

Welcome to *California*



Healthcare-Associated Infections (HAI) Reported by California General Acute Care Hospitals, 2012

Meeting of the HAI Advisory Committee
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Public Reporting of Healthcare-Associated Infections (HAI)

California Health and Safety Code established

- Formation of a HAI Advisory Committee (1288.5)
- Requirements for general acute care hospitals to report specific HAI (1288.55) and adherence to specific HAI prevention practices (1288.8)
- Creation of an HAI surveillance and prevention program in the Department to receive HAI data and make it available to the public on an annual basis (1288.8)

SB 739 (2006), SB 158 & 1058 (2008)



Required HAI Reporting by Hospital

Infection type	Acronym	Report via NHSN	Scope
Central line insertion practices	CLIP	2009	Lines inserted in ICU
Central line-associated bloodstream infections	CLABSI	2010	Each ICU and ward
Methicillin-resistant <i>Staphylococcus aureus</i> bloodstream infection	MRSA BSI	2010	Hospital-wide
Vancomycin-resistant Enterococcus bloodstream infection	VRE BSI	2010	Hospital-wide
<i>Clostridium difficile</i> infection	CDI	2010	Hospital-wide
Surgical site infection	SSI	2011	29 procedure types

Compliance with HAI Reporting

	% of Hospitals Participating		
	2010	2011	2012
CLABSI	97	99	99
MRSA/VRE BSI	94	95	99
CDI	91	94	99
SSI	--	99	100

New in 2012: Standardized Infection Ratio (SIR) Presented for CDI and MRSA BSI

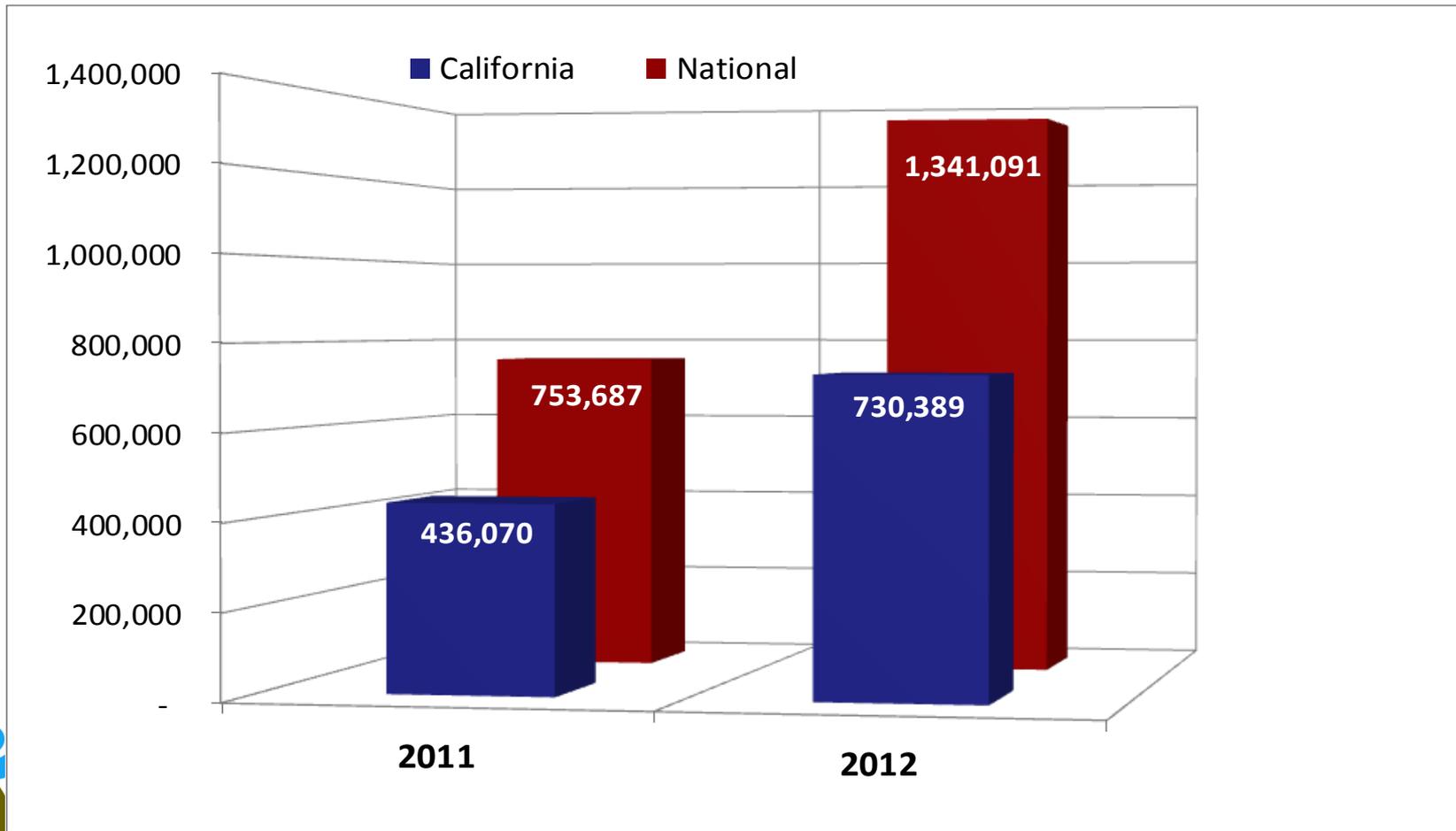
- De facto risk adjustment; shown as a single number
- Adjusts for hospital differences, such as patient severity
- Predicts the number of infections using national referent data

