Counting is part of surveillance but surveillance is more counting
- What is the benefit of doing it?
- How to act on the results?

