

Resources for Forecasting and Monitoring Bicillin L-A® Inventory

June 20, 2018
3:00 – 4:00 PM ET

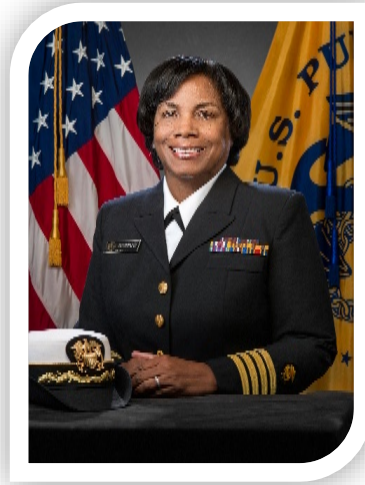
NCSD and CDC Division of STD Prevention



Webinar Presenters



Charlie Rabins
Capacity Building Consultant
National Coalition of STD
Directors (NCSD)



Roxanne Barrow, MD, MPH
Program Development and Quality
Improvement Branch
CDC Division of STD Prevention



Barbara Nichols
CDC Center for Surveillance,
Epidemiology and Laboratory
Services

A Few Housekeeping Items - 1

- Phones will be on mute. If we open the lines for questions or discussion, please mute your phone when not speaking
- Use the chat window to ask questions
- If the facilitator loses web or voice connection during the presentation, please keep your video and audio connections until the facilitator reconnects

A Few Housekeeping Items - 2

- Download today's meeting slides, Bicillin forecasting tool and instructions from the file sharing window.
- We will post the slides, forecasting tool, instructions and an audio/video recording of this webinar on the NCSD Website.

Poll Question 1

Agenda

- Welcome and Introductions
- Overview of CDC – NCSD Bicillin Forecasting and Inventory Monitoring Project
- Results from 2017 NCSD Bicillin Survey of Project Areas
- Update on Bicillin Availability
- Overview of Forecasting Tool for Bicillin Inventory
- Overview of CDC Developed Inventory Tracking System
- Questions, Discussion and Next Steps

Bicillin Project



Why is it important to forecast and monitor Bicillin L-A?

- Ensure adequate supplies are available to prevent and control syphilis
- Budget funds for securing medication
- Track quantity and location of supplies
 - Ordering
 - Distribution
 - Redistribution (outbreaks, expiring medication)
- Strategy in CDC RFA 19-1901

Strengthening STD Prevention and Control for Health Departments (STD PCHD): CDC RFA 19-1901

Strategy Area III: Promote CDC-Recommended Screening, Diagnosis, and Treatment

- 11c. Promote CDC-recommended treatment for gonorrhea and syphilis
 - Implement a Benzathine penicillin G forecasting inventory management system to monitor supply, and have a plan to address shortages in the applicant's project area.

Purpose of the CDC - NCSD Bicillin Project

- Develop and distribute an evidenced based tool for STD Programs to use to forecast future Bicillin needs and procure an adequate inventory to meet current and anticipated demand.
- Identify and make available tools for the timely monitoring and management of Bicillin inventory.

Activities of the CDC – NCSD Bicillin Project - 1

- Conducted weekly discussions, beginning April 2017, regarding Bicillin availability and capacity of STD Programs to forecast and monitor inventory.
- Administered survey to STD Project Areas and US-affiliated Pacific Islands to assess the availability of computerized systems and tools for forecasting Bicillin needs and monitoring inventory

Activities of the CDC – NCSD Bicillin Project - 2

- Developed spreadsheet tool for STD Programs to forecast Bicillin needs based on recent epidemiologic data.
- Explored feasibility and availability of CDC developed data tools for use by STD Programs in monitoring Bicillin inventory.
- Provide technical assistance and capacity building for STD Programs to forecast and monitor Bicillin inventory.

Results from 2017 NCSD Bicillin Survey-1

- 83% (54/65) of STD project areas and USAPI jurisdictions responded to an internet survey conducted from September to November 2017. Survey results indicated:
 - 52% (28/54) don't have a centralized computerized system to monitor Bicillin inventory;
 - 17% (9/54) have computerized systems to monitor Bicillin inventory;
 - 56% (30/54) don't have written policies or procedures for monitoring Bicillin inventory;

Results from 2017 NCSD Bicillin Survey - 2

- Survey results indicated:
 - 72% (38/54) are interested in learning about availability of tools and resources for state and local level to monitor ordering, inventory, distribution and dispensing of Bicillin.
 - 78% (42/54) are interested in learning more about tools to forecast Bicillin needs based on recent syphilis morbidity and other metrics (presumptive treatments, etc.).

