

Description of DHCS Datasets that Can Support the Improvement of Maternity Care: A User's Perspective

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Using Data to Improve Maternity Care in California: Research Collaborations and Future Opportunities

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Objectives and Acknowledgements

- Objectives
 - Experiences Working with Medi-Cal Data
 - Medi-Cal Programs and Maternity Care
 - Medi-Cal Data
 - Focus on data relevant to maternity care
- Acknowledgments
 - Content from this presentation was borrowed from *Optum*—the vendor that manages the Medi-Cal data warehouse

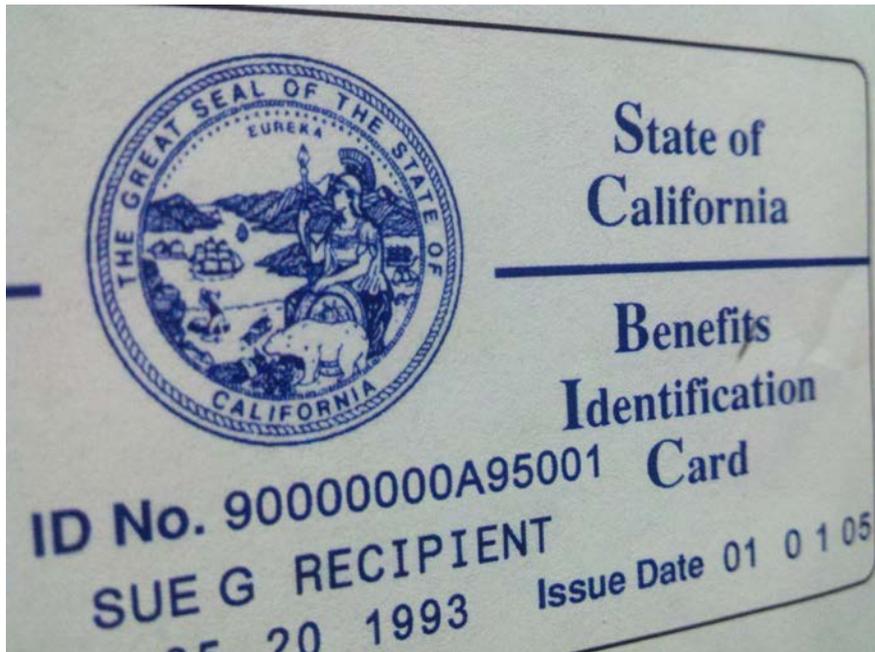
Experiences Working with Medi-Cal Data



Medi-Cal: A Researcher's Dream

- My role:
 - Nearly 2 years working as a “data scientist” at Medi-Cal
 - Data retrieval, statistical analyses, and interpretation
- Medi-Cal data are vast and complex—never a boring day
 - Data are not perfect, but data QI projects are underway
 - Seemingly endless research questions can be addressed
- MIS/DSS - Management Information System/Decision Support System
 - Queries using SQL and SAS run extremely fast on “Big Data”
 - Symmetry™ Episode Treatment Groups/Episode Risk Groups
- Challenges:
 - Evaluating the quality of particular data (e.g., encounter data)
 - Assessing and understanding “data about the data”

Medi-Cal Programs and Maternity Care



Medi-Cal: Patchwork of Programs

- Aid codes
 - Eligibility pathways define available benefits
 - Over 200 active codes; most members eligible through a few dozen codes
- “Share of Cost”
 - Monthly deductible amount; Medi-Cal pays for the rest
- Plan Codes
 - Different groups responsible for care (e.g., managed care plans, fee-for-service program)

Medi-Cal Programs and Maternity Care

- Medi-Cal pays for half of all births in California
- Special pregnancy-related programs
 - Presumptive Eligibility – immediate, temporary prenatal care coverage to low-income pregnant women
 - 200 percent FPL Pregnancy Income Disregard Program
 - Transfer from Limited to Full-Scope Coverage
 - Postpartum Program
 - Access for Infants and Mothers (AIM)
- Pregnancy Education Programs
 - Comprehensive Perinatal Services Program
 - Black Infant Health Program
 - Prenatal Care Guidance Program
- Family PACT Program
 - Established in 1997; 1115 Medicaid Waiver, 1999 to 2010
 - Provisioning a limited set of reproductive health benefits

Maternity Care Research Questions

■ Access

- What sub-populations get access to specific services?

