

California Department of
Public Health



Building Bridges: Reducing Chronic Disease in California

April 29-30, 2008

EXECUTIVE SUMMARY

Prepared By: Beth Smith
Public Sector Consulting

Meeting Purpose

The California Health and Human Services Agency (CHHSA) received a grant from the Robert Wood Johnson Foundation to participate with the national Common Ground Program. The Common Ground Program is an initiative to transform public health information systems through more effective and efficient business process, increased awareness of informatics principles and collaborative requirements, and informed stakeholders at all levels of government.

The CHHSA vision is to ensure broad systematic access to standards-compliant, secure, geographically-referenced information about Californians affected by chronic disease. Over the long term, the goal is to create a portal for chronic disease data.

As an important step to achieve the above objectives, facilitated sessions were conducted with CHHSA programs on April 29 and 30, 2008. The programs represented are currently working on or support existing web-based query systems and data linkage processes. The purpose of the facilitated sessions was to understand the existing systems and processes in place today as well as the opportunities for working together toward a common vision.

Executive Overview

Executive Summary

Two facilitated sessions were held on April 29 and 30, 2008 to discuss common activities within CHHSA around web-based data query systems and data linkages. Representatives from the California Department of Public Health, Department of Health Care Services, and Office of Statewide Health Planning and Development were in attendance.

The first session focused on the wide variety of web-based query systems within CHHSA programs. Each program representative was interviewed as to the details of its query system, including data used, targeted audience, relevant regulations, system development, and sustainability. The pros, cons and requirements of having an integrated, "in house" Web query system were discussed. In addition, issues of evaluating the effectiveness and audience reach of query systems were also discussed.

The second session focused on data linkage activities within programs. Each program representative was interviewed as to what data linkage activities the program was currently involved in, including data used, data linkage processes, purpose of linking, relevant regulations, and challenges to linking. The group discussed the merits of data linkages, how risks should be communicated, and how a centralized data linkage service might operate. All agreed that data linkages could greatly help achieve program objectives, but that the process was complex and difficult to maintain. There was overwhelming support for a shared architecture to support data linkages.

Participants agreed that the sharing of information was greatly beneficial. It is hoped the sessions will help spur further collaboration on these activities in the future.

Web-Based Data Query Systems Summary

The following Table 1 summarizes data sources and technology used for the existing Web-based Query Systems represented at the meeting. The first column is the name of the Program and the second column is the name of the Data Query System. Column three conveys whether the system is hosted with the State IT Department or not. The table also provides information on the data sets and technology used. Finally, the web address is provided for easy reference.

TABLE 1

Program Name	DQS Name	State IT Dept Hosted?	Summary of Data Used	Data Storage & Query Technology	Web Address
California Cancer Registry	Cancer Inquiry System	No	Death Statistical Master File SEER*Stat Database	unknown	www.cancer-rates.info/ca/
California Diabetes Program	DIRC	No	Events, Forum, Resources, Partner Profiles	None It is text query, not data	www.caldiabetes.org
Cancer Prevention & Nutrition Section	Network for a Health Change GIS Viewer	No	Over 50 sources, specific to nutrition, demographics, and locations	SQLServer ArcSDE ArcIMS	www.cnngis.org
Environmental Health Investigations Branch	Pesticide Web Mapping Service (PILOT)	No	Pesticide Use Report	SQLServer ArcSDE ArcIMS	www.ehib.org/tool_0ld.jsp?tool_key=18
Epidemiology & Prevention For Injury Control	EPICenter	Yes	Death Statistical Master File Hospital Admissions	SAS IntrNet	www.applications.dhs.ca.gov/epicdata/
Maternal & Child Health	Improved Perinatal Outcomes Data Reports (PILOT)	No	Birth & Death Statistical Master Files, Patient Discharge Data (OSHPD) Geographic Boundaries	SAS	http://ipodr.org/index.html
Office of Health Information & Research	Vital Statistics Query System	Yes	Birth & Death Statistical Master Files Current Calif Population (from DOF)	SQLServer	www.applications.dhs.ca.gov/vsq/
Tobacco Control Section	C-STATS – County & Statewide Archive of Tobacco Statistics	No	Calif Tobacco Survey Calif Student Tobacco Survey	Access ColdFusion	www.cstats.info
California Health Interview Survey	AskCHIS	No	California Health Information Survey data	SQLServer SAS ASP	www.askchis.org
Office of Statewide Health Planning and Development	California Healthcare Atlas	Yes	Large data warehouse includes patient origins, treatments, hospital financials, healthcare facilities, utilization data	SQLServer ArcSDE Oracle	www.oshpd.ca.gov (data and reports tab)

The following Table 2 summarizes the public health purpose and audience of the same Web-based Data Query Systems.