Update on Penicillin G Benzathine (Bicillin L-A[®]) Availability



Update on Penicillin G Benzathine (Bicillin L-A[®]) Availability

Roxanne Barrow, MD, MPH
Program Development and Quality Improvement Branch
Division of STD Prevention

Penicillin G Benzathine (Bicillin L-A[®]) - 1

- Penicillin G benzathine (Bicillin L-A[®]) is the recommended treatment for syphilis and the only recommended treatment for pregnant women infected or exposed to syphilis.
- Pfizer is the sole manufacturer of Bicillin L-A[®] in the United States.
- Pfizer experienced a manufacturing delay of Bicillin L-A[®] from 2016 through 2017.

Penicillin G Benzathine (Bicillin L-A[®]) - 2

- Shortage of Bicillin L-A[®] was **resolved** as of May 8, 2018.
- Bicillin L-A[®] is **currently available**.
- CDC will continue to work with FDA's Drug Shortage Staff and Pfizer to monitor Bicillin L-A[®] supply.
- Programs should contact their Prevention Specialist/Project Officer or send an email to STD_apps@cdc.gov, to report any challenges with securing Bicillin L-A[®] supplies.

Penicillin G Procaine - 1

- Penicillin G procaine is one of the recommended treatments for congenital syphilis and an alternative treatment for both neurosyphilis (NS) and ocular syphilis (OS).
- Pfizer is the sole manufacturer of Penicillin G procaine in the United States.
- Penicillin G procaine is **currently unavailable**.

Penicillin G Procaine - 2

- The next delivery is anticipated by late 2018.
- Until Penicillin G procaine is available, CDC guidance is provided at <https://www.cdc.gov/std/treatment/drugnotices/procaine-peng.htm>
- CDC will continue to work with FDA's Drug Shortage Staff and Pfizer to monitor supply.

Bicillin L-A[®] Forecasting Tool

Bicillin L-A® Forecasting Tool

- **Purpose:** Provide STD Programs with a tool to estimate how much Bicillin L-A® they need to purchase or have in inventory based on recent changes in syphilis morbidity and other related factors.
- **Developed by CDC DSTDP in consultation with NCSD and pilot-tested by NCSD Program Committee members.**

Excel Spreadsheet Forecasting Tool With Notes

	A	B	C	D	E	F	G	H	I	J	K
1	BENZATHINE PENICILLIN G (BICILLIN L-A) SUPPLY FORECASTING TOOL										
2											
3	Enter case count data for 2016 and 2017 in columns B & C. Doses used in 2016-2017 and forecast doses in 2018 and 2019 automatically populate										
4	Data can only be entered in the colored cells: must fill (green), or optional (yellow). Enter numbers only as indicated in the notes										
5											
6	Number of patients empirically treated per case of P&S or EL ¹										
7											
8		Probable / confirmed cases treated ²	% change	Multiplication Factor ³	Calculated doses used (2.4 mu) ⁴	Forecast cases ⁵	Forecast doses (2.4 mu) ⁶				
9	Stage at treatment	2016	2017	2016-2017	2016	2017	2018	2019	2018	2019	
10	Primary and secondary			0.0		0	0	0	0	0	0
11	Early latent			0.0		0	0	0	0	0	0
12	Late latent			0.0		0	0	0	0	0	0
13	Late with clinical manifestations			0.0		0	0	0	0	0	0
14	Congenital ⁶			0.0		0	0	0	0	0	0
15	Percentage of cases treated with non-bicillin therapy (enter as a number 0-100) ⁷										
16	Total (cases or doses)	0	0	0.0		0	0	0	0	0	0
17	Inventory at start of calendar year 2018 or 2019										
18	Percentage of syphilis that is treated by the health department (enter as a number 0-100) ⁸										
19	Need to order to meet expected demand									0	0
20											
21	Notes:										
22	1 OPTIONAL: empirically treated (i.e., epi treatment, epidemiologic treatment, preventative treatment, presumptive treatment). You may enter a value if you have an estimate based on your own data. Otherwise, 0.25 (or 1 patient empirically treated per 4 P&S EL patients) will be assumed for the calculations in the table.										
23	2 Confirmed cases = those meeting the CDC case definitions (probable for early latent or late latent). If a patient who is empirically treated is later confirmed but not re-treated, do not count the patient twice.										
24	3 OPTIONAL: Cases forecast for 2018 and 2019 are based on your jurisdiction's change 2016-2017 as entered on columns B and C. If you would like to forecast cases based on a different multiplication factor, you may enter it here—enter a percentage; e.g., -10.0 means a 10% decline, 20.0 means a 20% increase.										
25	4 Assumes all cases treated with 2.4 mu of benzathine penicillin G (3 doses per case for late syphilis). Includes empiric partner treatment. Adjusted for the percentage treated with non-bicillin as discussed in note 5 below.										
26	5 Forecast cases are based on either the percentage change 2016-2017 (column D) or the multiplication factor entered in column E. Increases are capped at 100% of the cases in 2017 unless a higher multiplication factor is entered.										
27	6 Refers to treatment of the congenital syphilis (CS) case only, not the mother; assumes 2.4 mu of benzathine penicillin G used to treat (except as modified by the percentage treated with non-bicillin therapy). However, management of CS is dependent upon neonatal weight and clinical considerations and more or less bicillin may be used in treating a given patient.										
28	7 OPTIONAL: Leave blank if unknown. Percentage treated with non-bicillin in 2017. If entered, is used to estimate the forecast doses for 2018 and 2019.										
29	8 Enter number of 2.4 mu dose equivalents available at the beginning of the year—e.g., 1 box of 10- 1.2 mu syringes— 2.4 mu equivalent is 5; 1 box of 10-2.4 mu syringes—2.4 mu equivalent is 10.										
30	9 OPTIONAL: Leave blank if unknown. If no number entered, 100% is assumed.										
31											
32											
33	Developed by CDC in consultation with NCSO										