$$\text{e.g. } \frac{3 \text{ reported HAI}}{3.0 \text{ predicted HAI}} = 1.0$$

- Interpretation:
 - SIR greater than 1.0 → more HAI than predicted
 - SIR less than 1.0 → fewer HAI than predicted



New in 2012: Increase in Surgical Procedure Volume Reported to NHSN



California HAI Prevention Progress

	2012	Change since 2011
CLABSI	Unit-specific rates	↓ 5%
MRSA BSI	SIR 0.78*	↓ 6%
VRE BSI	Rate 0.52	No change
CDI	SIR 1.05*	↓ 1.3%
SSI	SIR 0.60**	Only partial-year reporting

*Comparison to national referent data, 2010-2011

**Comparison to national referent data, 2006-2008



Key CLABSI Findings, 2012

- Number of reported CLABSIs lower in 2012 (2998 cases) than in 2011 (3163 cases)
- Comparisons of 2012 CLABSI rates to 2011 show
 - 6% lower in general patient care wards (0.77 vs. 0.82 per 1000 central line days)
 - 13% lower in special care areas (1.70 vs. 1.96)
 - 22% lower in neonatal critical care areas (0.79 vs. 1.01)
 - 3% higher in intensive care units (1.06 vs. 1.03)
- Decreases in statewide CLABSI case counts and rates in 2012 continue to demonstrate a downward trajectory
 - CLABSI prevention progress in most patient care location types; efforts still needed to decrease rates uniformly in all locations

Key CDI Findings, 2012

- 100% of hospitals reported type of CDI laboratory testing method compared to 93.5% in 2011 (necessary for risk adjustment)
- Other factors in risk-adjustment for hospital-onset CDI are major teaching hospital, bed size, and hospital prevalence rate
- 54 hospitals with 12 months of data (14.4%) reported zero CDI
- 2012 risk-adjusted CDI SIR from 324 hospitals was 1.06
- For the 23 long-term acute care (LTAC) hospitals and 7 rehabilitation acute care hospitals, risk-adjustment method not available. 2012 hospital-onset CDI rates
 - LTAC, 17.6 per 10,000 patient days (range 9.0 to 31.7)
 - Rehabilitation, 4.6 per 10,000 patient days (range 2.0 to 7.8)

Key MRSA BSI Findings, 2012

- 174 (45.0 %) hospitals reported no MRSA BSI
- Risk adjustment for HO MRSA BSI includes bed size, medical school affiliation, and hospital prevalence rate
- 2012 statewide pooled mean MRSA BSI SIR (from 357 hospitals) is 0.78
- There is no risk-adjustment method for MRSA BSI for LTAC and rehabilitation acute care hospitals. Hospital-onset MRSA BSI rates are
 - LTAC, 1.75 per 10,000 patient days
 - Rehabilitation, 0.40 per 10,000 patient days



Key VRE BSI Findings, 2012

- 207 (54%) hospitals reported no VRE BSI
- There is no risk adjustment for VRE BSI; data will continue to be presented as rates, stratified by hospital type

