IBIS-PH Home

Indicator Profiles

Custom Query

Home

About IBIS-PH

About Public Health

Publications

Surve

Link:

Contact Information

Utah's Indicator-Based Information System for Public Health (IBIS-PH)

Utah Department of Health

Office of Public Health Assessment

Lois M. Haggard, Ph.D., Director



IBIS Capabilities

- Displays general static web site content with a consistent look and feel without having to code the entire web page.
- Displays Indicator Reports (aggregated data values with associated contextual data).
- Provides Web-based interface for distributed maintenance of Indicator Profile data.
- Provides realtime SAS dataset queries.
- Allows DOH to define the query interfaces without having to know the Web technologies (HTML, CSS, Javascript).

What IBIS Is

- Set of evolving free, open-source software (FOSS) applications based on the Web's request/response paradigm that runs on virtually all modern-day hardware and operating systems.
- Culmination of 14 years of experience and knowledge from hundreds of health data analysts and users.
- Simple in design, complex in details. The applications are data-driven using loosely-coupled interfaces which makes for a fairly agile system able to be extended as needed.
- A lot of work (getting it to where it is today, and for an agency to implement).

What IBIS Is NOT

- Canned, plug-in appliance type application.
 - Applications need to be "hand" installed and maintained with TLC.
- Effortless.
 - IT Support
 - IBIS Champion
 - Committed data stewards
 - SAS analysts
 - Some Web programming skills



What IBIS Is NOT

Silver Bullet

- IBIS applications have advantages, but for every design decision there are trade-offs.
- All systems will meet resistance somewhere, none will meet all users' needs.
- All systems will, however, require effort to implement. Different systems require different types of effort.



What IBIS Is NOT

- Free of software licenses
 - SAS must be licensed.
- Supported by a large team of developers and tool-free support technicians.
 - We hope to meet needs through the Community of Practice.





File Edit View

About IBIS-PH

Publications

About Public Health

Contact Information

http://ibis.health.utah.gov

Home

Indicator Reports

Community Profile

Dataset Queries

aps

Format this page for printing

Welcome to IBIS-PH; Utah's Public Health Data Resource

Welcome to Utah's Indicator Based Information System for Public Health (IBIS-PH). This site provides information on the health status of Utahns, the state of the health care system, and Utah public health activities. You can access <u>published reports</u>, <u>indicator profile reports</u>, and <u>query health data</u> directly. For an overview of the information available on this site, go to the "Contents and Usage" page.

The latest publications and data updates available on this site are listed below in the "Website Updates". The "News and System Enhancements" section contains the latest web site functional changes and any IBIS-PH related news.

Indicator Profile Report Updates

- Traumatic Brain Injury in Utah (updated: 7-31-07)
- Obesity (updated: 7-18-07)
- Overweight or Obese (updated: 7-18-07)
- 5 A Day Fruit (updated: 7-12-07)
- <u>5 A Day Vegetables</u> (updated: 7-12-07)
- Alcohol Consumption Binge Drinking (updated: 7-12-07)
- Blood Cholesterol: Doctor-diagnosed High Cholesterol (updated: 7-12-07)
- Blood Pressure: Doctor-diagnosed Hypertension (updated: 7-12-07)
- Fair/Poor Health (updated: 7-12-07)
- Health Status: Mental Health Past 30 Days (updated: 7-12-07)
- Health Status: Physical Health Past 30 Days (updated: 7-12-07)
- Physical Activity: Recommended Levels Among Adults (updated: 7-12-07)

more...

Query System Updates

2006 data added to BRESS (undated)

News and System Enhancements

- Site Navigation (updated: 5-15-2007)
- Balloon Popups (updated: 5-15-2007)
- Collapable Sections (updated: 5-15-2007)

Utah's IBIS-PH homepage

provides access to all areas of the website and information on

- new features. This is a standard
- home page template, but states
- adopting IBIS can modify the

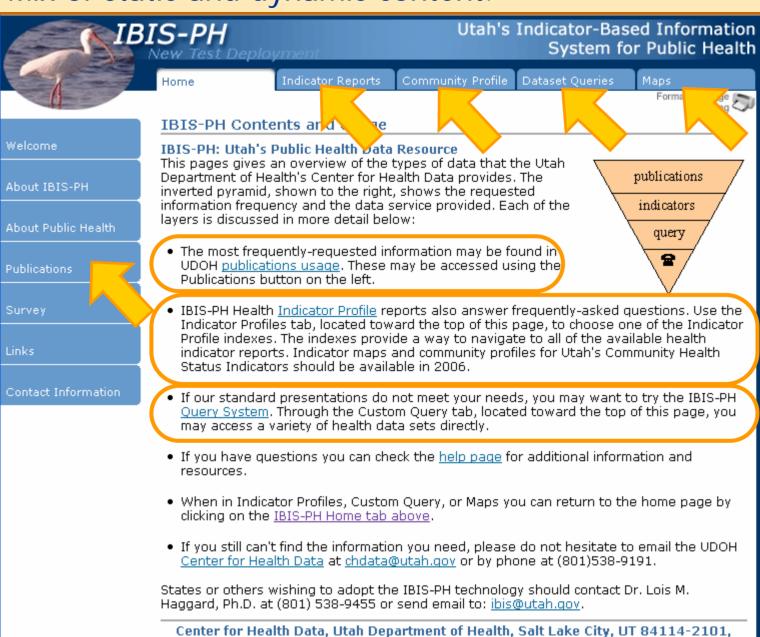
• Ut content and the look of the page.

Report: Utah 3rd Quarter 2006

 (7-2007)
 July Health Status Update: Adolescent Sexual Health (7-2007)

Utah's Health: An Annual Review.
 Special Supplement: Women's Health

Mix of static and dynamic content.



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Phone: (801)538-9191

Custom Data Query

- Allows users to query health data sets directly
- General audience
 - User-friendly GUI interface
 - Sound epidemiology
 - Help descriptions & instructions
 - Bullet-proof can't confuse or give misleading answers, can't allow users to do "stupid" things

The IBIS Query system allows members of the general public to access several public health data sets and generate query results based on their specifications.