Inventory Tracking Tools



Bicillin Inventory Tracking Tools

- Purpose: Provide STD Programs with tools to monitor Bicillin inventory and distribution within their jurisdiction.
- Deployable at the state or local level
- Off the shelf ready (no charge) or customizable;
- Example tool from CDC Center for Surveillance, Epidemiology and Laboratory Services
- Other tools forthcoming



Countermeasure Tracking Systems Overview: Potential Tools for STD Programs to Monitor Bicillin Inventory

Barbara Nichols

Program Manager, Countermeasure Tracking Systems

Susan Hughes

Business Analyst, Northrop Grumman

Inventory Management and Tracking System (IMATS)

IMATS is a warehouse management system used to track medical countermeasure inventory.

Type of data collected

- Product information (dose, strength, manufacturer, funding source, etc.)
- Storage facilities including clinics and health care provider locations
- Product quantities (on-hand, shipped, dispensed, etc.)
- State and local user information

Public health benefits

- Easily monitor and report inventory status
- Identify point of dispensing facilities where product is shipped

IMATS Screen Shots

IMATS Dashboard

Users have a dashboard showing all items that are not complete for their facility or facilities. The dashboard contains the following four tabs:

- Create Receipts – displays all purchase orders and resupply requests that are due in to the facility
- Put Away – displays all put away lists that have not been verified
- Pick – displays all pick lists that have not been picked and verified
- Ship – displays all shipments not marked as complete

IMATS
Inventory Management & Tracking System

Inventory Management ▾ Reports ▾ Setup ▾

Create Receipts ¹ Put Away ¹ Pick Ship

Filter by: Type All... ▾

Facility ^	PO/Request Number	Supplier/Requested From	Order/Request Date	Status	Action
Local Health Department	<u>000002</u>	McKesson Medical-Surgical, Inc.	05/30/2017	Open	Receive

Found 1 records
1

Facility setup

A facility is any site where inventory is stored. This could be a warehouse or storeroom at a health care provider. Each facility configured in IMATS must have at least one storage location associated with it before inventory can be added to the system.

- To manually add a Facility, select **Setup -> Facility -> Add Facility** and enter associated data
- Fields marked with a red asterisk are required

IMATS
Inventory Management & Tracking System

Inventory Management ▾ Reports ▾ Setup ▾

[< Back to Dashboard](#)

New Facility Required *

Project Area Georgia - Demonstration

Region ?

Jurisdiction

Facility Detail

Facility Name *

Status * Active ▾

Type of Distribution Site * Select Type ▾

RSS Site Priority * Select RSS Site Priority ▾

Facility Type * Select Type ▾ (specify if Other selected)

POD, Closed Type * Select POD, Closed Type ▾ (specify if Other selected)

Notes (max. 255 chars)

Ship to Address

Address Line 1 * ?