Hospital Type	No. of hospitals	VRE BSI Pooled Mean Rate per 10,000 Patient Days	
		2012	2011
Long Term Acute Care	22	2.61	1.94
Major Teaching	20	0.98	1.11
Community	292	0.35	0.35
Pediatric	11	0.17	0.20
Critical Access	31	0	0.12
Rehabilitation	7	0	0.07
Prison	3	0	0
All	386	0.52	0.52

Key SSI Findings, 2012

- 2012 is the first full year of reporting data for 29 surgical procedure categories
- All 345 hospitals known to be subject to SSI reporting requirements reported data on one or more surgical procedure category
- In 2012, 68% increase in number of reported surgical procedures (679,828) and 73% increase in number of SSIs (3,524) compared to partial year (7-9 months) of required reporting in 2011
- SSI data are presented as procedure-specific SIRs; both patient-level and hospital-level factors for are used for risk adjustment
- There is no risk adjustment for 5 reportable surgery categories: heart transplant, kidney surgery, ovarian surgery, pacemaker surgery and spleen surgery



Key SSI Findings, 2012 (continued)

- 22 of 24 statewide 2012 SSI SIRs were statistically lower as compared to the national referent SIR of 1.0
 - Coronary artery bypass graft with chest incision only and kidney transplant SSI SIRs were not different than national data

Surgical Procedure Category	No. of hospitals performing surgery type	2012 Statewide SSI SIR
Bile duct, liver, or pancreatic surgery	238	0.24
Cardiac surgery	145	0.61
Cesarean section	233	0.31
Coronary artery bypass graft	125	0.60
Colon surgery	314	0.65
Hip prosthesis	297	0.62
Knee prosthesis	296	0.53
Open reduction of fracture	301	0.37
Small bowel surgery	288	0.42
Spinal fusion	216	0.53

California Hospital-specific Findings, 2012

Infection type	Number of Hospitals	
	Significantly FEWER Infections than Predicted	Significantly MORE Infections than Predicted
CLABSI	23	49
MRSA BSI	12	0
CDI	46	54
SSI	90*	31*

*14 of these hospitals had both

New in 2012: Improved Presentation of HAI Data to the Public

"My Hospital - 411 Infections"

- Interactive map designed and tested to present hospital HAI data to consumers
- Received several awards including **2012 People's Choice Award for Best Public Sector App** at the Government Technology Conference-West, May 2012
- Enhancements made in 2013 based on 3 public user focus groups convened last year



