OREGON HEALTH & SCIENCE UNIVERSITY

Center for Health Systems Effectiveness

Oregon's All Payer All Claims (APAC) data

October 20, 2014

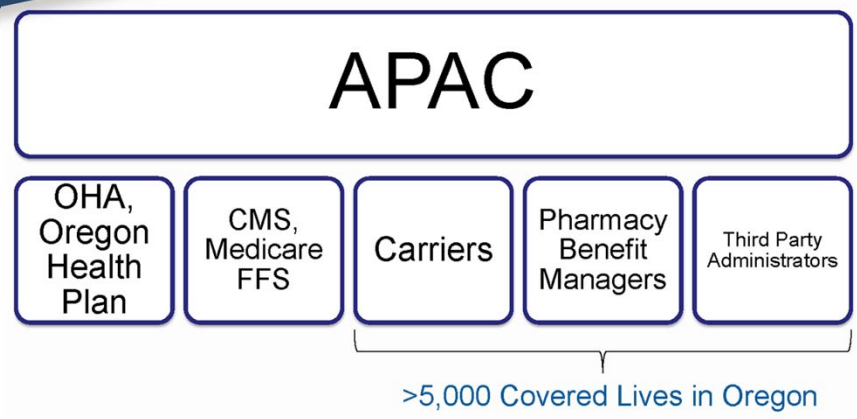
Overview

- Oregonians pay for health care without comparable information about cost and quality across the health care system settings. From a variety of sources: annual estimates for Oregon health care spending range from $20-25 billion or between $5,400 and $7,000 per Oregonian.
- Currently, Oregon has fragmented, inconsistent and incomplete information about how our health care system is performing.
- The 2009 Oregon State Legislature passed HB 2009, which created the all-payer, all-claims (APAC) database to measure the quality and value of health care in Oregon.
- **The all-payer, all-claims database will provide a more complete picture of cost, quality, and utilization across Oregon's health care system.**

Overview

- HB 2009 authorized APAC
  - Determine the maximum capacity and distribution of existing resources allocated to health care.
  - Identify the demands for health care.
  - Evaluate the effectiveness of intervention programs in improving health outcomes.
  - Compare the costs and effectiveness of various treatment settings and approaches.
  - Provide information to consumers and purchasers of health care.
  - Evaluate health disparities, including but not limited to disparities related to race and ethnicity.

Who submits

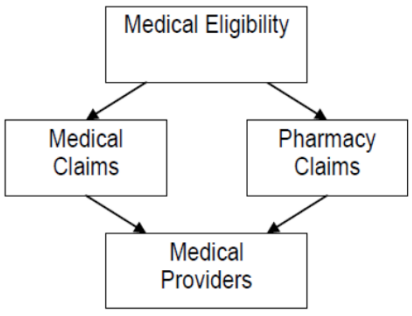


Who does not submit

- Federal self-insured programs
  - Tricare
  - Indian Health Services
- Self-pay/uninsured
- Stand-alone vision coverage
- Stand-alone dental coverage
- Stop-loss only coverage
- Non-mandatory reporters (<5k covered lives)

What is submitted

- Three categories of data include:
  1. Medical eligibility files
  2. Medical and pharmacy claims
  3. Health care provider information



What is not submitted

- Insurance market segment (individual, small group, large group, through Cover Oregon, etc.)
- Insurance product information (deductible, coinsurance requirements, actuarial value)
- Worker's compensation claims
- Substance abuse claims
- Claims for HIV, AIDS and genetic testing
- Bundled payments are a gray area

What is not submitted

- **APAC does not capture non-claims based payments**
  - Capitation arrangements
  - Back-end settlements
  - Manufacturer rebates
  - Case management fees
  - Member incentives
  - Pay for performance
  - Payer or carrier administrative expenditures / net cost of private health insurance
  - Care paid for via cash payment (with no insurance claim)

OHA website

- APAC website
  - Search **oregon apac**
  - http://www.oregon.gov/oha/ohpr/rsch/pages/apac.aspx

Evaluating Coordinated Care Organizations

1. Assess the cost and utilization impacts of CCOs by utilization, expenditures per user, and their product expenditures per person
2. Assess the effects of the CCO transformation on the quality of care
3. Assess the effects of the CCO transformation on the quality of care for individuals with physical and mental health comorbidities