Address Line 2

-- OR --

Latitude * Longitude *

City *

State * Select State ▾

Add inventory

- Once a facility is configured, inventory may be added to IMATS
- To manually add inventory, select **Inventory Management -> Inventory Management -> Add Inventory** and enter associated data
- Select Funding Source Type (pre-defined) & Funding Source (custom field)

IMATS
Inventory Management & Tracking System

Inventory Management ▾ Reports ▾ Setup ▾

[< Back to Dashboard](#)

Add Inventory Item Required *

Project Area: Georgia - Demonstration
Facility: Local Health Department
Product Name: * BICILLIN L-A 1200000 10 SYRINGE in 1 PACKAGE 60793-701-10 by PFIZER LA x
Product Item Number: 60793-701-10 (National Drug Code NDC or Stock#/Model #)
Storage Location Type: * Select Storage Location Type ▾
Storage Location: * Select Location ▾
Serial Number:
Lot Number: *
Product Expiration Date: * mm/dd/yyyy
Funding Source Type: * Select Funding Source Type ▾
Funding Source: CDC ▾
Quantity: * 0
Unit Of Measure: * Each ▾

Select Funding Source Type
Donation
Federal
Local
PHP
Regional
State
Tribal

Add Back

Search inventory

- IMATS provides an inventory search screen that allows results to be exported
- Users may also navigate to the edit inventory page from the search screen

IMATS
Inventory Management & Tracking System

Inventory Management ▾ Reports ▾ Setup ▾

[< Back to Dashboard](#)

Search Inventory

Please enter one or more of the search criteria and then click Search button.

Facility: Local Health Department

Storage Location:

Product Name:

Funding Source Type:

Funding Source:

Expiration Date Before: mm/dd/yyyy

Include Expired Products? Yes No

Facility	Storage Location	Product Name Item Number	Funding Source Type Funding Source	Lot Number Expiration Date Serial Number	Quantity	Unit Of Measure
Local Health Department	Storage-A	BICILLIN L-A 2400000 10 SYRINGE in 1 PACKAGE 60793-702-10 by PFIZER LABOR 60793-702-10	State	1345134 05/16/2019	25	Case of 10
	Storage-A	BICILLIN L-A 600000 10 SYRINGE in 1 PACKAGE 60793-700-10 by PFIZER LABOR 60793-700-10	Federal	TRY123 05/17/2019	50	Each of 1
	Storage-A	Tamiflu 30 1 BLISTER PACK in 1 CARTON 0004-0802-85 by Genentech, I 0004-0802-85	State	234562345 02/28/2019	50	Each of 1

Found 3 records

1

Dispense Inventory

- IMATS provides a way to account for dispensed inventory
- To add a dispensed item select **Inventory management -> Dispense -> Add Dispensed Countermeasures**
- Items marked as dispensed will be deducted from inventory

IMATS
Inventory Management & Tracking System

Inventory Management ▾ Reports ▾ Setup ▾

[< Back to Dashboard](#)

Add Dispensed Countermeasures

Facility: Local Health Department ▾

Product Name: BICILLIN L-A 600000 10 SYRINGE in 1 PACKAGE 60793-700-10 by PFIZER LABOR

Item Number: 60793-700-10

Storage Location	Funding Source	Lot No	Exp Date	Quantity	UOM	Dispensed	Dispensed Date
Storage-A	Federal	TRY123	05/17/2019	50	Each	2	05/29/2018

Found 1 records

1

Save Back

IMATS Implementation

IMATS Connect

- Must be deployed at your jurisdiction
- Jurisdiction is responsible for security and access
- Will require jurisdiction's IT support
 - Staff with familiarity of servers, databases, and how to install and manage server applications
 - Hardware to install the software

IMATS Next Steps

If you are interested in obtaining a copy of IMATS Connect, please send an email to

CTSHelp@cdc.gov.

Questions and Discussions

Next Steps



Next Steps

- Webinar recording and slides will be available on the NCSD website
- Projection tool and instructions will be available on NCSD website
- Contact CSELS at CTSHelp@cdc.gov for assistance with CDC database and copy Charlie Rabins
- Contact Charlie Rabins with examples of inventory tools or written policies and procedures for monitoring inventory
- Send questions for DSTDP regarding STD PCHD to std_pchd@cdc.gov

Poll Question 2

Acknowledgments

Charlie Rabins
217-801-4312
crabins@ncsddc.org

Roxanne Barrow, MD, MPH
404-639-8503
rrb6@cdc.gov

For more information, contact CDC
1-800-CDC-INFO (232-4636)
TTY: 1-888-232-6348 www.cdc.gov

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

Jennifer Fuld
Thomas Gift
Harrell Chesson
CDC CSELS
NCSD

