

# **NPHII Grantee Update: South Carolina's Performance Management System**

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Control

Performance Improvement Managers Network Webinar

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# Agenda

- ❑ **History of performance management at DHEC**
- ❑ **Development process for new system**
- ❑ **DHEC Performance Dashboard features**
- ❑ **Q&A**

A brief history of

# **DHEC PERFORMANCE MANAGEMENT**

# “System” vs. “System”



Public Health Foundation. (2012, June 13). Turning Point Performance Management Framework 2012 Framework Diagram Refresh Overview. *Turning Point Performance Management Refresh*. Retrieved January 9, 2013, from [http://www.phf.org/resourcestools/Documents/Turning\\_Point\\_Performance\\_Management\\_Framework\\_2012\\_Refresh\\_Changes.pdf](http://www.phf.org/resourcestools/Documents/Turning_Point_Performance_Management_Framework_2012_Refresh_Changes.pdf)

# The "Old" System

Performance Management - Windows Internet Explorer provided by DHEC Network Services

http://web01/performance\_management/

File Edit View Favorites Tools Help

Google Search More >> Sign In

Performance Management

Log out

Indicators by Strategic Plan Indicators by Performance Management Area

- 1 : Increase the number of community-based minority serving organizations that are implementing strategies to address HIV
- 2 : Strengthen the capacity of community-based organizations and local health departments to implement and evaluate effective STD/HIV prevention and
- 3 : Increase the proportion of minority HIV infected and high-risk persons receiving appropriate prevention, referral and care/treatment services
- 4 : Decrease the incidence of perinatal HIV transmission
- 5 : Eliminate syphilis among South Carolina residents
- 6 : Decrease the prevalence of chlamydia and gonorrhea
  - a : Percent of DHEC family planning and STD clinic clients with positive chlamydia tests that are treated within 14 days of the specimen collection date
  - b : Percent of DHEC family planning and STD clinic clients with positive gonorrhea tests that are treated within 14 days of the specimen collection date

Show Indicator Data  Include historic data

Percent of DHEC family planning and STD clinic clients with positive chlamydia tests that are treated within 14 days of the specimen collection date  
No description available

Standard: 80 Standard description: <none>

Filter by reporting area: All Filter by reporting date: Jul-Dec 2009

Save Reset Values

<b>Region 1</b>	<b>Jul-Dec 2009</b>	Notes:
Baseline: N/A	Target: N/A	Value: 79.9 %
<b>Region 2</b>	<b>Jul-Dec 2009</b>	Notes:

Done Local intranet 100%

## The “Old” System

- ❑ **Web interface → Access database → SQL server**
- ❑ **Linked to DHEC Strategic Plan**
- ❑ **Data could be entered locally, retrieved centrally**
- ❑ **Limited reporting options**
- ❑ **Inflexible and difficult to maintain**
- ❑ **Designed for Internet Explorer 6 (2001)**

# **DEVELOPING A NEW PERFORMANCE MANAGEMENT APPLICATION**

## **Joint Application Design (JAD)**

- ❑ May–June 2011**
- ❑ Six planning sessions of two to three hours**
- ❑ Facilitated by in-house programmer/applications analyst**
- ❑ Over 75 stakeholders statewide**
  - ❑ Program managers and coordinators**
  - ❑ Senior leaders in Central Office and Regions**
  - ❑ QI staff from CO and Regions**
- ❑ Looked at other systems**

# Joint Application Design (JAD)

- ❑ **Questions covered areas of**
  - User interface
  - Reporting
  - Database
  - Data collection
  - Interoperability with other data systems
  - System features: must-haves and like-to-haves

# Functional Requirements

- ❑ **Developer turned JAD session responses into a “functional requirements” document**
- ❑ **Phase I (must-have) requirements**
  - Sort indicators by organizational unit
  - Search features
  - Show relevant measures for each user based on their login
  - Add spec sheet information by adding links to existing PDFs
  - Customized reports
  - Option to export reports to Excel

# Functional Requirements

- ❑ **Phase II (keep dreaming) future enhancements**
  - Add charts, graphs, and maps
  - Collect data frequently
  - Add users' performance measures in the system
  - Link performance measures to regional and national goals
  - Score card
  - Customize data dashboard
  - Import data from other systems
  - Import data from spreadsheets
  - Upload documents and alert users to new documents