Utah's Mortality Query Module

Path: IBIS-PH > Custom Query > Mortality

Query Module Overview

Overview

Click on either the Quick Selection or Advanced Selection bar to see a list of measures available. Use the hierarchical folder tree to navigate to the guery module that will meet your needs. To see folder contents, click on the folder icon. Clicking on the folder again will hide the menu folder contents. When you click on the text link, it will take you to the query module. For further explanation on the modules, click on the "Help" button to the right.

Use Quick selection to select a measure from the Mortality module from 1999 and later, by county and LHD. Use Advanced selection to select data from other years or to select data by small area.

Quick Selection (Click here for most commonly used measures)

Select from this list to guery deaths from 1999 and later by county and health district. For earlier years (1998 and before), small areas and maps, use Advanced Selection below.

Help Counts Crude Rates Help Age-adjusted Rates Help Leading Causes of Death by Count Help Leading Causes of Death by Crude Rate Help Leading Causes of Death by Age-adjus ates Help Average Age at Time of Death Help

Advanced Selection (Click here for Small Area, Years 1998 and before, Comparability Modified)

Population Estimates

Hospital & Emerge c

Birth, Fetal Death & Infant Death

Mortality

Department

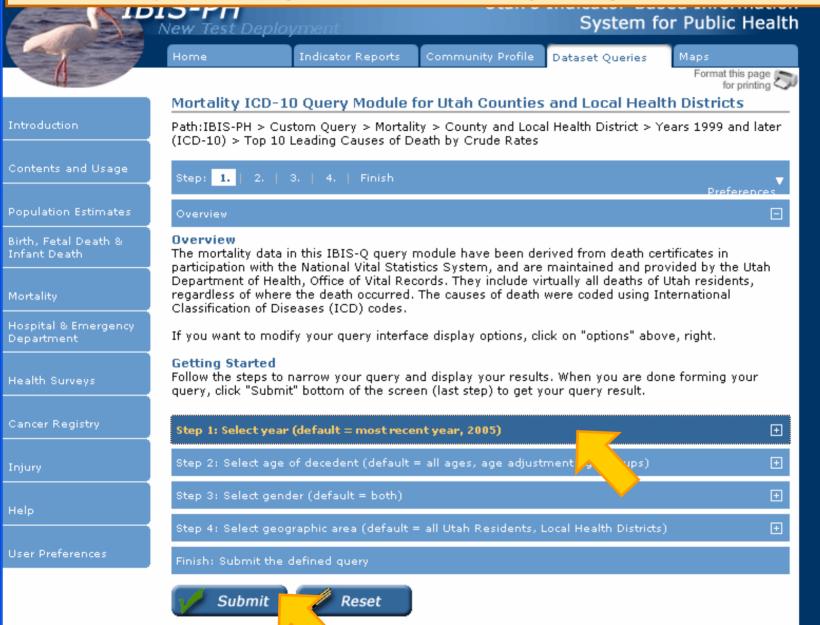
Health Surveys

Cancer Registry

Injury



3. Use "QueryBuilder" page to select filters and grouping variables and submit query.



javascript:section.toggle('1');

Results include query filter criteria, a data table...

IBIS-PH
New Test Deployment

Utah's Indicator-Based Information System for Public Health

lome Indicator

Indicator Reports

Community Profile

Dataset Queries

Maps

for printing

Modify Query

Start New Query

Graphical Charts

Output to Excel

Show XML

Query Results for Mortality	ICD-10 Query	Module for t	Jtah C	ounties a	and L	.ocal
Health Districts						

Path:IBIS-PH > Custom Query > Mortality > County and Local Health District > Years 1999 and later (ICD-10) > Top 10 Leading Causes of Death by Crude Rates

Data Filter Criteria

Geographic Area:

Data List

Single Years: 2005

Utah residents Utah residents

Data Grouped By: Top 10 Causes of Death

Top 10 Causes of Death	Number of Deaths	Number in the Population	Top 10 Leading Causes of Death by Crude Rate, Deaths Per 100,000 Population	95% CI LL	95%CI UL
Diseases of heart	2,845	2,528,926	112.5	108.37	116.63
Malignant neoplasms	2,512	2,528,926	99.33	95.45	103.21
Cerebrovascular diseases	781	2,528,926	30.88	28.72	33.05
Unintentional injuries	715	2,528,926	28.27	26.2	30.34
Chronic lower respiratory diseases	592	2,528,926	23.41	21.52	25.29

Done





...and query meta-data.

Modify Query

Start New Query

Graphical Charts

Output to Excel

Show XML

pneumonia	000	2,020,720	10,00	11.04	14,40
Parkinson's disease	198	2,528,926	7.83	6.74	8.92

Data Notes

ICD Stands for International Classification of Diseases. It is a coding system maintained by the World Health Organization and the U.S. National Center for Health Statistics used to classify causes of death on death certificates and diagnoses, injury causes, and medical procedures for hospital and emergency department visits. These codes are updated every decade or so to account for advances in medical technology. The U.S. is currently using the 10th revision (ICD-10) to code causes of death. The 9th revision (ICD-9) is still used for hospital and emergency department visits.

Top 10 leading causes of death are generated from NCHS 50 leading causes.

Data Sources

Utah Death Certificate Database, Office of Vital Records and Statistics, Utah Department of Health; Population Estimates: Governor's Office of Planning and Budget, 2005 Baseline Economic and Demographic Projections

Data Issues

Death certificates in Utah are required to be filed by funeral directors. Funeral directors obtain demographic information from an informant, a close family member of the decedent. The cause of death is certified by the decedent's physician or the physician that attended the death. Accidental and suspicious deaths are certified by the Medical Examiner. Death certificate data go through extensive edits for completeness and consistency. The Office of Vital Records and Statistics (OVRS) does annual trainings for funeral directors and local registrars.

When death certificates are received the cause of death literals are keyed into software locally by Office of Vital Records and Statistics (OVRS), then shipped to NCHS where they are machine coded into ICD-10 codes. NCHS returns the ICD-10 codes to OVRS where the death records are updated.