■ Quality

- Do Medi-Cal pregnancies have high rates of medical errors?

■ Costs

- What are the costs for specific procedures, diagnoses, or populations?

■ Utilization

- Are procedures over or under utilized?

Medi-Cal Data



Types of Data

- 10 to 10.5 years of history
- Transaction Data Sources (examples)
 - Paid Claims and Encounters
 - Eligibility data per person-month
 - Providers: fee-for-service and managed care providers
 - Capitation payments
 - Maternity supplemental payment (KICK)
- Reference Data Sources
 - Providers
 - Procedures
 - Pharmaceuticals
- Derived Data: Groupers, Primary Aid Code, GIS

Medi-Cal Eligibility System “MEDS”

- Monthly information: nearly complete:
 - Patient ID: SSN, CIN, and “AKA CIN”
 - Age, Sex, Ethnicity, Gender, Birthdate
 - Aid Codes
 - Medicare coverage
 - Other insurance coverage status
- Not always complete:
 - Person name
 - Country of birth
 - County of birth
 - Date of death
 - Term date and reason
- Derived information:
 - “certified” eligibility status
 - Number of continuous months
 - Plan type and plan model
 - Geographic coordinates (latitude and longitude)

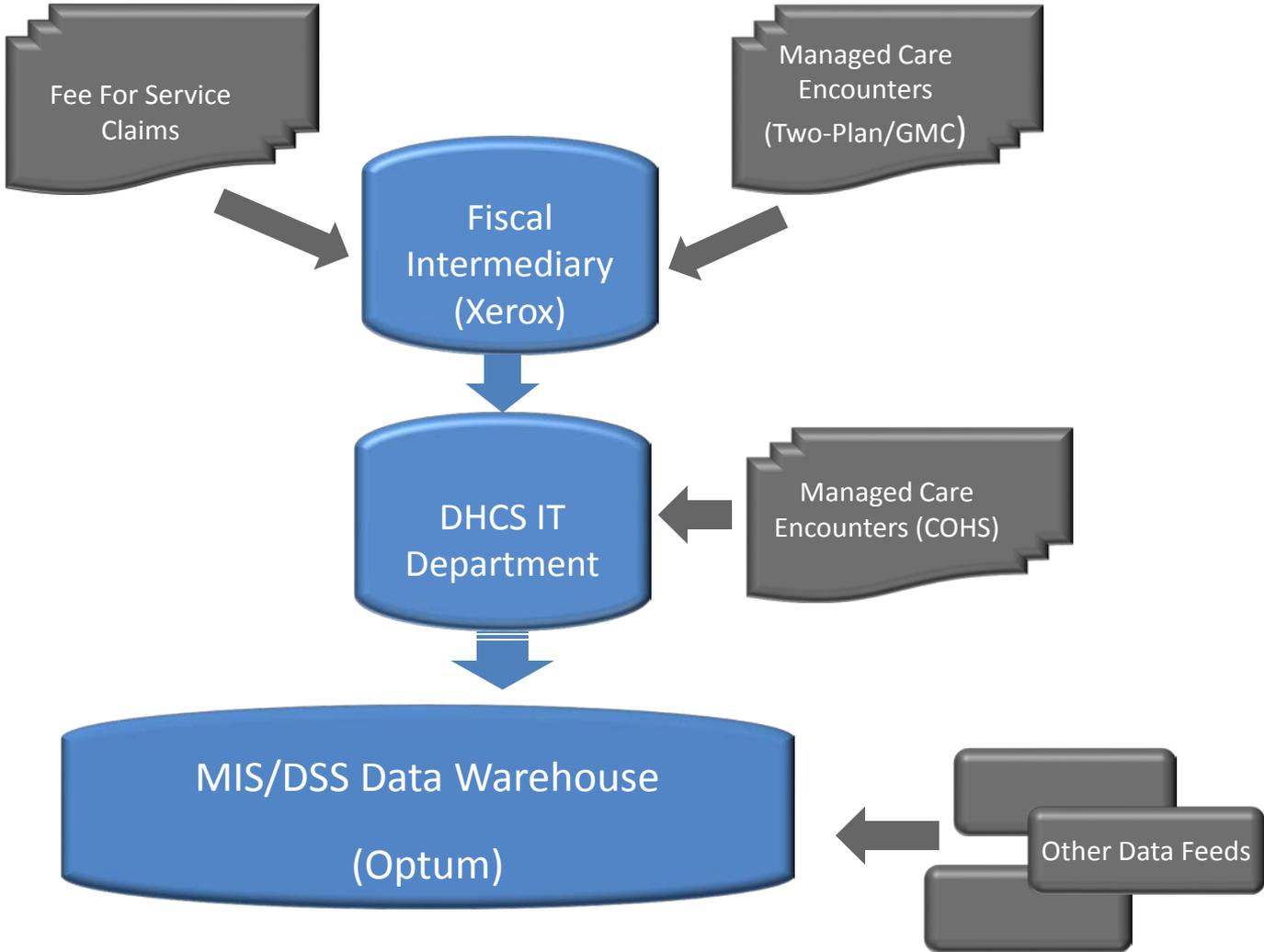
Claims and Encounters

- Claims data is the core of the MIS/DSS
 - Over 3.8 billion detail claim records as of June 2014
 - 10 years of data with payment lag of 1-9 months (98%)
- A claim represents a medical care event, or transaction
 - A record of a Medi-Cal beneficiary receiving a medical service from a given provider on a given day
- Two types of transactional records:
 - Paid claims (Fee-For-Service)
 - Provider is paid per service
 - Managed care encounters
 - Plan is paid a monthly capitation
- Major efforts to change how data are submitted
 - Medi-Cal's 35-C to industry standard of 837

Claim Origin: Example of Treatment Scenario

- Patient is taken to a hospital by ambulance. ER physician admits the patient overnight and discharges to home with referral for follow-up care.
- The following claims or encounter records might be generated:
 - Emergency medical transportation claims
 - Hospital inpatient claim with Room & Board and ancillary charges (e.g., labs, X-rays, drugs, supplies)