# Reasons to Develop In-House vs. Vendor

## ❑ **Cost effective**

- No yearly subscription or maintenance fees
- Significantly lower cost per user (can be scaled up to 2500+ users without additional cost)
- No need to purchase new or proprietary servers

## ❑ **Interoperability**

- Built on existing DHEC data architecture
- Can pull data from new (and some legacy) DHEC data systems
- Information Systems staff will be familiar with code base and can provide ongoing support

## ❑ **Developed to fit our needs**

## **Development**

- ❑ **Contract IS developer began January 6, 2012**
- ❑ **Two smaller stakeholder groups established**
  - PM Advisory Board: Representatives from CO and Regional leadership, program management, PM/QI staff
  - User group: CO and Regional PM/QI staff
- ❑ **Monthly meetings with PM Advisory Board through May**
- ❑ **Weekly and as-needed progress meetings between OPM and developer**
- ❑ **User group involved in testing**
- ❑ **Phase I launched in September 2012**
- ❑ **Phase II development completed 12/31/2012**

# Evaluation and Training

## ❑ System usability survey

- Deployed during Phase I testing
- Demonstrated that step-by-step training/instructions had a big impact on perceived usability of application
- Will be repeated after roll-out

## ❑ Focus groups

## ❑ Training

- Work with USC Arnold School of Public Health Training Center to develop user guides and interactive trainings
- Convert test server to training sandbox

Introducing

# **DHEC PERFORMANCE DASHBOARD**



# Performance Dashboard

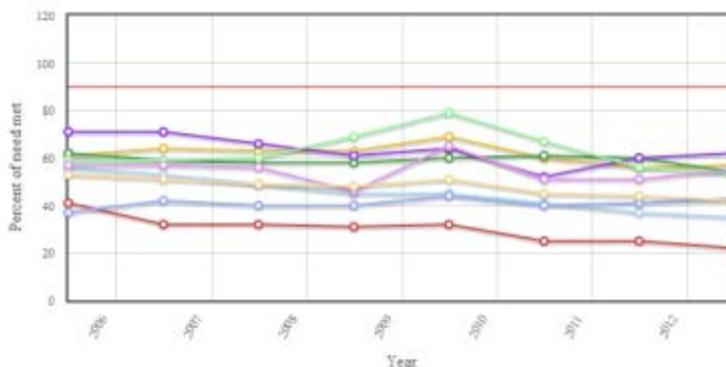
Tuesday, January 08, 2013  
 Logged in as Jeremy VanderKoyff  
 (vanderj)

- Dashboard**
- Reports
- Measures
- Objectives
- Organization Unit
- Misc
- User
- Tools

## User Dashboard

Actions	Measure	Description	Standard	Frequency	SC
Enter Data <input type="radio"/> Spec Sheet <input type="radio"/> Remove <input type="checkbox"/>	FP-01: Family planning need met	Percent of family planning need met based upon Guttmacher Institute estimates	90	Annual (SFY)	
Enter Data <input type="radio"/> Spec Sheet <input type="radio"/> Remove <input type="checkbox"/>	FP-04: Total Family Planning caseload	Total Family Planning caseload	None	Quarterly	
Enter Data <input type="radio"/> Spec Sheet <input type="radio"/> Remove <input type="checkbox"/>	HH-08: Acute care hospitalization	This Outcome Measure shows percent of patients who require acute care hospitalizations. Lower is Better.	25	Quarterly	
Enter Data <input type="radio"/> Spec Sheet <input type="radio"/> Remove <input type="checkbox"/>	IMMZ-05: AFIX compliance	Percent of non-DHEC immunization practices that are reviewed for AFIX compliance	25	Annual	

Print



Region 1  Region 2  Region 3  Region 4  Region 5  Region 6  Region 7  Region 8  SC

- Line
- Area
- Point
- Column
- Pie
- Donut
- Stoplight Map
- Heat Map

Hide Graph

Start Date:

End Date:

Refresh Run Report

Show Legend

- Region
- State

- Select All
- Region 1
- Region 2
- Region 3
- Region 4

## Features

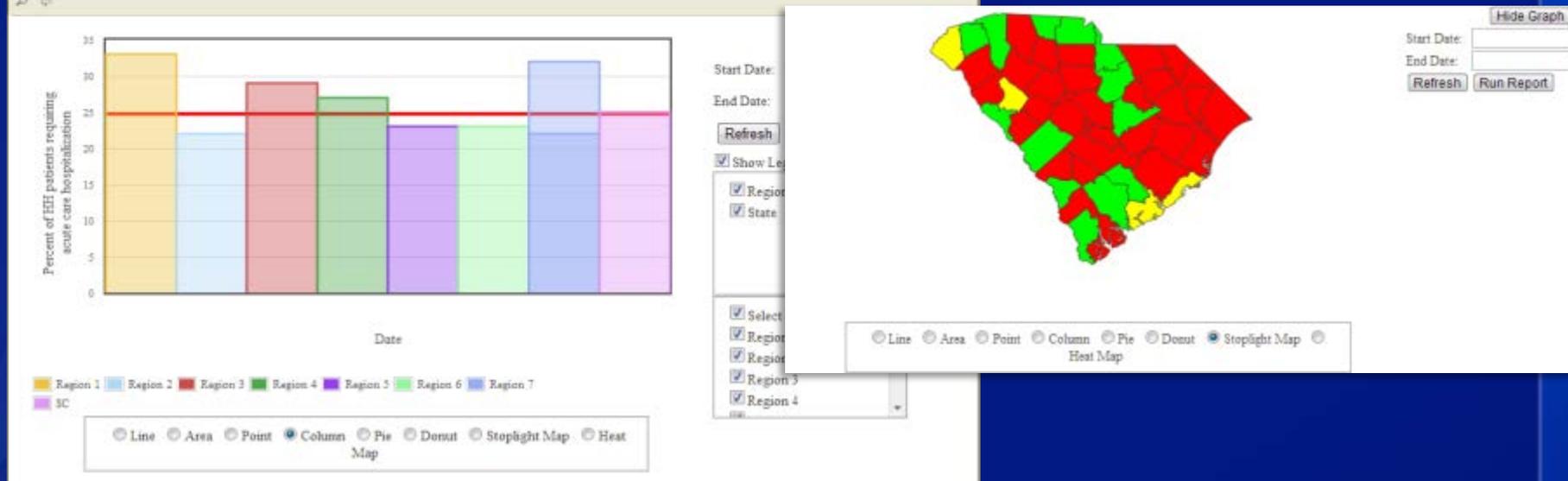
- ❑ **Customizable data dashboards with graphs**
- ❑ **Customizable reports, exportable to Excel/Word/PDF**
- ❑ **Performance and Health Status measures linkable to PHAB and HP 2020**
- ❑ **Easily accessible data definitions**
- ❑ **Document upload and alerts**

## Features

- ❑ **E-mail notification when data entry required**
- ❑ **Manual data entry from Dashboard**
- ❑ **Automatic data entry from spreadsheet or other DHEC systems**
- ❑ **User-based security and permissions**
- ❑ **Flexibility**
- ❑ **Transparency**

# User-Customizable Dashboard

Dashboard							
Reports		Measures	Objectives	Organization Unit	Misc	User	Tools
<b>User Dashboard</b>							
Actions	Measure	Description	Standard	Frequency	SC		
Enter Data <input type="radio"/> Spec Sheet <input type="checkbox"/> Remove <input type="checkbox"/>	FP-01: Family planning need met	Percent of family planning need met based upon Guttmacher Institute estimates	90	Annual (SFY)			
Enter Data <input type="radio"/> Spec Sheet <input type="checkbox"/> Remove <input type="checkbox"/>	FP-04: Total Family Planning caseload	Total Family Planning caseload	None	Quarterly			
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Enter Data <input type="radio"/> Spec Sheet <input type="checkbox"/> Remove <input type="checkbox"/>	IMMZ-05: AFIX compliance	Percent of non-DHEC immunization practices that are reviewed for AFIX compliance	25	Annual			



# Customizable Reports

**Performance**

Run Report:

Select Report: Measure Report

Report Type: Line

Sort: Line

Color: Pie

Measure:  FIN-09: Travel  
 FP-01: Family planning need met  
 FP-02: FP caseload - initial  
 FP-03: FP caseload - annual  
 FP-04: Total Family Planning caseload  
 FP-05: FP caseload to hours coded  
 FP-06: Family Planning visits