Time of Query

These data were gueried on: Fri, 1 Jun 2007 01:55:11 GMT

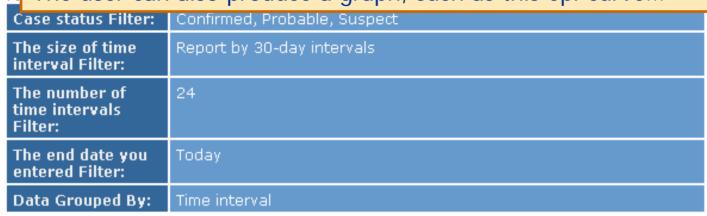
Тор

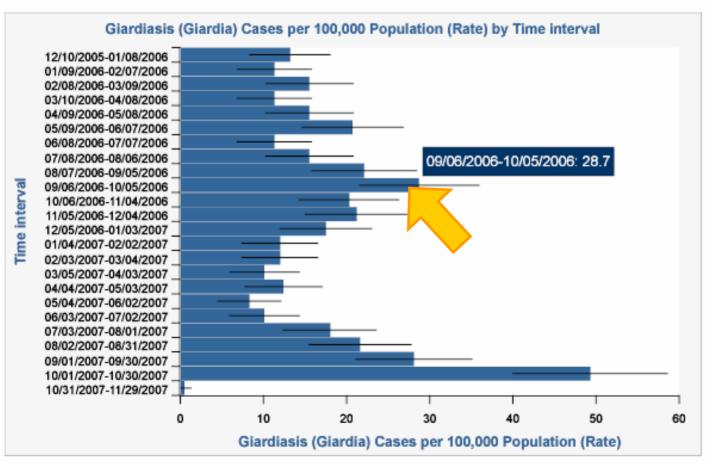
Office of Vital Records and Statistics, Center for Health Data, Utah Department of Health,
Salt Lake City, UT 84114-1012, Telephone: 801-538-6843, Website:
http://health.utah.gov/vitalrecords/, Email: vrequest@utah.gov

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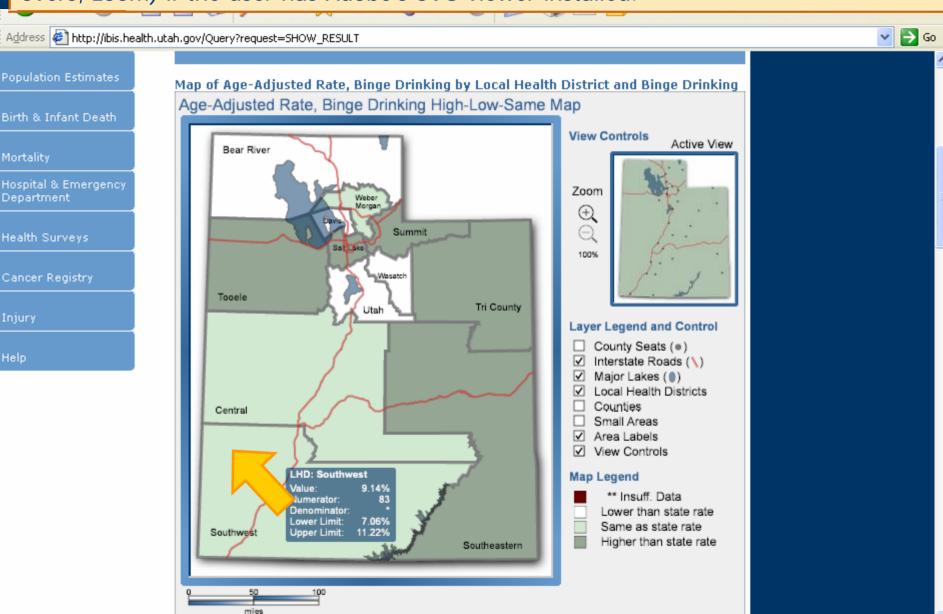


The user can also produce a graph, such as this epi-curve...

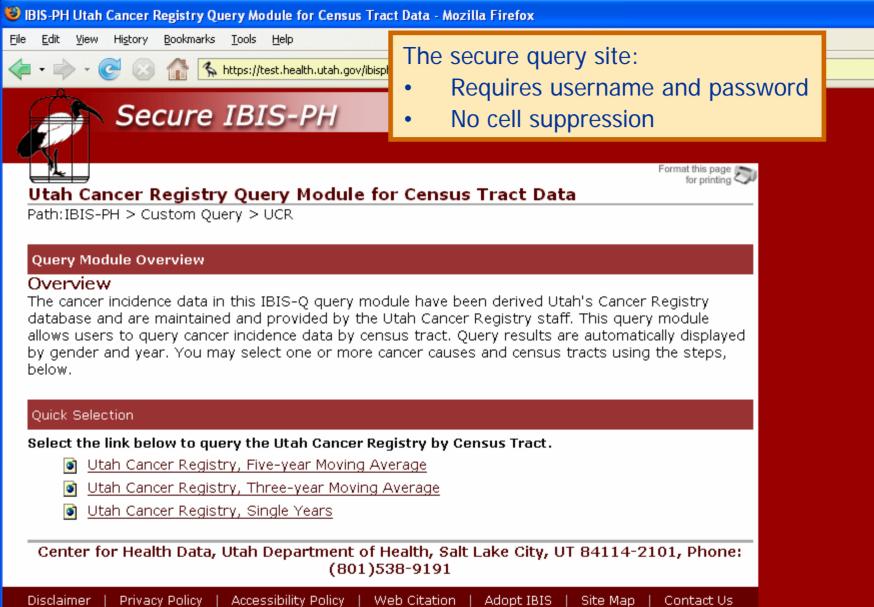




...or map views generated from the data. Graphs and maps are interactive (mouse-overs, zoom) if the user has Adobe's SVG viewer installed.