TABLE 2

Program Name	DQS Name	Main Audience	Major Uses (Public Health Purpose)
California Cancer Registry	Cancer Inquiry System	<ul style="list-style-type: none"> Public Local and State Health Officers Researchers Health Professionals Cancer Control Organizations and Programs 	<ul style="list-style-type: none"> To describe geographic distribution of cancer by county in California To describe the distribution of cancers throughout California among various racial and ethnic groups To examine changes in cancer patterns over time
California Diabetes Program	DIRC	<ul style="list-style-type: none"> California organizations that work in the area of Diabetes prevention and control 	<ul style="list-style-type: none"> To provide a method for Diabetes-related organizations to exchange information with each other To provide a means for partners post their own information, resources, models and reports To be an online community for everyone involved with Diabetes prevention and control
Cancer Prevention & Nutrition Section	Network for a Health Change GIS Viewer	<ul style="list-style-type: none"> Grantees of the USDA-funded nutrition and physical activity health promotion and education activities The eligible population receiving food stamps in California 	<ul style="list-style-type: none"> To determine eligible areas or sites to hold promotional activities and share media materials. Eligible sites are census tracts where at least 50% of the population is at <185% of poverty level.
Environmental Health Investigations Branch	Pesticide Web Mapping Service (PILOT)	Limited users, as it is a pilot. The intended audience is <ul style="list-style-type: none"> Public Researchers Policy Makers 	<ul style="list-style-type: none"> It is used to visualize spatial and temporal distribution of pesticide usage in California
Epidemiology & Prevention For Injury Control	EPICenter	<ul style="list-style-type: none"> Public County Health Departments Media Public Health Professionals Physicians Universities Law Enforcement 	<ul style="list-style-type: none"> The major uses are largely unknown as the major audience is external to the program. The intent of the system was to provide access to current injury data to minimize the workload of EPIC staff who previously received data requests in person
Maternal & Child Health	Improved Perinatal Outcomes Data Rpts (PILOT)	<ul style="list-style-type: none"> Local MCAH staff 	<ul style="list-style-type: none"> To assess and monitor perinatal indicators To support the need for perinatal health information at the local level
Office of Health Information & Research	Vital Statistics Query System	<ul style="list-style-type: none"> Public County Health Data Managers Media Epidemiologists Universities 	<p>The system is used to understand:</p> <ul style="list-style-type: none"> Death rates and disparities by race, ethnicity, sex and age groupings Deaths by specific causes Birth rates by age of the mother Statistics on low birth weights and prenatal care Statistics on infant death rates

Program Name	DQS Name	Main Audience	Major Uses (Public Health Purpose)
Tobacco Control Section	C-STATS County & Statewide Archive of Tobacco Statistics	<ul style="list-style-type: none"> • Public • Local Health Department • Researchers • Health Advocates working on Tobacco Control, 	<ul style="list-style-type: none"> • Preparing local tobacco control work plans to obtain funding • Issuing tobacco control related press releases • Developing local tobacco control policies • Making presentations to local government
California Health Interview Survey	AskCHIS	<ul style="list-style-type: none"> • Community Advocates • Local Health Clinics • Community Non-Profit Organizations • Researchers • Legislators and Policy Makers • Journalists • Students • Health Care Industry, 	<ul style="list-style-type: none"> • CHIS is the richest source of data for some very specific programs, such as support of Native Americans • Others use the data one time, occasionally, or even daily • Two thirds of the queries are county level, one third state level • 95% of the queries use 5% of the variables
Office of Statewide Health Planning and Development	California Health Care Atlas	<ul style="list-style-type: none"> • Public • Researchers • Policy Makers • Health Care Industry 	<ul style="list-style-type: none"> • Identifying and finding access to care • Healthcare indices and key healthcare delivery information • Open access for a wide variety of uses within the Program

Data Resources and Linking Processes Summary

The following Table 3 outlines the Program name, whether the data linkage process is performed by Program staff or not, the data sets used for the linkage, the essential fields for linking, and the technology used. Specific linking software used by the Programs include Integrity, LinkPro, and LinkPlus.