 - Medical or Outpatient claim for a follow-up office visit
 - Pharmacy claims for prescriptions filled

Claims and Encounter Data Flow



Claim Type: Medical/Allied and Outpatient

- Claims and encounters documenting:
 - Office visits
 - Hospital outpatient department services
 - FQHC services
 - Lab and x-ray
 - Physician administered drugs
 - Medical transportation
 - Dialysis services
 - Physician services delivered to hospitalized patients (e.g. surgery)
 - DME
 - ... and much more
- Primary and secondary diagnosis codes
 - Until new 837 data structures, only 2 diagnoses per claim
- Procedure code
- Billing and rendering provider

Claim Type: Hospital Inpatient

- Room & Board and ancillary services (e.g., pharmaceuticals, anesthesia, labs) provided during hospital stay
- Important Data Elements:
 - Primary and secondary diagnosis codes
 - Revenue code
 - Surgical procedure code
 - Inpatient admission and discharge dates
 - Inpatient days stay
- Important Facts:
 - Reimbursements vary between contract and non-contract hospitals
 - More than one bill may be found for a single hospitalization
 - Physician services may be billed separately as outpatient
 - Babies may initially show up under mother's ID
 - Diagnosis Related Groups (DRGs) have changed the way hospitals are reimbursed

Claim Type: Pharmacy

- National Drug Code (NDC)/Universal Product Code
- Provider fields:
 - Billing provider (typically pharmacy)
 - Prescribing provider (typically physician)
- Drug units and days supply
- Groupers help analyze drug utilization by therapeutic class, route of administration
- Diagnosis codes are not reliable on pharmacy claims

Provider Data

- Claims/Encounters
 - Billing/Reporting
 - Rendering/Operating
 - Referring/Prescribing
- Provider Reference data:
 - Provider Master File
 - Database of enrolled Medi-Cal providers
 - Maintained by Provider Enrollment Division
 - Does NOT include many renderers, prescribers and managed care providers
 - National Plan and Provider Enumeration System (NPPES)
 - Database of all valid NPIs
 - Maintained by CMS

