

CHIR

Center for Health Information & Research

An ABOR Designated Research Center

CHIR Current Research Initiatives



CHIR goals

- Provide actionable information regarding health care policy, quality of care, public health, health care workforce to
 - The community
 - Health care providers and payers
 - Researchers
 - Public health and other community organizations
- Develop new methodologies for storing, collecting, analyzing, and disseminating information
 - Community Health Data System
 - Econometric analyses
 - Community collaboratives
 - Health care workforce supply/demand



ARIZONA HEALTHQUERY



Arizona HealthQuery (AZHQ)

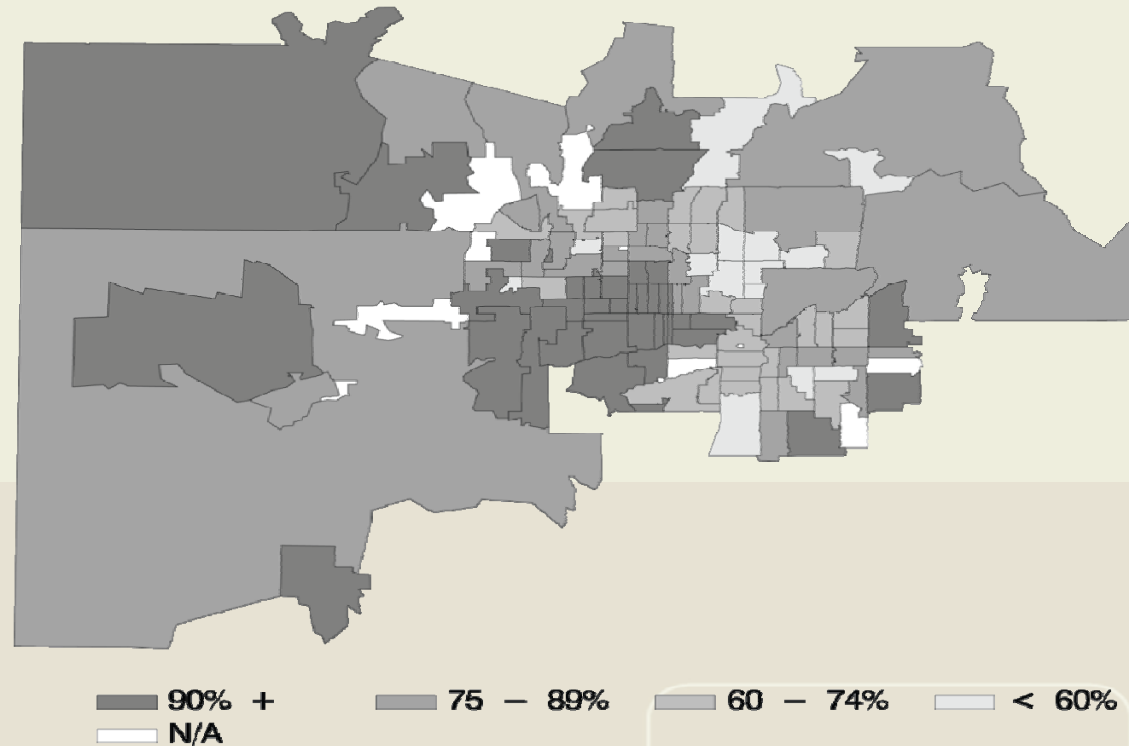
- Statewide community health data system
- Sponsored by Arizona State University, previously sponsored by St. Luke's Health Initiatives and the Flinn Foundation
- Community resource for assessing health status and health care needs in Arizona
- Obtain routinely collected administrative data from employers, insurers, providers and health related organizations
- Link data sources to create integrated health information for each person
- Demographic, clinical, geographic, and health care financial information

Organizing Principles

- Participation is voluntary
- Flexible data requirements; no set data layout or formatting
- HIPAA compliant data contracts
- Data partners retain ownership
- Data partners never identified in research without their prior permission
- Patients never identified in research output
- Strict physical and electronic security

Maricopa County: Patients in AZHQ

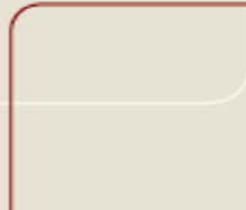
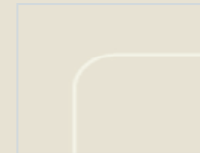
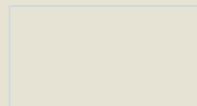
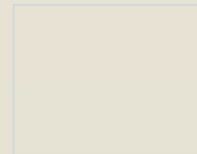
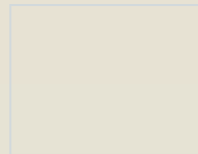
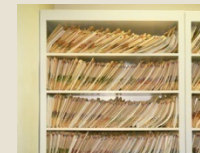
Patients receiving services 2004 - 2007 versus 2006 Census projection