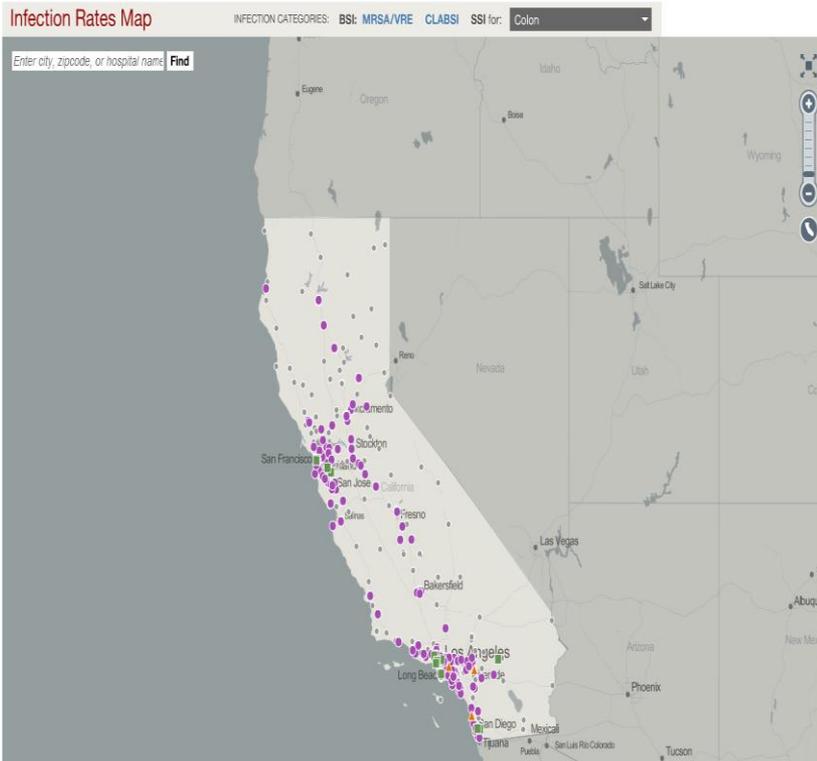
Home Page

Current: Displays four infection types

New in 2013: Adds a fifth infection type , CDI

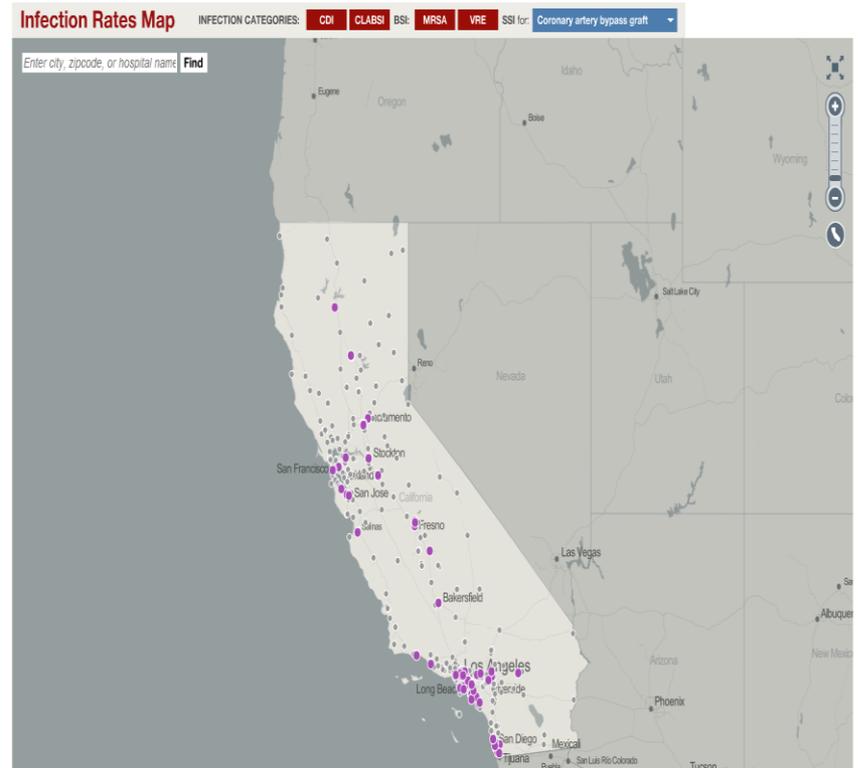
Current

My Hospital – Healthcare Associated Infections For more information on the infections and map data, see below.



Version 3

My Hospital – 411 Infections



Navigation Bar

Current: Users unaware of how to change display for different HAIs

New in 2013: Clearly defines selection buttons and the surgical procedure list

Current

INFECTION CATEGORIES: BSI: [MRSA/VRE](#) [CLABSI](#) SSI for:

Version 3

INFECTION CATEGORIES: [CDI](#) [CLABSI](#) BSI: [MRSA](#) [VRE](#) SSI for: [Select a surgical procedure](#)

Navigation Bar

New in 2013: Infection definitions, in lay terms, pop up when hovering

Version 3

Legend: **CDI** **CLABSI** BSI: **MRSA** **VRE** SSI for: Select a surgical procedure

CDI pop-up: an infection caused by the germ *C. difficile*, a common cause of diarrhea in health care settings

CLABSI pop-up: a blood infection caused by germs that contaminate a central line, a tube usually placed in a large vein

Legend: **CDI** **CLABSI** BSI: **MRSA** **VRE** SSI for: Select a surgical procedure

MRSA pop-up: a blood infection caused by staph bacteria resistant to many antibiotics

VRE pop-up: a bloodstream infection caused by *Enterococci* bacteria resistant to certain antibiotics

Legend: **CDI** **CLABSI** BSI: **MRSA** **VRE** SSI for: Select a surgical procedure

SSI pop-up: an infection that occurs after surgery in the part of the body where the surgery took place

Content Below Map

New in 2013: Consumers are the focus (not healthcare providers); streamlined verbiage and removed jargon

Current

About This Map

Publicly presenting information on individual hospitals' infection rates is a crucial part of the California Department of Public Health strategy to reduce healthcare associated infections (HAI). This map was created by Slamen Design and funded by California HealthCare Foundation. It replaces our earlier award-winning SSI map by the same team.

We have provided this in two formats: detailed information on each of the 3 HAIs separately (see below) and the interactive map providing summary information on the 3 HAIs.

