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Kaiser Permanente: *Secondary Use of Health Data*

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August 1 , 2007

care management | institute

Discussion Agenda

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- Background
- Quality drivers
- Data sources / issues
- Critical focus areas – secondary data use
- Future directions

America's Largest Non-Profit Health Care Program

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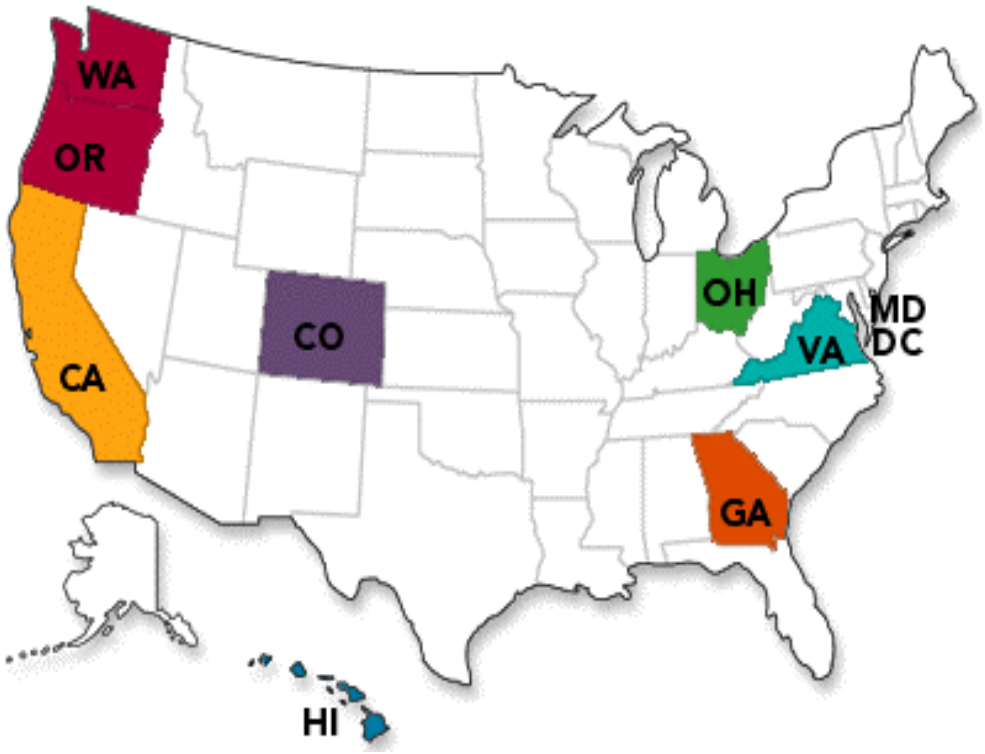

- Integrated health care delivery system
- 8.6 million members
- 13,000 physicians
- 151,000 employees
- 8 regions in 9 states and D.C.
- 37 hospitals and medical centers
- 431 medical offices
- 32+ billion annual revenues

Data Strategy - Key Drivers

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- Growing chronically ill population
- Demographic shifts (Baby-Boomers and elderly)
- Advancing medical science / technology – more and more evidenced-based practices to implement
- Increasing need for performance information
- Transitions between care settings

KP Quality Strategy – Data Driven

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- Data are a key attribute of KP's quality and system improvement
- Data must be actionable at multiple levels
  - national, regional, medical center or provider
- KP utilizes a common set of metrics (HEDIS, JCAHO, etc)
- Data is generated from multiple sources:
  - Internal (clinical care)
  - Members (KP.org)
  - External (old medical records)

Secondary Data Aggregation: Multiple Sources

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Issues and Concerns:

- Critical need to standardize
  - HL7/SNOMED-CT including CDA/CCD for data transmission between systems and aggregation of data
- Expansion of currently collected data
  - Include health risk and health status data
- Incorporation of data from chart notes
  - Currently difficult to achieve
- Resolve issues of attribution
  - Provider, care team or system

Secondary Data Use: Clinical Management

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- Secondary use of primary clinical information allows for direct improvements in patient care

- KP extensively uses secondary data to improve
  - Targeted populations
  - Provide predictive and simulation modeling
  - Merge technology and care processes
  - Discover and test innovation in care
  - Improve preventative services

- Examples:
  - Population Care Information System
  - Predictive modeling
  - Archimedes
  - Aspirin-Lisinopril-Lovastatin

Secondary Data Use: Performance Measurement and Management

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- KP realized the need to develop and provide actionable metrics and reports for operational leaders and providers
- Aggregation must span clinical and non-clinical sources
- Noted data must be near real time, accurate and accessible to all involved
- Within KP measures of safety, clinical effectiveness, service and resource stewardship are available at the national, regional and medical center level