TABLE 3

Program Name	By Pgm Staff?	Summary of Data Used	Essential Fields	Data Storage & Linking Technology
California Cancer Registry	Yes No	Link One: Calif Death Certificate Records File, Social Security Death Master File, OSHPD Data, Cal Voter Data Link Two: DMV Data, SSA EPI, NDI, NCOA, CMS Data	First and Last Name, SSN, Date of Birth	SAS Integrity
Cancer Detection Section	Yes	CDP Every Woman Counts Enrollment data CDS 1-800# client call data	Pgm Recipient ID, Mothers maiden name, Providers patient #, First/ middle/ last name, Date of Birth, SSN, Address, Phone	SQLServer Visual Basic
Cancer Prevention and Nutrition Section	Yes	GIS Link: Retail Food Outlets, Census Data, CHIS CDE Link: free/reduced prices lunch database with California FSNE and Power Play participating schools database	GIS Link: most narrow geo IDs- for point data, address to link to latitude and longitude OR census block, census tract, county, zip code CDE Link: data is linked by County-District-School	SQLServer ArcSDE ArcIMS Access
Environmental Health Investigations Branch	Yes	This is a Framework for linking called "Record Level Spatio-Temporal Integration", 2 services available: <ul style="list-style-type: none"> Traffic Linkage Service Agricultural Pesticides Service 	Space (latitude, longitude, radius OR address) Time Period	SQLServer ArcSDE
Epidemiology & Prevention For Injury Control	Yes	Calif Death Certificate Records (DC) & Supplementary Homicide Rpts (SHR) SHR & DC to Violent Death Reporting System Inpatient & Emergency Dept Reports	Victims name, age, SSN, Date of incident or death, county of residence or occurrence	SAS Probabilistic Matching Software
Tobacco Control Section	Yes	Calif Adult Tobacco Survey, Calif Tobacco Survey, Smokers 1-800 Helpline data, Media Placement date, Program data, Survey of illegal Tobacco Sales to Minors, Tobacco Industry Events	County or Media Market	SAS
Medi-Cal	No	Birth and Death Vital Statistics with Medi-Cal eligibility Birth and Death Vital Statistics with Medi-Cal beneficiaries with HIV State Hospital Discharges (SHD) with Medi-Cal eligibility SHD with Medi-Cal inpatient claims	SSN, gender, date of birth, additional variables	SAS LinkPro

Program Name	By Pgm Staff?	Summary of Data Used	Essential Fields	Data Storage & Linking Technology
Office of Statewide Health Planning & Development	No	Death Vital Statistics with Patient Discharges Birth Vital Statistics and Birth Cohort File with Patient Discharges	SSN, gender, Birth date, race/ethnicity, and zip code	SAS Oracle LinkPlus

The following Table 4 outlines the Program name and the public health purpose and usage of the linked data.

TABLE 4

Program Name	Main Public Health Purpose of Data Linkages	Major Uses of the Linked Data
California Cancer Registry	<ul style="list-style-type: none"> To improve patient follow-up rates in order to monitor survival among cancer patients To improve and enhance data quality 	<ul style="list-style-type: none"> To meet national data standards for patient follow-up rates To enhance data for survival studies To improve patient contact information for use in epidemiologic studies
Cancer Detection Section	<ul style="list-style-type: none"> To know if women enrolled in the EWC program have received services Operational analysis Research 	<ul style="list-style-type: none"> Reporting to CDC (funder) Internal evaluation Legislative reporting Bill analysis Response to public inquiry
Cancer Prevention and Nutrition Section	<ul style="list-style-type: none"> For targeting low-income census tracts that are eligible for interventions Understanding the resources of limitations in the environments in which health promotion activities are conducted Developing a realistic picture about providing services to California school children within limitations of our funding 	<ul style="list-style-type: none"> Documenting compliance with funding requirements Program planning and decisions Understanding the larger environment in which the program occurs
Environmental Health Investigations Branch	<ul style="list-style-type: none"> Linking health-related data to the environmental information to assist researchers and PH professionals to better understand chronic disease in California 	<ul style="list-style-type: none"> It is too early to know all the possible uses. Currently researchers from universities are the main users
Epidemiology & Prevention For Injury Control	<ul style="list-style-type: none"> To learn more about homicides by combining information from 2 sources To use one data source to identify records in another for data quality control 	<ul style="list-style-type: none"> Having the ability to look at two aspects of an incident that would not be available with a single file.
Medi-Cal	<ul style="list-style-type: none"> To identify services provided to Medi-Cal management care beneficiaries To analyze cost of treatment by stage of disease To include information not available through Medi-Cal alone in analysis of health care utilization 	<ul style="list-style-type: none"> To evaluate hospital usage among enrolled population – linked files fill in incomplete data from encounter reporting Studies of ambulatory care sensitive conditions among the Medi-Cal management care enrolled populations provide information regarding primary care delivery networks

Program Name	Main Public Health Purpose of Data Linkages	Major Uses of the Linked Data
Office of Statewide Health Planning & Development	<ul style="list-style-type: none"> To support legislative mandate to produce risk-adjusted hospital report cards 	<ul style="list-style-type: none"> To publish report based on deaths that occur 30 days following hospital admission To understand healthcare processes and outcomes associated with a wide range of procedures and conditions
Tobacco Control Section	<ul style="list-style-type: none"> To evaluate the media campaign and community interventions of the Tobacco Control Program 	<ul style="list-style-type: none"> To evaluate our program and then make improvements based on what we learn from the data analysis