About The Data

The comparisons on this map take into account how hospital patient populations differ in their risk of infection. Hospital data were used when there was sufficient volume to perform statistical comparisons. Each hospital's infection frequency or rate is compared to a standard. Please use caution when making comparisons between hospitals. The frequency of infections for hospitals may differ due to differences in patients' infection risks not accounted for, or differences in clinical, infection control, or surveillance practices.

Infection Categories

Central line-associated bloodstream infections (CLABSI)

The map shows how CLABSI rates in patient care locations in each hospital compare to the California averages for 2011. Patient care locations are places in the hospital where patients with similar medical conditions receive similar medical care, and therefore should have similar risks for CLABSIs. The map summarizes, for each hospital, the numbers of patient care locations that were statistically lower, no different, or higher than state average rates and locations too small or too infrequently reported to be compared.

For additional details, please see the [Central Line-Associated Bloodstream Infections in California Hospitals, 2011 data release page](#). This page includes key findings, summary and detail CLABSI rate tables, and technical notes describing definitions, risk adjustment strategies, and statistical testing processes.

[Return to the Map](#)

Methicillin-resistant Staphylococcus aureus (MRSA) or vancomycin-resistant Enterococci (VRE) bloodstream infection (BSI)

The map shows how MRSA and VRE BSI rates compare (statistically lower, higher, or no different) with the average rate for California hospitals in the specific category to which that hospital belongs. The hospital categories reflect their patients' severity of illness and other factors that can affect their risk of infection, such as age and length of hospitalization, and the type of care that they receive. The categories are: major teaching, pediatric, long-term acute care, rehabilitation, critical access, prison, and community (all other) hospitals.

For additional details, please see the [Methicillin-Resistant Staphylococcus Aureus and Vancomycin-Resistant Enterococci Bloodstream Infections in California Hospitals, 2011](#). This page includes key findings, complete data tables on MRSA & VRE BSI and technical notes.

[Return to the Map](#)

Surgical Site Infections (SSI)

The map shows how the frequency of SSIs for a surgical procedure performed in a hospital compares (statistically lower, higher or no different) with the national average for that procedure. These frequencies are adjusted for factors affecting the risk of infection in each patient, using the standardized infection ratio (SIR) for each procedure produced by the CDC National Healthcare Safety Network (NHSN). The SSIs for the 9 surgical procedures displayed on the map include only serious infections involving tissues under the skin ("deep", organs ("organ space"), or implants (e.g. hip or knee replacement), and not superficial infections.

For additional details, please see the [Surgical Site Infections in California Hospitals, 2011](#). This page includes key findings, complete data tables on 29 surgical procedure categories and technical notes describing statistical testing and data reporting process.

[Return to the Map](#)

For information and tools on prevention, see [CLABSI](#), [MRSA BSI](#), [VRE BSI](#) or [SSI](#)

The Healthcare Associated Program invites you to share your questions or comments on this report, My Hospital by contacting the program at cdphhai@cdph.ca.gov

Health Facilities Consumer Information System (HFCIS)

HFCIS - Created for health care consumers and general public

The Office of Statewide Health Planning and Development (OSHPD)

The Office of Statewide Health Planning and Development

California Department of
Public Health

LEGEND

NO COMPARISON LOWER SAME HIGHER

Rates of infection per hospital are compared with the US national average for SSIs, and the California average for MRSA, VRE & CLABSI. Lower is better.

In contrast to the other maps, the CLABSI map icon colors indicate hospitals with at least one patient care location (PCL) lower, the same and/or higher than state averages (i.e., icons may be multicolored). For additional information on specific PCLs in hospitals, see [CLABSI](#).

The map has been optimized for use with Internet Explorer. Some features may not be fully functional in other browsers.

Version 3

About This Map

If no comparison is available for your hospital, please ask your healthcare providers about their infection rates. Hospitals are responsible for the quality and completeness of their data.

See full HAI reports and prevention information

The map has been optimized for use with Internet Explorer. Some features may not be fully functional in other browsers.

The Program invites you to share your questions or comments about this map by e-mail at cdphhai@cdph.ca.gov. The interactive map is funded by the California HealthCare Foundation.

LEGEND

NO COMPARISON LOWER SAME HIGHER

Infection testing rates in each hospital are compared with the California average for CLABSI and VRE BSI and with the US national average for CDI, MRSA BSI and SSI. Lower is better.