ARIZONA HEALTHQUERY

The Database



Scope

- Multi-payer database spanning many health care settings
- Time: From 1999 – Present (for some data partners)
- Settings: Hospitals, clinics, physician offices, urgent care, pharmacy, home health, labs, long term care (ALTCS), etc.
- Geography:
 - Statewide coverage for hospital inpatient & Medicaid
 - Significant coverage of other settings for Yuma and Maricopa counties
 - Growing coverage in Pima and Pinal counties
- Update Frequency: Most data partners provide quarterly updates
- Volume: Information captured for over 9 million recipients and over 200 million health care encounters

Contents

- Encounters
 - Patient identifiers
 - Patient demographics
 - Place of service
 - Facility
 - ICD-9 diagnosis codes
 - Payer/Insurance type
 - Dates of service
 - ICD-9 procedure codes (surgical)
 - HCPCS/CPT procedure codes
 - UB Revenue codes
 - NDC numbers
 - Charged/paid amounts
 - Treating/attending provider
- Additional information
 - Immunizations
 - Date of immunization
 - Type of immunization
 - Death certificate information
 - Date of death
 - Cause of death
 - Provider information
 - Name
 - License #
 - Location
 - Specialty

Arizona HealthQuery & Registries

- AZHQ confidentiality structure does not permit identification of individual patients but with appropriate permissions, AZHQ could be an extremely effective foundation for the development of registries
- Data contains very large numbers of patients across all disease categories permitting prior planning for the number of potential patients in a registry or a randomized control trial
- The organizations crating a registry would need to initially identify the patients and obtain their permission but follow up could be greatly improved through the use of AZHQ. A pilot project with Catholic Healthcare West established that AZHQ could improve follow up information on patients otherwise lost to attrition (no patient specific information was revealed)
- Patients participating in a registry could obtain a personal health record that could include all their health care not just for the registry specific disease

AZHQ: Service Volume 2004 - 2007

Type	Visits
Inpatient Hospital	5,973,804
Outpatient Hospital	7,591,218
Emergency Department	5,548,996
Physician Office	36,061,753
Pharmacy (claims)	32,203,944

Not listed: laboratory, ancillary, DME, etc.

Examples: Patients Treated for Alzheimer's (2005-2007)

Age	# of Patients
0-17	689
18-34	697
35-54	1068
55-64	1018
65-74	2427
75-84	6875
85+	7864

Examples: Children by Condition and Ethnicity(Maricopa County)