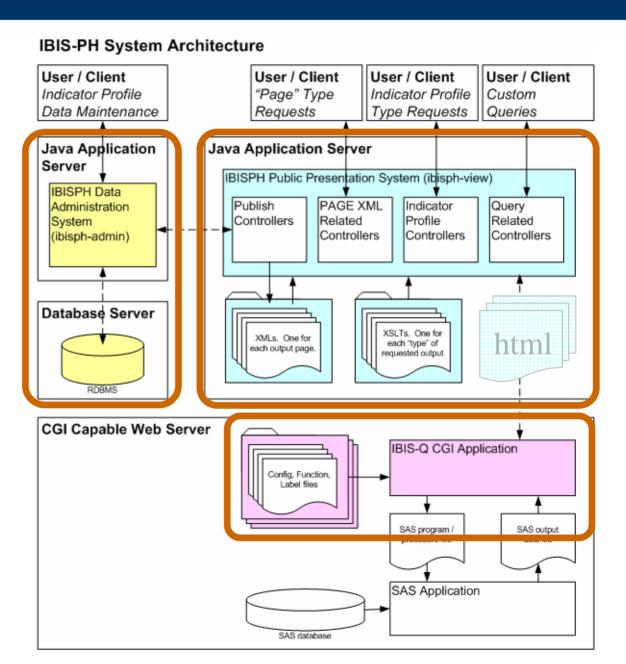
Internet



Components of the IBIS Software

IBIS-Admin

IBIS-View

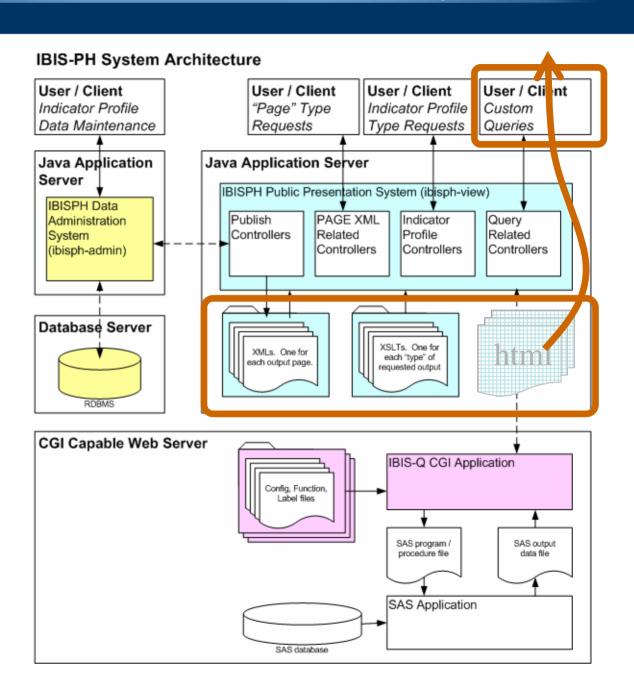




1. User requests query interface screen

IBIS-Admin

IBIS-View

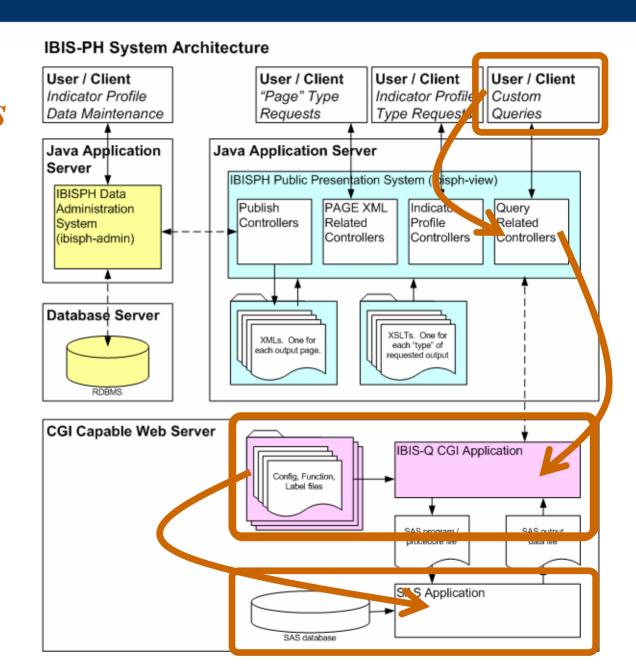


2. User submits query, IBIS-View sends URL to CGI

3. CGI calls SAS

IBIS-Admin

IBIS-View

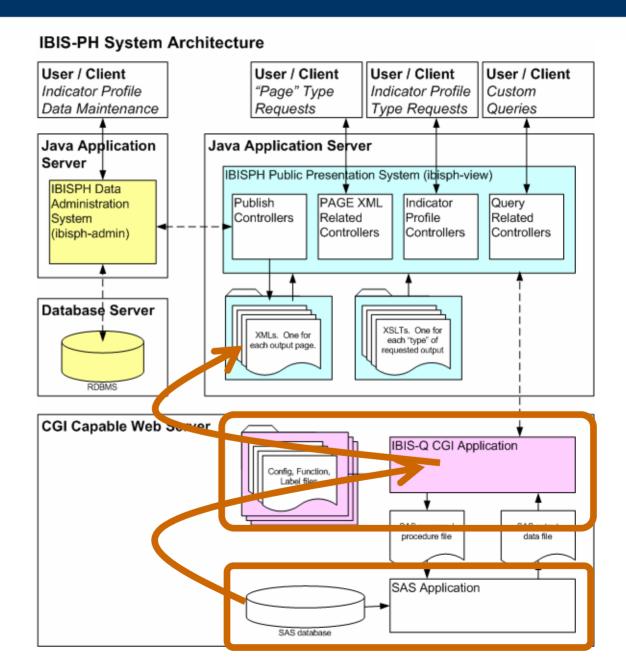


4. SAS runs, sends query result to CGI

5. CGI
formats, sends
XML to View
System

IBIS-Admin

IBIS-View

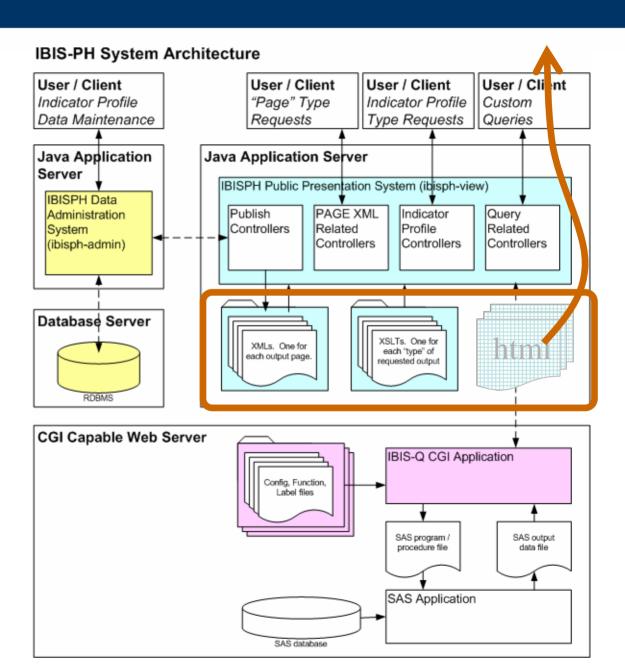




6. View
system
transforms
XML, sends
results page
to user

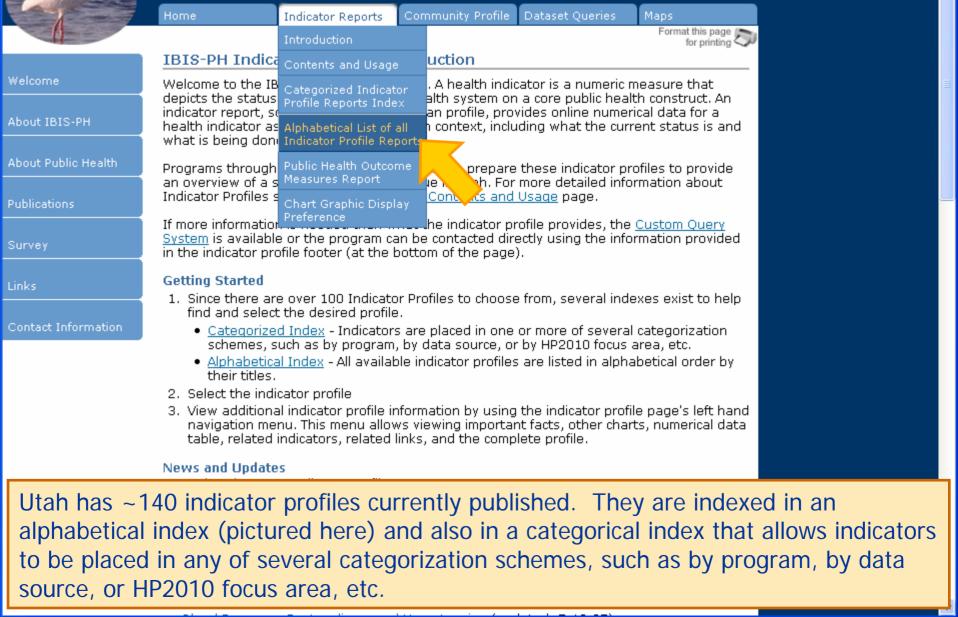
IBIS-Admin

IBIS-View



IBIS Indicator Reports

- Allows users to view a report of data that have already been tabulated.
- For more novice users, easier, more user-friendly.
- Webpage CONTENT MANAGEMENT and REPORT GENERATION system, not a query system.

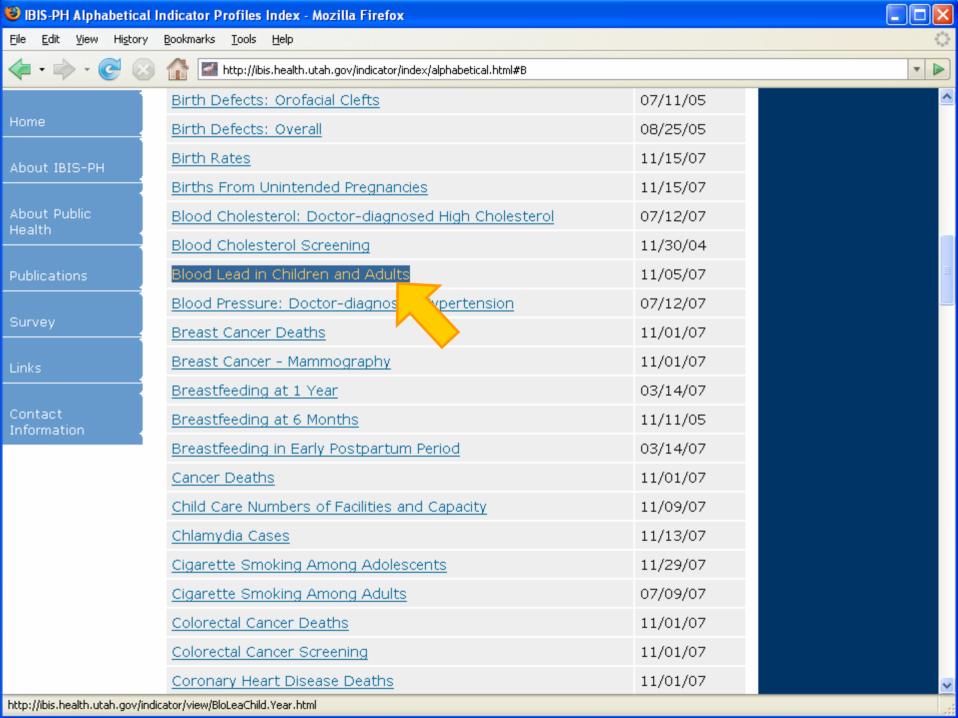


Utah's Indicator-Based Information

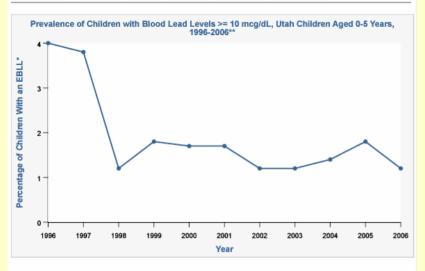
System for Public Health

🐸 IBIS-PH Indicator Reports Introduction - Mozilla Firefox History Bookmarks Tools

File Edit



Indicator Profile of Blood Lead in Children and Adults



Data Notes

*EBLL = Elevated Blood Lead Level (>= 10 mcg/dL). **2006 = Provisional Data. Prevalence is calculated as (number of cases with an elevated blood lead level/number of persons tested) x 100. Prior to 1996, results on children were not collected, therefore, this calculation was not made for those years.

Data Sources

Utah Blood Lead Registry; Environmental Epidemiology Program, Division of Epidemiology and Laboratory Services, Utah Department of Health;

Other Views

Utahns Aged 18 and Older, 1992-2005

Definition

Children: Percentage of children tested, aged 0 through 5 years with blood lead levels of 10 mcg/dL or greater in this age group.

Adults: Percentage of adults aged 18 and over tested with blood lead levels of 25 mcg/dL or greater and 40 mcg/dL or greater in this age group.