Evaluating Coordinated Care Organizations

- Completed Expenditure Metrics (PMPM)
  - Total
  - Any inpatient admission
  - Any inpatient admission initiating in the ED
  - Any outpatient visit
  - Primary care visits
  - Emergency department visits
  - Any professional (not facility) payments
  - Any facility (not professional) payments
  - Procedures
  - Tests
  - Imaging
  - Durable Medical Equipment
  - Prescription drugs
  - Typical antispsychotics
  - Second generation antispsychotics

Evaluating Coordinated Care Organizations

- Completed Quality Metrics
  - Breast Cancer Screenings
  - Chlamydia Screenings
  - Cervical Cancer Screenings
  - Effective Contraceptive Use
  - Avoiding Non-Recommended Cervical Cancer Screening in Adolescent Females
  - Well-Child Visits in the Third, Fourth, Fifth and Sixth Years of Life
  - Adolescent Well-Care Visits
  - Diabetes HbA1c Testing
  - Diabetes LDLC Testing
  - Use of Appropriate Medications for People with Asthma
  - Screening for Alcohol or Other Substance Abuse Treatment
  - Screening for Clinical Depression
  - Potentially Avoidable ED Visits
  - Annual Monitoring for Patients on Persistent Medications
  - Cholesterol Monitoring for Patients with Cardiovascular Disease
  - Children's Access to Primary Care Practitioners
  - Adolescents' Access to Primary Care Practitioners
  - Use of Imaging Studies for Low Back Pain
  - Glucose Testing for People Using Second Generation Antipsychotic Medications
  - Lipid Testing for People Using Second Generation Antipsychotic Medications
  - Adult Diabetes Short Term Complications Admission Rate
  - Adult Perforated Appendix Admission Rate
  - Diabetes Long Term Complications Admission Rate

Evaluating Coordinated Care Organizations

- Completed Quality Metrics, continued
  - COPD or Asthma in Older Adults Admission Rate
  - Hypertension Admission Rate
  - Congestive Heart Failure Admission Rate
  - Dehydration Admission Rate
  - Bacterial Pneumonia Admission Rate
  - Adult Urinary Infection Admission Rate
  - Angina without Procedure Admission Rate
  - Uncontrolled Diabetes Admission Rate
  - Adult Asthma Admission Rate
  - Lower Extremity Amputations Among Patients with Diabetes
  - Pediatric Asthma Admission Rate
  - Pediatric Diabetes Short Term Complications Admission Rate
  - Pediatric Gastroenteritis Admission Rate
  - Pediatric Perforated Appendix Admission Rate
  - Percent of Members with Alcohol/Other Drug Diagnosis
  - Percent of Adults with Alcohol/Opioid/Tobacco Diagnosis that Received Cessation Medications
  - Percent of Members with Alcohol/Opioid/Tobacco Diagnosis with an ED Visit
  - Percent of Members with Alcohol/Opioid/Tobacco Diagnosis with an Inpatient Admission
  - Percent of Members with Opioid Diagnosis that Received HCV Test
  - Percent of Members with Opioid Diagnosis that Received HIV Test

ED visits for non-traumatic dental problems

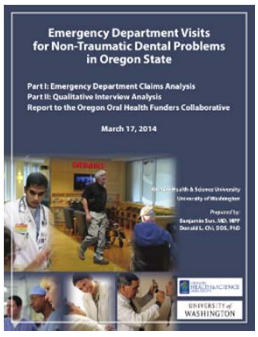
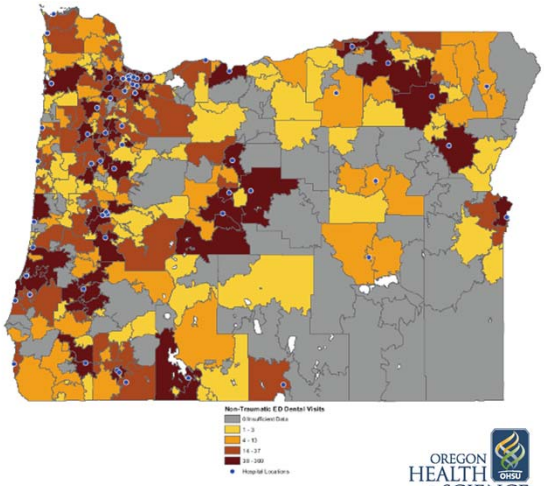


Figure 2. Number of ED Dental Visits by Patient Residential Zip Code (APAC)