Family PACT Data and Reports

- To facilitate prompt access, enrollment is onsite at the provider's office
 - 1 page enrollment form (front and back) based on self-certification
 - Eligibility data differs from Medi-Cal (~2.8 enrolled annually)
- Uses Medi-Cal's Fee-for-service claims system (~15 million claims annually)
- A variety of detailed reports use enrollment and claims data to describe provider and client populations, the types of services utilized, fiscal issues, and county profiles. Examples include:
 - Family PACT Annual Reports
 - Access to Family Planning Services
 - Cost Benefit Analyses
 - <http://www.familypact.org/Research/reports-and-research>

Efforts to Improve and “Free” the Data

- Encounter data
 - In contrast to the more complete and reliable fee-for-service data, managed care encounter data are often incomplete
 - Quality depends on specific plans and specific data elements
 - “Encounter Data Improvement Project”
 - Using analytics to identify high-quality data fields
 - “Use drives improvement”
- DHCS Eligibility records have been linked to OSHPD datasets and Vital Statistics Data Files
 - Medicare data are available
- “Free the Data” Project – Dr. Linette Scott
 - Data Research Committee and external data requests

Conclusions

- Medi-Cal's massive data warehouse can be used to study maternity care
 - Data quality varies, but use will likely drive improvement
- Data can be extracted and analyzed with relative ease
- Biggest challenges:
 - Understanding the complexity of the claims data
 - Applying “meta-data” to transform results into actionable information
 - Accessing high-quality data
 - New efforts and policies are being established to improve the data and “free the data”

Reference Slides

Finding Additional Information

- Medi-Cal Managed Care Claims and Encounter Data Reporting
 - <http://www.dhcs.ca.gov/dataandstats/data/Pages/MMCDCImsEncDataRpt.aspx>
- Medi-Cal Provider Billing Manual
 - http://files.medi-cal.ca.gov/pubsdoco/manuals_menu.asp
- Accessing DHCS protect data for research and public health
 - <http://www.dhcs.ca.gov/dataandstats/data/pages/accessingprotecteddata.aspx>

Aid Codes

- Aid Codes Master Chart
 - **Code**
 - Over 200 active codes
 - **Benefits**
 - e.g., Full; Restricted to pregnancy and emergency services; Restricted
 - **Share of cost**
 - Yes, No
 - **Program/description**
 - Example: Abandoned Baby Program. Provides full-scope benefits to children up to 3 months of age who were voluntarily surrendered within 72 hours of birth pursuant to the Safe Arms for Newborns Act.
- http://files.medi-cal.ca.gov/pubsdoco/publications/masters-mtp/part1/aidcodes_z01c00.doc

Important Data Elements

- Patient identifiers:
 - AKA CIN, CIN, SSN-OR-MEDS-ID
- Dates:
 - Service-From Date, Service-To Date, Paid Date, Adjudication Date, Admission Date, Discharge Date
- Program Code:
 - Fee-For-Service, Managed Care, COHS, Short Doyle
- Claim Type:
 - Pharmacy, Hospital Inpatient, Outpatient, Medical/Allied
- Plan Code:
 - FFS or managed care; medical and dental plans
- Clinical:
 - Primary and Secondary Diagnosis
 - for now, only 2 per claim
 - Procedure Code,
 - Revenue Code,
 - NDC
- Provider:
 - Billing, Referring/Prescribing, Rendering/Operating
 - Provider type
 - Specialty
 - Vendor code
- Financials:
 - Allowed Amount, Billed Amount, Paid Amount, Reimbursed Amount

Medi-Cal Providers

- Medi-Cal providers include nursing homes, hospitals, clinics, labs, pharmacies, physician groups, solo practitioners
- Fee-For-Service:
 - Must be enrolled in Medi-Cal to bill
 - Must bill using NPI
 - Does not have to be enrolled if rendering or referring/prescribing provider only
 - Does not have to use NPI, although that will be changing soon
- Managed Care:
 - Does not have to be enrolled in Medi-Cal
 - Does not have to use NPI, although that will be changing soon