How We Calculated the Rates

HOW WE Calculated the Rate

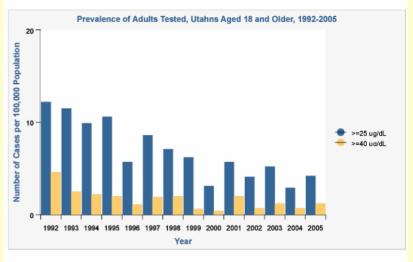
Numerator: Children: Total number of children tested, aged 0 through 5 years with a blood lead level of 10 mcg/dL or greater. Adults: Total number of adults aged 18 and over tested with a blood lead level of 25 mcg/dL or greater and 40 mcg/dL or greater.

Denominator: Children: Total number of children aged 0 through 5 years tested for blood lead. Adults: Total number of adults aged 18 and over tested for blood lead.

Why Is This Important?

Lead poisoning is the most significant and prevalent disease of environmental origin among children living in the United States. Despite considerable knowledge and increased screening and intervention efforts, lead exposures remain prevalent. Environmental lead is a toxic substance that is affecting the growth and development of up to one million U.S. preschool children today, with effects ranging from learning disabilities to death. High levels of lead can cause many health problems by damaging the brain, nervous system, and kidneys. Lead poisoning can cause decreased intelligence, behavioral and speech problems, anemia, decreased muscle and bone growth, poor muscle coordination, and hearing damage.

Indicator Profile of Blood Lead in Children and Adults



Data Notes

Prevalence is calculated as (number of cases with an elevated blood lead level/number of individuals employed in non-agricultural jobs) \times 100,000. Prevalence for 1997 was re-calculated based on final population data. 1998 employment data is estimated from the growth rate during the previous year.

Data Sources

Utah Blood Lead Registry; Environmental Epidemiology Program, Division of Epidemiology and Laboratory Services, Utah Department of Health;

Other Views

Utah Children Aged 0-5 Years, 1996-2006**

Definition

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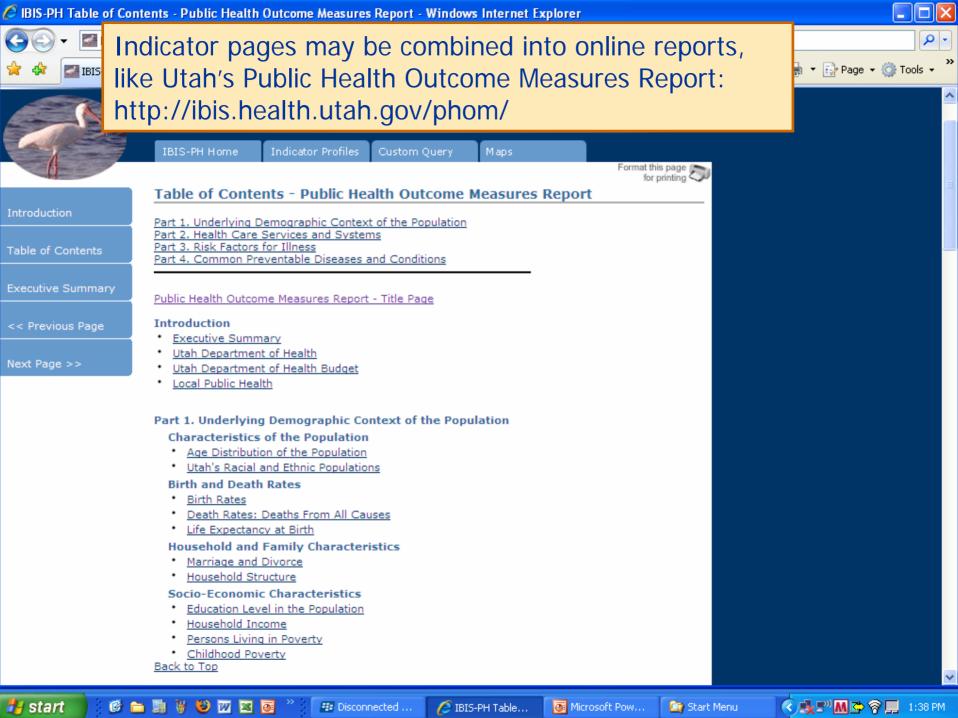
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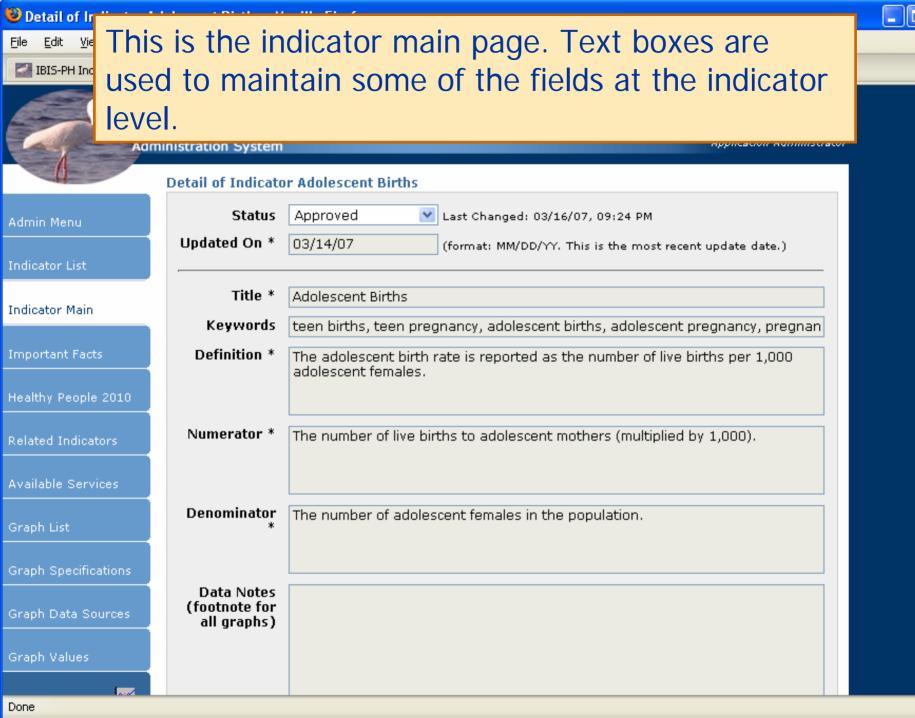
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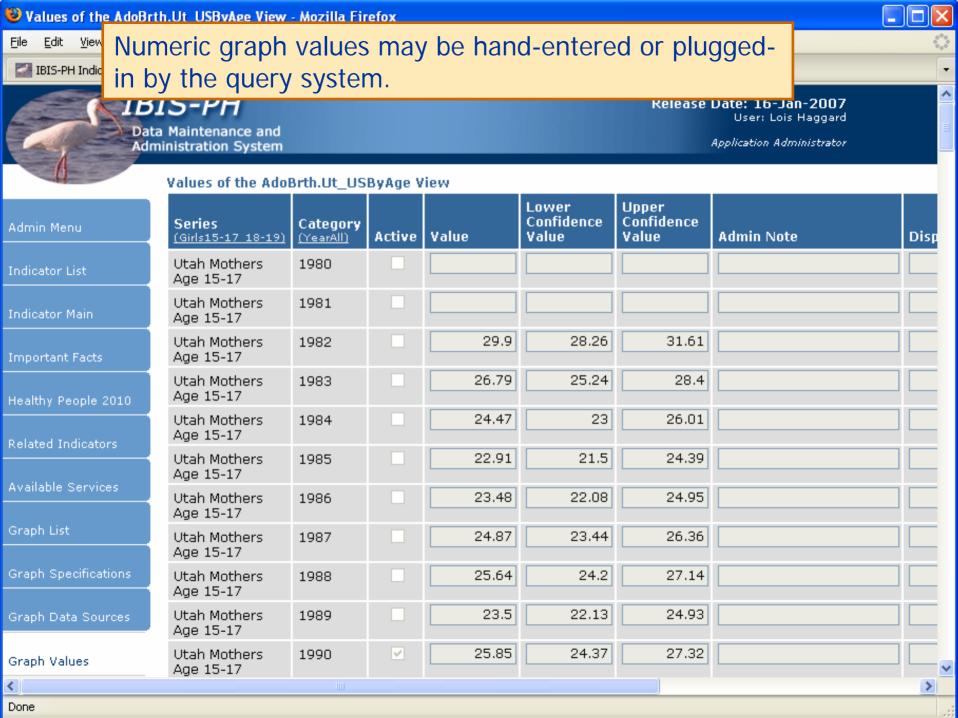
Program staff from across the department use a website, called the "IBIS Admin site" to access the database and modify data records. Once an indicator has been set up, the maintenance is minimal, generally limited to annual update of numeric data and modification of text to reflect those changes.