ED visits for non-traumatic dental problems

Appendix Table 10: Prescription Medications Dispensed After ED Dental Visit

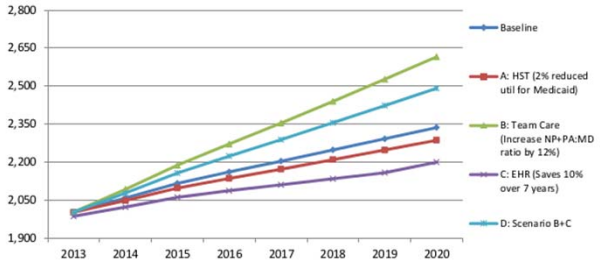
Medication Class	Frequency	% ED Visits*
Opioid Analgesic	17599	69%
Antibiotics- Penicillins	14592	57%
Anti-Inflammatory Analgesic	11857	46%
Antibiotics- Miscellaneous	11228	44%

Appendix Table 11: Procedures Associated With ED Dental Visits

CPT Code	Description	Frequency	% ED Visits*
64400	Facial Nerve Block	1794	7%
85025	Blood Test: Cell Count	1239	5%
96375	Drug Injection- Subsequent Intravenous Push	867	3%
96372	Drug Injection- Subcutaneous or Intramuscular	843	3%

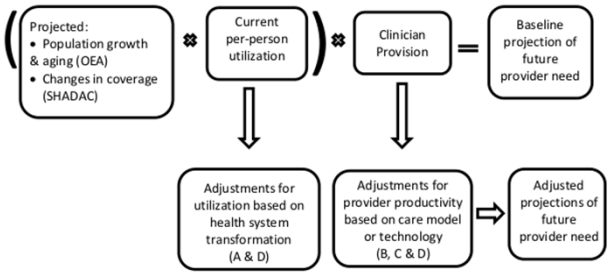
Workforce modeling

Figure 3: Projected FTE Demand for Oregon's Nurse Practitioners by Scenario: 2013-2020



Workforce modeling

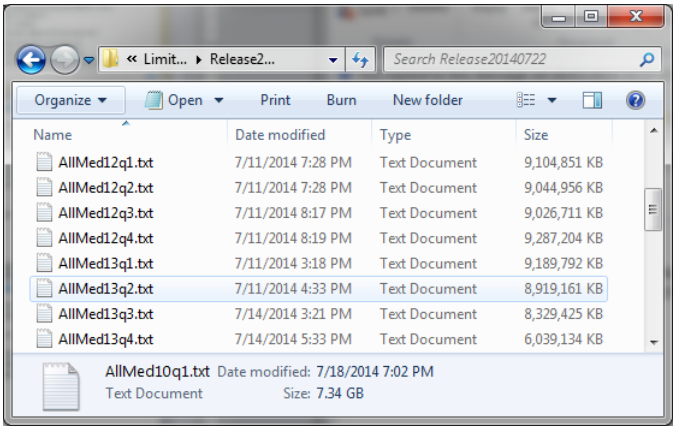
Figure 1: Projection Model



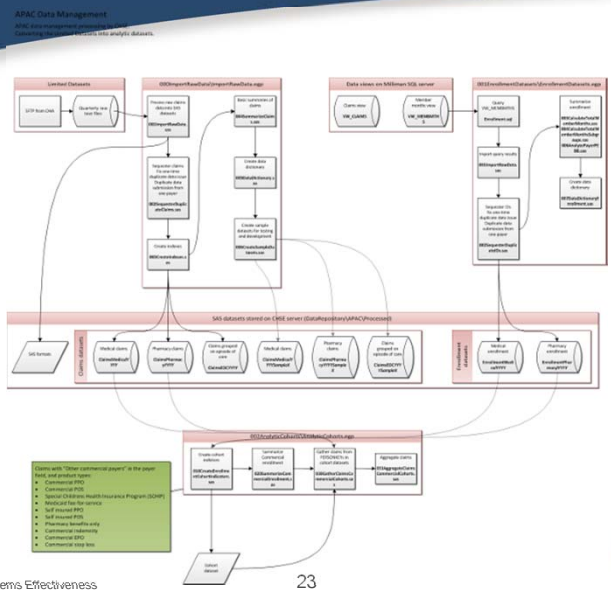
Other in-progress projects

- From non-CHSE researchers
  - Economic burden associated with neurocysticercosis (O'Neal)
  - Estimate number of patients who experience new and recurrent *Clostridium difficile* infection (Furuno)
  - Analysis of policy questions on the impact of the 2011 elective delivery hard-stop policy (Caughey)