Roles of Providers

- Billing/Reporting
 - Provider who submitted a Fee-For-Service claim or Managed Care encounter
- Rendering/Operating
 - Rendering: medical and outpatient claims
 - Operating: hospital inpatient claims
- Referring/Prescribing
 - Prescribing: pharmacy claims
 - Referring: all other claims

Claim Program Codes

PGM_CD	PGM_SHORT_DESC	PGM_LONG_DESC
00	Delta Dental Claims	Delta Dental Services (DELTA)
01	IHSS (DSS)/DDS Waiver/TCM	Dept of Social Services (DSS) In-Home Supportive Services Program/ Dept of Developmental Services (DDS) Waiver Program/ DDS Targeted Case Management/ Medi-Cal Targeted Case Management
02	Managed Care	Encounter Data
04	COHS	County Operated Health Systems (COHS) in: Santa Barbara County, Santa Cruz County, Napa County, Solano County, Orange County (most - remainder are encounters), San Mateo County, Yolo County, Monterey County, Ventura County, Merced County, Sonoma County, San Luis Obispo County
05	EPSDT	Early Periodic Screening, Diagnosis and Treatment (EPSDT)
06	State Hosp/DDS Cntr	State Hospitals/State Developmental Centers (DDS is the claims processor for both DMH and DDS)
08	Short Doyle	Short-Doyle/Medi-Cal (SD/MC) Administered by Department of Mental Health and Department of Alcohol and Drugs
09	FFS Medi-Cal	ACS/ HP/EDS Claims
29	FPACT	Family Planning, Access, Care, and Treatment

Claim Source Codes

SRC_CD	SRC_DESC	SRC_CD	SRC_DESC
01	COHS - YOLO	23	Medical FI Claims - BREAST CANCER (Electronic Data Processing) EDP
02	COHS - SANTA CRUZ	24	Medical FI Claims - HEALTHY FAMILY
03	COHS - MONTEREY	25	DELTA DENTAL - HEALTHY FAMILY
04	COHS - SANTA BARBARA	26	Medical FI Claims - CALIFORNIA CHILDREN Services
05	COHS - SAN MATEO	27	Medical FI Claims - GENETICALLY HANDICAPPED
06	COHS - NAPA	28	Medical FI Claims - CMSP
07	COHS - SOLANO	29	DELTA DENTAL - County Medical Services Program (CMSP)
08	COHS - CALOPTIMA	30	DELTA DENTAL - Children Health and Disability Treatment Program (CHDTP)
09	DELTA DENTAL - REGULAR	31	Medical FI Claims - EARLY ACCESS PRIMARY Care
10	DELTA DENTAL - SPECIAL	32	DELTA DENTAL - California Children Services (CCS)
11	DELTA DENTAL - ROOT CANAL	33	DELTA DENTAL - Genetic Handicap Person Program (GHPP)
12	DELTA DENTAL - Immigration Reform and Control Act (IRCA)	34	COHS – SAN LUIS OBISPO
13	Department of Developmental Services (DDS) STATE HOSPITAL	35	COHS - Merced
14	Department of Social Services (DSS) Personal Care Services Program (PCSP) - CMIPS I	36	COHS - Sonoma
15	Department of Developmental Services (DDS) WAIVER	37	MEDI-CAL/SHORT-DOYLE (MSD) Alcohol Drug Program (ADP)
16	Department of Developmental Services (DDS) Targeted Case Management (TCM)	38	COHS-MARIN
17	MEDI-CAL Targeted Case Management (TCM)	39	COHS-MENDOCINO
18	Medical FI Claims - MENTAL HEALTH INPATIENT	40	COHS-VENTURA
19	Medical FI Claims - Fee For Service Medi-Cal	41	Department of Social Services (DSS) Personal Care Services Program (PCSP) - CMIPS II
20	Medical FI Claims - ENCOUNTERS	42	DELTA DENTAL - Targeted Low Income
21	MEDI-CAL/SHORT-DOYLE (MSD) Department of Mental Health (DMH)	70	Medicare Modernization Act (MMA) Prescription Drug Plan (PDP) - WELLCARE
22	Medical FI Claims - Child Health and Disability Program (CHDP)		Unknown