Entry Unit:  Select All  
 SC  
 Region 1  
 Region 2  
 Region 3  
 Region 4  
 Region 5  
 Region 6  
 Region 7

Start Date:

End Date:

Run Report:

# Linkable to PHAB/HP 2020

Entity Name ↕	PHAB Standard : Standard 7.1			
Standard 11.1	- Performance Measure			
Standard 11.2	+ Add Link			
Standard 12.1	OPC-01: Shortage Designations	Percent of Shortage Designations reviewed/updated by HRSA deadline	<a href="#">Remove Link</a>	<a href="#">Go To</a>
Standard 12.2	OPC-02: J-1 Visa Waivers	Percent of allotted 30 J-1 Visa Waiver slots used in program year	<a href="#">Remove Link</a>	<a href="#">Go To</a>
Standard 12.3	OPC-03: NHSC Site Applications	Percent of NHSC Site Applications processed within 15 days of receipt	<a href="#">Remove Link</a>	<a href="#">Go To</a>
Standard 2.1	FP-01: Family planning need met	Percent of family planning need met based upon Guttmacher Institute estimates	<a href="#">Remove Link</a>	<a href="#">Go To</a>
Standard 2.2	OPHN-06: RD to WIC client ratio	Ratio of Registered Dietitians to WIC clients	<a href="#">Remove Link</a>	<a href="#">Go To</a>
Standard 2.3	OPHN-07: (Developmental) Time between referral and appointment with RD	(Developmental) Average number of days between WIC clients in the high-risk category receiving a referral to see an RD and their appointment	<a href="#">Remove Link</a>	<a href="#">Go To</a>
Standard 2.4	OPHN-08: (Developmental) Referral of high-risk WIC clients	(Developmental) Percent of high-risk WIC clients who are referred to a Registered Dietitian	<a href="#">Remove Link</a>	<a href="#">Go To</a>
Standard 3.1	OPHN-09: (Developmental) Breastfeeding support	(Developmental) Percent of pregnant women on WIC contacted for breastfeeding support by the 28th week of pregnancy	<a href="#">Remove Link</a>	<a href="#">Go To</a>
Standard 3.2	MCH-01: Perinatal regions with pre/inter-conception health coalition	Number of perinatal regions with an established pre/inter-conception health coalition working to identify and address pre/inter-conception health needs	<a href="#">Remove Link</a>	<a href="#">Go To</a>
Standard 4.1				
Standard 4.2				
Standard 5.1				
Standard 5.2				
Standard 5.3				
Standard 5.4				
Standard 6.1				
Standard 6.2				
Standard 6.3				
Standard 7.1				
Standard 7.2				
Standard 8.1				
Standard 8.2				
Standard 9.1				
Standard 9.2				

# Data Entry from Dashboard

The screenshot displays the DHEC Performance Dashboard interface. A modal dialog box titled "Add Data Point" is open, allowing for data entry. The dialog includes the following fields:

- Numerator:** A text input field.
- Denominator:** A text input field.
- Measure Data Notes:** A large text area for additional information.
- Year:** A dropdown menu currently set to "2013", with a "Load Dates" button next to it.
- Measure Data From Date:** A date input field.
- Measure Data To Date:** A date input field.
- Measure Data Entry Unit:** A dropdown menu currently set to "SC".

Buttons for "Submit" and "Cancel" are located at the bottom of the dialog. In the background, a line graph titled "Percent of trend met" is visible, showing data for various regions (Region 1 through Region 7) and SC from 2007 to 2012. The graph includes a legend and a "Hide Graph" button. To the right of the graph, there are "Start Date" and "End Date" input fields, "Refresh" and "Run Report" buttons, and a "Show Legend" section with checkboxes for "Region" and "State". Below that, there is a "Select All" section with checkboxes for "Region 1" through "Region 4".

# Accessible Data Definitions

The screenshot displays the DHEC Performance Dashboard interface. The main content area is titled "Performance Measure : NUR-03: Public health nursing orientation plan". Below this title, there is a section for "Performance Measure Details" which contains a table of key information.