The CLABSI map icon may be multicolored if the hospital has patient care locations (intensive care units or other hospital wards) in more than one category, i.e. lower, the same and/or higher than state averages. For additional information on specific patient care locations in hospitals, see [CLABSI](#).

Health Facilities Consumer Information System (HFCIS)

[Health Facilities Consumer Information System](#)

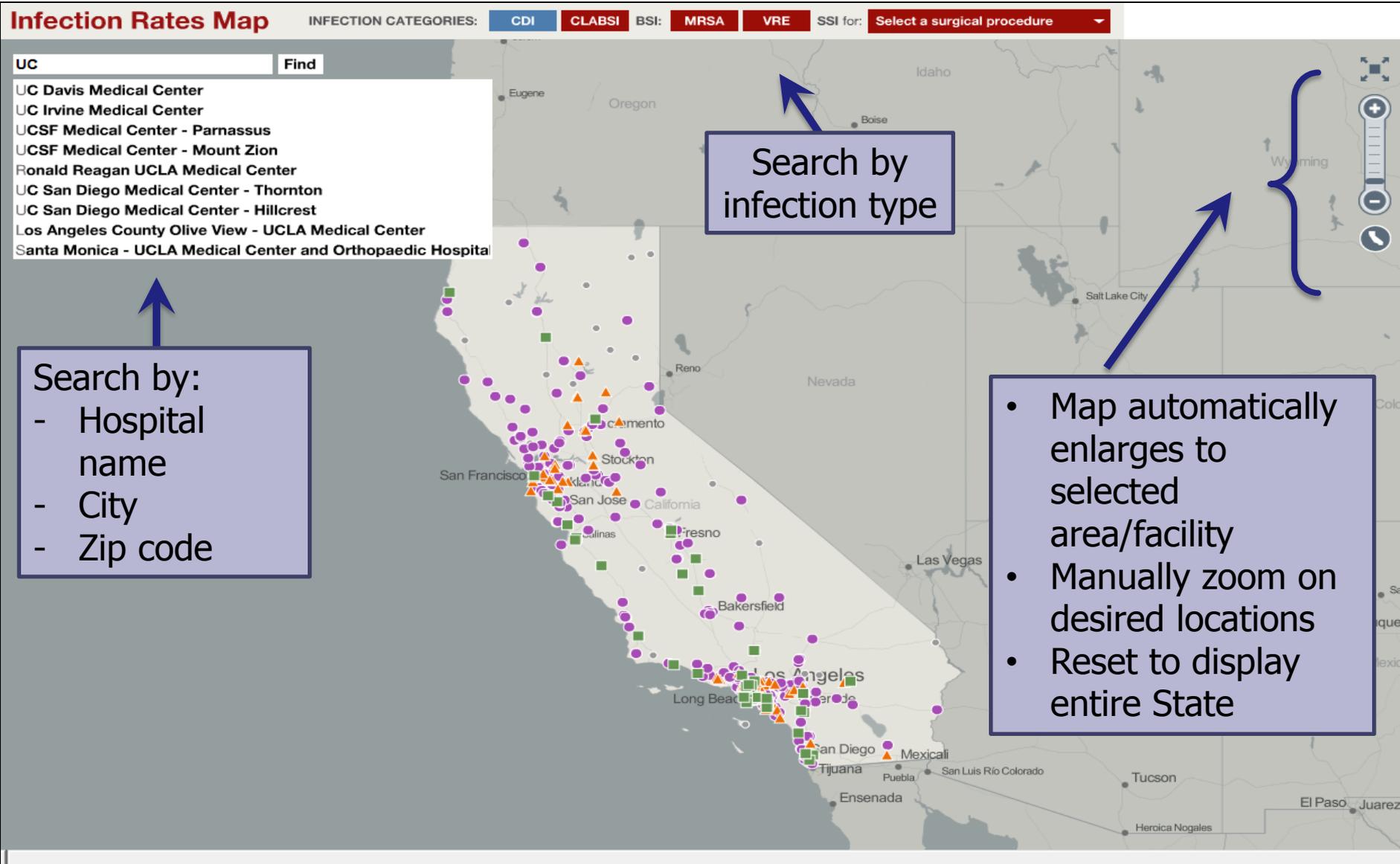
HAI Program Information

[HAI Program Home Page](#)