IBIS Admin Site

- GUI Interface for DB Access
- Used by busy folks who do not necessarily have website publishing or DB data entry skills (with no interest in acquiring them)
- Must be user-friendly, follow good IS rules/heuristics





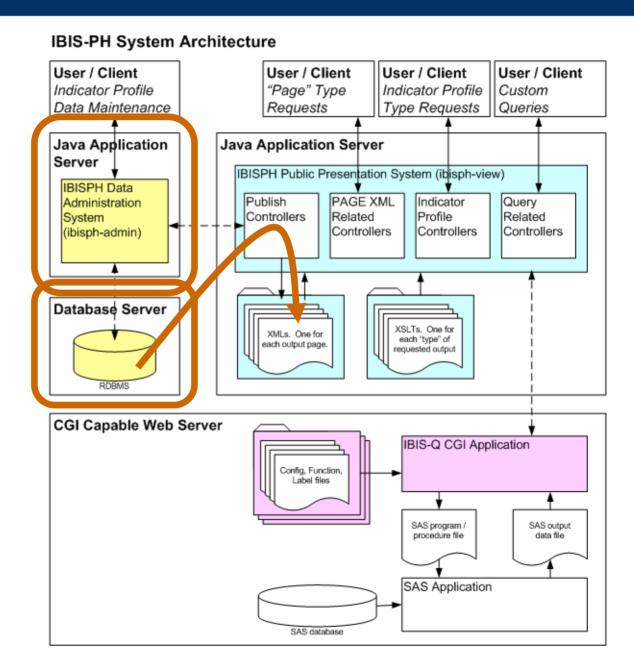


1. SMEs use IBIS-Admin to enter page content into DB

2. Page content published to XML

IBIS-Admin

IBIS-View

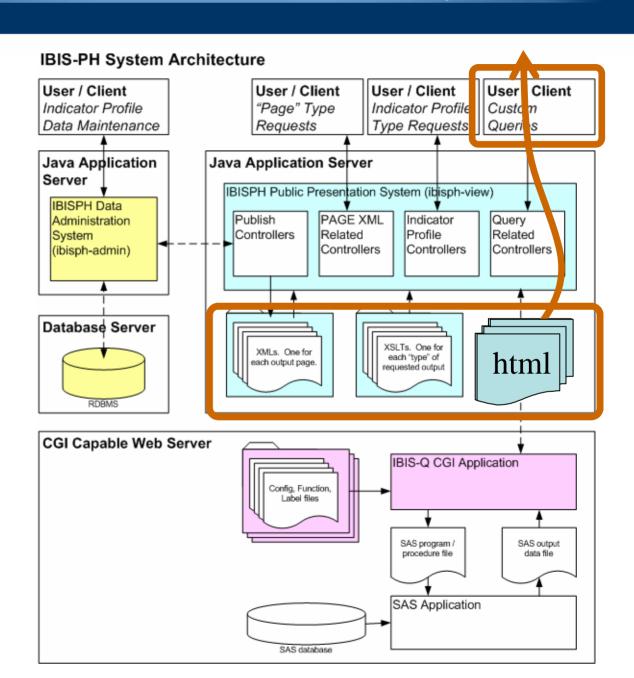


3. User requests indicator page

4. View system transforms XML, sends to user

IBIS-Admin

IBIS-View



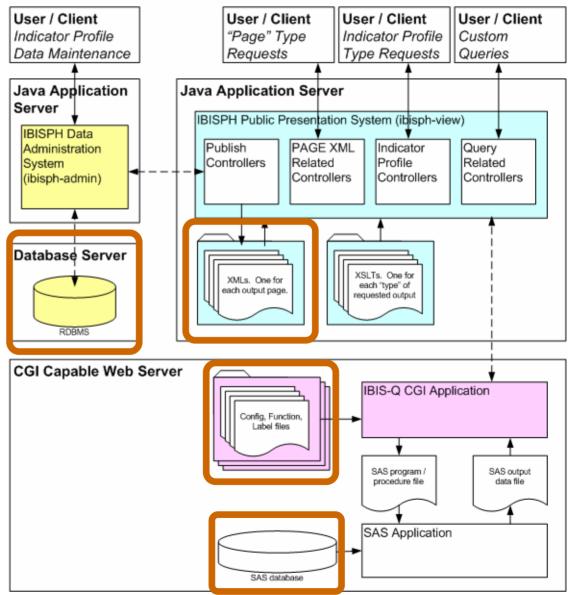
Files Maintained by PH Staff

IBIS-Admin

IBIS-View

IBIS-Query

IBIS-PH System Architecture





IBIS-PH stands for Indicator-Based Information System for Public Health. This site provides access to all of the IBIS-PH work products. In general, the IBIS-PH Community of Practice consists of any organization or individual who is interested in the dissemination of data and information for public health assessment. **Use of this site and/or the content contained within is subject to this disclaimer.**

The goal of the IBIS-PH Community is to share ideas, expertise, and information on how to

- · collect and maintain public health data,
- · analyze the data,
- · present the data to the public,
- · improve public health informatics in general

http://www.ibisph.org/trac/

The Product Management portion of the IBIS PH Community site provides • Project Management of the Tracking of bugs and tast here.

Access to all versions of implies agreement to the
 A WIKI page engine that

http://www.ibisph.org

of IBIS-PH software

Other IBIS-PH Community of Practice web resources include

- Detailed System/Application Documentation. This includes how to install and support the applications, developer documentation, and content management user documentation.