Size of datasets



Limited datasets → analytic datasets



Size of datasets

Year	Claim type	Number of records	Number of claims
2010	Medical	49,617,957	23,083,226
	Pharmacy	21,868,422	21,698,771
	Episode of care	**71,486,379**	**44,781,997**
2011	Medical	51,053,185	23,499,173
	Pharmacy	22,927,801	22,765,488
	Episode of care	**73,980,986**	**46,264,661**

- Each claim can have multiple line items
- Records include payment reversals

Data request process from OHA's POV

1. *Submit Form APAC-5-OHSU*
2. Initial processing to be complete within **30 days** (is application complete/incomplete?)
3. Posting for public comment
4. OHA staff review
5. Privacy and Security Advisory Board (PSAB) review session (public meeting) and recommendation
   - PSAB meetings occur every **2-3 months**
6. Security Officer review and recommendation
7. *Outcome*
   a. *Approved*
   b. *Request for additional information*
   c. *Denied*

Data request process from OHSU's POV

1. Submit completed APAC-5-OHSU to IRB for *OHSU Authorized Signature*
2. Submit signed APAC-5-OHSU to OHA

- Can get APAC-5-OHSU from CHSE or by email from OHA
- Don't use form from OHA website

Form APAC-5-OHSU

- Section 1
  - Contact information
  - CHSE can provide boilerplate language for "Information Privacy and Security staff"
- Section 2
  - The "meat" of the data request form
- Section 3
  - The DUA; i.e., the "legalese"

Form APAC-5-OHSU, Section 2

- Sections 2.1 and 2.2 could be lifted directly from parts of your IRB protocol
  - For Section 2.2.c, use “DataElements.xlt”
    - Provide justification for each variable you are requesting
- CHSE can help you determine
  - Which variables you need
  - Which variables are high quality
  - What a variable is really encoding
  - How to use them

Form APAC-5-OHSU, Section 2

- CHSE can also help you with Section 2.2.g

f. **Provide a detailed timeline for the research.**

g. **Provide algorithms to identify included and excluded claim lines.**

h. **Explain:**

Form APAC-5-OHSU, Section 2

- CHSE can provide boilerplate language for Sections 2.2.e, 2.3, and 2.4

OFFICE OF HEALTH ANALYTICS
All Payer All Claims Data Reporting Program
APAC-5

3. Specify the administrative, technical, and physical safeguards Principal Investigator will use to protect the data set. Provide a detailed description of how the data set will be received, transmitted, stored, secured, and accessed.

4. Provide a detailed description of how the data set and any potentially identifiable derivatives of the data set will be destroyed when the research is completed.

5. Attach a copy of Institutional Review Board (IRB) Application for Approval of Research on Human Subjects. This is required and must include contact information for the Principal Investigator's IRB. Include any information about current or pending IRB actions on the application and attach copies of the research protocol, any supporting documentation, and all IRB approval documents.

Form APAC-5-OHSU, Section 2

- Section 2.5 asks for your IRB protocol and approval memo

4. Provide a detailed description of how the data set and any potentially identifiable derivatives of the data set will be destroyed when the research is completed.

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6. Data Sets. Use the table below to specify the standard data sets you are requesting. *Please check the box below to indicate that you are requesting a custom data set.*

How much?

- **OHA estimates that costs will range from $2,500 to $7,500**
  - The cost of fulfilling a data request will vary depending on the amount and type of data requested
  - Actual charges will depend on the time required to perform application review and fulfill the data request

CHSE can help you get started

Don't reinvent the wheel!

- Writing your data request
  - Understanding APAC fields, formats, values
  - Shepherding a data request through IRB, OHA
  - Interfacing with OHA

CHSE can help you get started

Don't reinvent the wheel!

- Managing and analyzing your data
  - Cleaning up the financial data
  - Defining disease/condition groups
    - Mental illness
    - Substance use disorders
    - Chronic diseases
    - Pregnant women
    - Continuous enrollment
  - Documenting data flow

CHSE computing resources

Hardware

- Windows Server 2008 R2 Enterprise application server
  - 2 Intel Xeon X5675 3.06 GHz 6-core processors
  - 144 GB of RAM
- Direct-attached storage (DAS) array
  - Capacity to store approximately 3 TB
  - Soon to be 5 TB
  - RAID6

Software

- R version 3.0.2 (2013-09-25)
  - Including Revolution R Enterprise version 7.0
- Stata MP 13
- SAS 9.3
- Python 3.3

Questions?

- CHSE-info@ohsu.edu
- http://www.ohsu.edu/xd/research/centers-institutes/center-for-health-systems-effectiveness/