Performance Measure Data Entry	
Quick Link:	
Measure:	NUR-03: Public health nursing orientation plan
Description/Definition:	Percent of new nursing hires that have completed the public health nursing orientation plan within 1-year of employment
Standard:	100
Category:	Quality/Outcome
Strategic Plan Link:	5A.2
HP2020 Link:	
PHAB Link:	S.1.8.2
Program/Org Unit:	142
Data Source:	Public Health Nursing Individual Plan/Report of Supervision (DHEC 1575)
Data collection procedures:	Reports completed by Nursing Directors
Data collection responsibility (name or title):	Regional Nursing Directors
Input Responsibility:	Central Office : false Regions : true Counties : false Bureaus : false Program Areas : false Sites : false State : false
Name or Title of person entering data for CO (if applicable):	
Frequency:	Annual (SFY)
Granularity:	
Numerator Description:	Number of new nursing hires from the denominator who have completed the public health nursing orientation plan within 12 months of date of hire

# Security

## ❑ System-wide

- Tied to Active Directory—no separate login required

## ❑ User-based

- Each user is assigned “roles” allowing them to edit data, measures, users, etc.

## ❑ Measure-based

- Select users or org units allowed to edit data for a measure
- “Private” measures viewable only by selected users or org units

## Flexibility

- Users can add and edit performance measures (including private measures for their org unit)
- “Superusers” can create new types of measures, org units, objectives, etc. and update menus through a Web-based “admin panel”
- “Entities” (e.g., measures, org units, or objectives) can be “linked” to organize data
- **Entirely open source**

The screenshot displays a web-based dashboard titled "Dashboard" with a date of Tuesday, January 08, 2013, and a user logged in as Jersey VandeKeyff. The dashboard features a table with columns for Measure, Standard, Frequency, and SC. A dropdown menu is open over the "Organization Unit" column, listing various organizational levels and a list of health departments.

Measure	Standard	Frequency	SC
FP-01: Family planning need	90	Annual (SFY)	↓
FP-04: Total Family Planning caseload	None	Quarterly	↑
PH-08: Acute care hospitalizations			
DMZ-05: AFIX compliance			
DMZ-09: Childhood immunizations			
SUR-01: HIV TTH questionnaire completion			
WCS-02: PPNBHV referrals			

Organization Unit dropdown menu:

- State
- Region
- County
- Site
- Division (Executive) »
- Deputy Area »
- Bureau »
- Division (Bureau) »**
- Office »
- Program Area »
- Central Office

Health Department list:

- Acute Disease Epidemiology
- Cancer Prevention and Control
- Chemistry
- Children's Services
- Chronic Disease Epidemiology
- Diabetes Prevention and Control
- Healthy Aging
- Heart Disease and Stroke Prevention
- Immunization and Prevention
- Injury and Violence Prevention
- Logistics
- Microbiology
- Obesity
- Oral Health
- Research and Planning
- STD/HIV
- Support
- Surveillance and Technical Support
- Tobacco Prevention
- WIC
- Women's Health

# Deploying Performance Dashboard in Your Organization

## ❑ You will need

- Source code (available 2013)
- Web server
- SQL server

## ❑ Customization

- Programmer necessary to install software and adapt security and mapping features to your organization
- Non-technical staff can be trained to populate the system with your organization's measures, org units, objectives, and users

# Lessons Learned

## ❑ The obvious

- Involve stakeholders early in the process and keep them involved
- A performance management system is only as good as its content
- Market, market, market: No buy-in, no users. No users, no system.

## ❑ The less obvious

- In-house development can be cheaper than off-the-shelf products
- The people responsible for entering data and content are your most important customers
- Start testing as soon as the first line of code is written; don't wait for a "finished" version!
- You should be in constant communication with the developer—monitoring progress, reporting errors, and prioritizing changes and features to meet customers' expectations

## Feel-Good Platitudes

- ❑ **Never stop dreaming, shoot for the moon, etc.**
  - DHEC Public Health got everything we wanted in a performance management system (and more)

**Thank you!**  
**Please send comments and questions to**  
*[pimnetwork@cdc.gov](mailto:pimnetwork@cdc.gov)*

For more information please contact CDC's Office for State, Tribal, Local and Territorial Support.

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