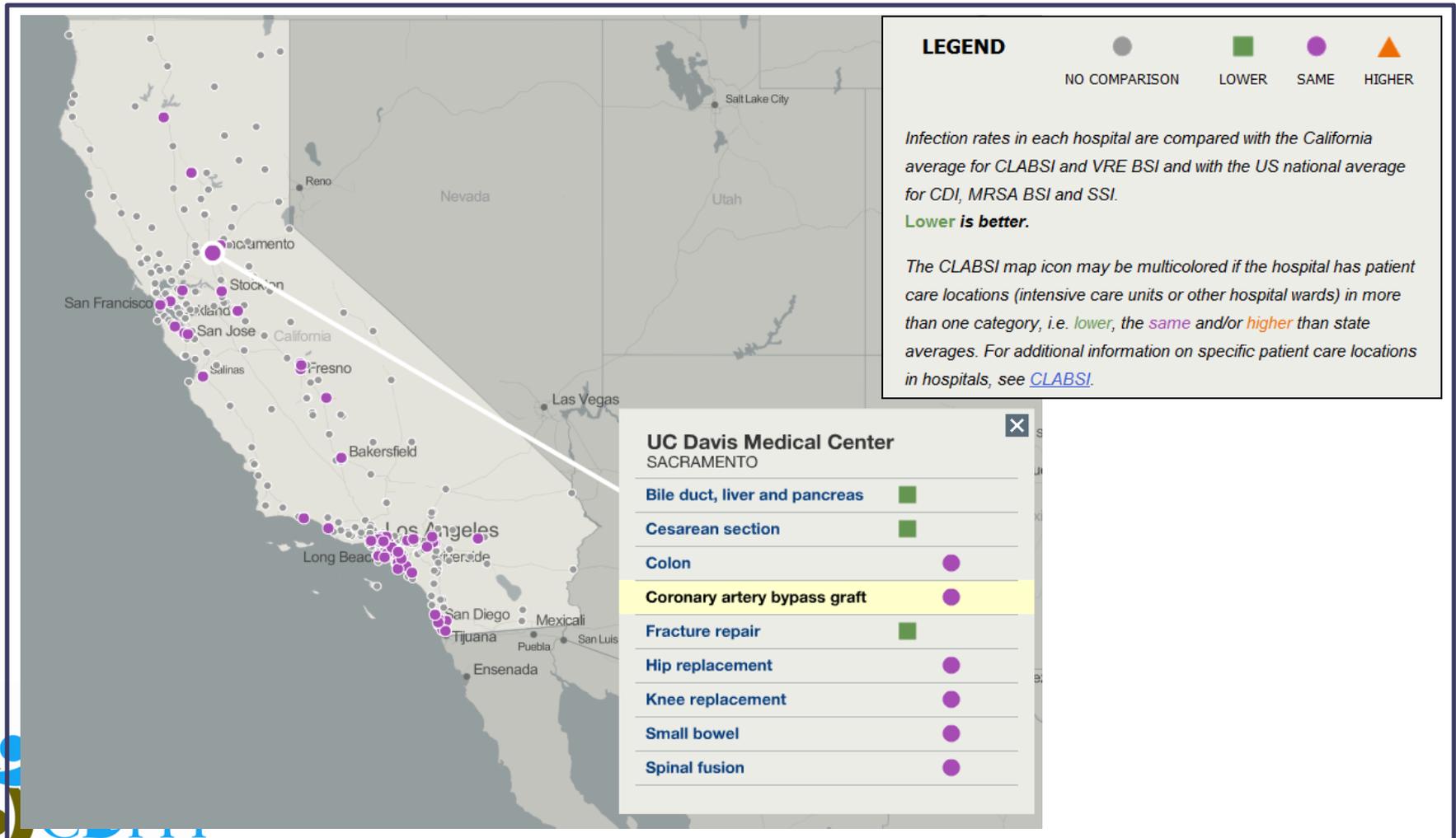
The Office of Statewide Health Planning and Development (OSHPD)

[The Office of Statewide Health Planning and Development](#)

"My Hospital - 411 Infections"



Map Display



HAI Program Plans for 2014

- Specific activities to evaluate and improve data quality, including external data validation and systematic reviews for outliers
- Targeting “Data for Action” to identify and consult with hospitals with high HAI incidence
- Publish one combined HAI report that includes
 - Hospital-specific profiles to view all HAI data types for a single hospital
 - Ability to view HAI prevention progress over multiple reporting years



Thank you!

Visit HAI Program at
www.cdph.ca.gov/HAI