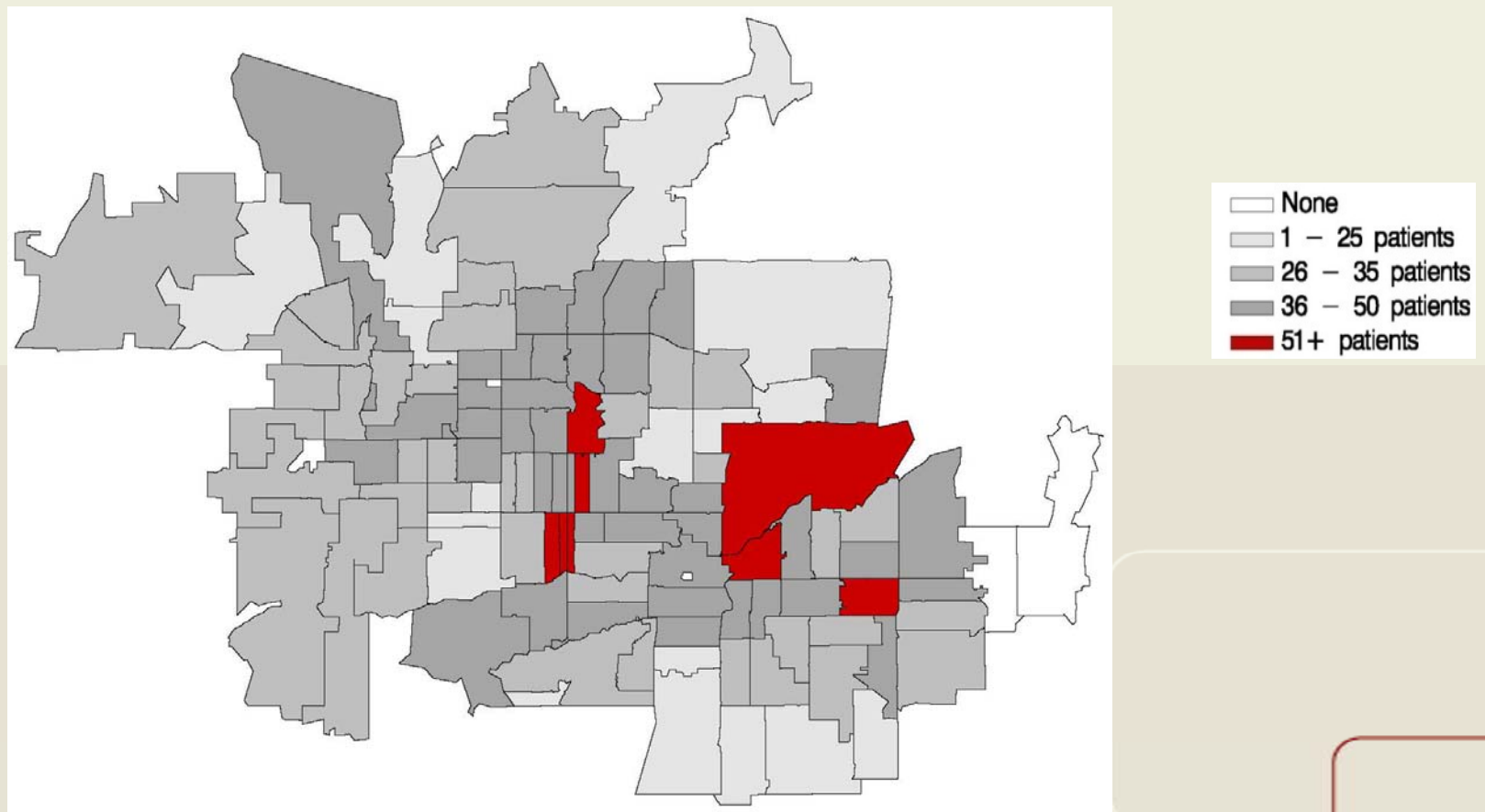
<i>Conditions</i>	<i>Asian/Pacific Islander</i>	<i>Non-Latino White</i>	<i>Latino</i>	<i>American Indian</i>	<i>Total</i>
All Blood Disorders	180	3,675	1,043	371	5,269
Low Birth weight	103	1,846	376	153	2,478
Asthma	416	12,075	4,184	1,439	18,114
Diabetes	55	2,039	304	120	2,518
ADHD	99	9,524	1,876	479	11,978
Nutritional Disorders	280	6,640	1,276	801	8,997
Anemia	119	1,844	569	218	2,750
Mental Disorders	526	32,863	5,967	2,214	41,570
Gastroenteritis	211	3,944	808	681	5,644
All Endocrine Disorders	431	12,041	2,038	1,080	15,590
Epilepsy	3	168	18	18	207
Otitis Media	920	24,382	4,509	2,743	32,554

Examples: Adults by Condition and Ethnicity(Maricopa County)

<i>Conditions</i>	<i>Asian/Pacific Islander</i>	<i>Non-Latino White</i>	<i>Latino</i>	<i>American Indian</i>	<i>Total</i>
Asthma	472	31,352	3,991	1,086	36,901
Diabetes	1,458	50,878	5,645	2,632	60,613
Nutritional Disorders	506	29,993	3,475	1,575	35,549
Mental Disorders	1,954	137,653	13,380	4,924	157,911
Abdominal Pain Pulmonary	1,310	49,677	6,416	1,877	59,280
Tuberculosis	15	170	35	28	248
Gastroenteritis	151	8,747	841	365	10,104
All Endocrine Disorders	3,846	163,183	12,965	4,712	184,706
Congestive Heart Failure	224	21,773	1,620	336	23,953
Colon Cancer	29	1,868	101	21	2,019
Breast Cancer	104	4,808	252	51	5,215

Examples: MRSA in Maricopa County*

Age Adjusted MRSA Incidence Rate per 10,000 Patients by Zip Code, Maricopa County, 2004-2007



*From *CHIR Community Brief, April 2008*

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