- Discussion Forums. vBulletin is a web based application which allows individuals to share knowledge and ideas like dealing with health data, SAS programming, web development, and IBIS-PH application specific topics.

About IBIS-PH and the Trac Application

This page is part of the IBIS-PH WIKI and is hosted within the "Trac" application. As all Wiki pages, this page is editable, this means that you can modify the contents of this page simply by using your web-browser. Simply click on the "Edit this page" link at the bottom of the page. WikiFormatting will give you a detailed description of available Wiki formatting commands.

"trac-admin yourenvair initeny" created a new Trac environment, containing a default set of wiki pages and some sample data. This newly created environment also contains documentation to help get things started with the IBIS-PH project.

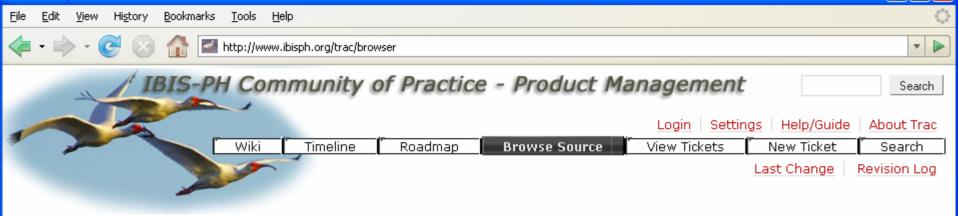
Please use the trac-admin to configure - Trac to better fit IBIS-PH, especially in regard to components, versions and milestones.

TracGuide is a good place to start.

Trac Starting Points

- TracGuide -- Built-in Documentation
- ➡ The Trac project -- Trac Open Source Project
- Trac FAQ -- Frequently Asked Questions
 TracSupport -- Trac Support

For a complete list of the local wiki pages, see TitleIndex



root

				View revision:
Name A	Size	Rev	Age	Last Change
□ branches		17	1 week	root: additional directories
□ releases		20	1 week	lois: Initial seeding for IBIS-Q CGI executables
□ tags		1	2 weeks	root: initial repository
□ trunk		35	1 hour	tong: Add mortality to pop_denominator.xls

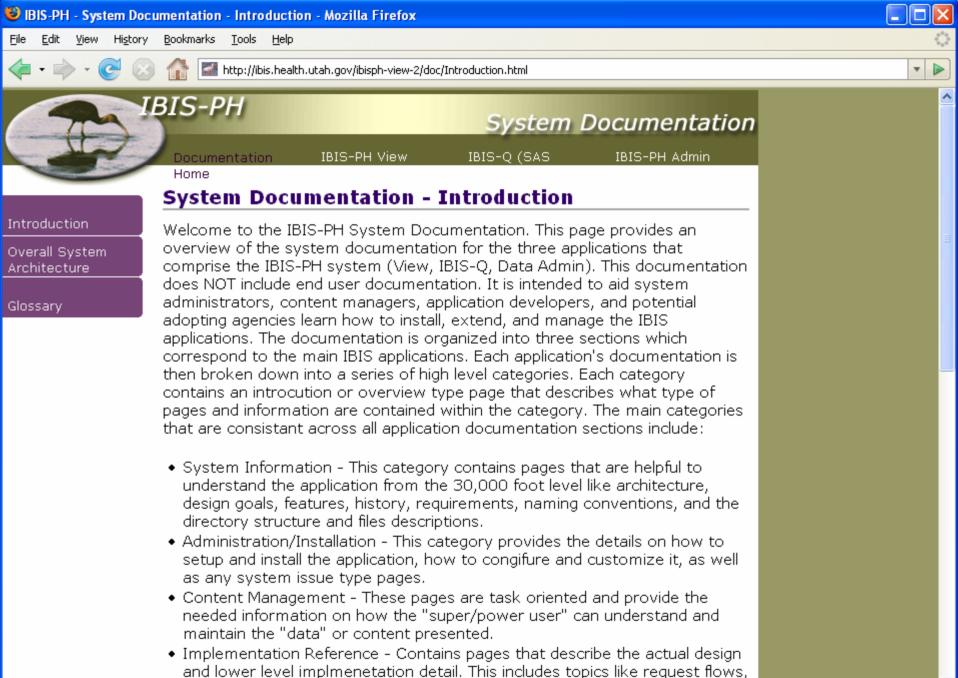
Note: See TracBrowser for help on using the browser.

View changes...

🥮 / - ibisph - Trac - Mozilla Firefox



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how errors are handled. URL options etc.

v



Thank you!

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