KP Big Q Dashboard: Performance Management

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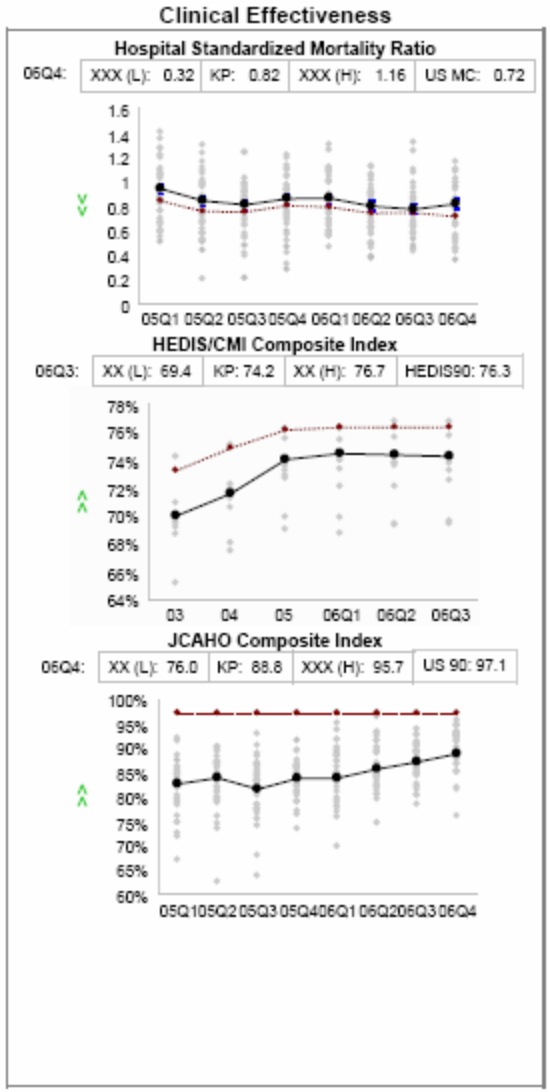
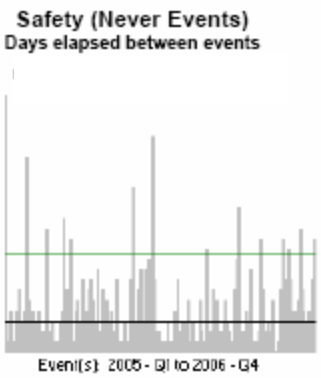
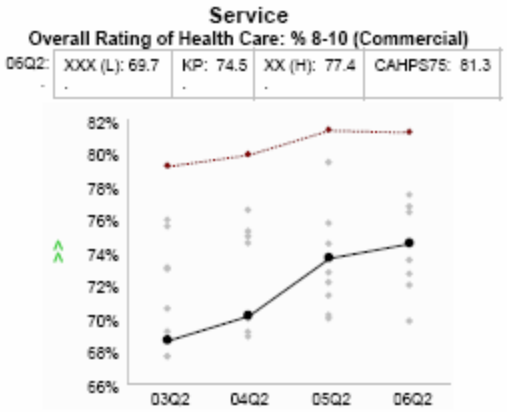
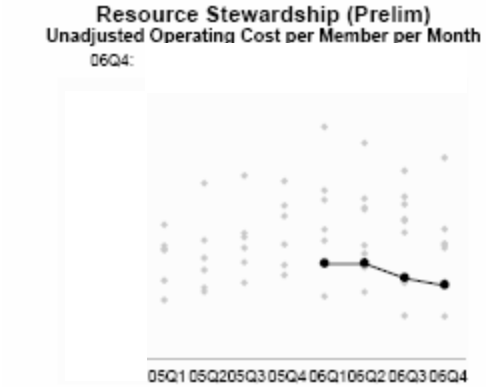
"Big Q" Performance Metrics Program Level Summary









Secondary Data Use: Accountability

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- Answers a diverse list of operational needs ranging from regulatory reporting to financial performance (utilization)
- Secondary data enables KP leadership, delivery system leaders to better understand the healthcare needs of KP members
- Allows better understanding of short and long term utilization trends. This allows KP to provide needed resources
- Example:
  - Mammography Utilization

Secondary Data Use: Patient Safety

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- Secondary data use by integrated delivery systems allow enterprise wide assessment of patient safety and early detection of adverse events

- **Example:**

  KP pharmacy outcomes research group noted rise in deaths among member utilizing Vioxx.

Risk of Acute Myocardial Infarction and Sudden Cardiac Death with Use of COX-2 Selective and Non-Selective NSAIDs: Nested Case Control Study

***Lancet* 2005; 365: 475–81**

DJ Graham,[1] DH Campen,[2] R Hui,[2] M Spence,[2]
C Cheetham,[2] S Shoor,[2] G Levy,[2] and WA Ray[3]
[1]Office of Drug Safety, US Food and Drug Administration
[2]Kaiser Permanente, California
[3]Vanderbilt University School of Medicine

Secondary Data Use: Research

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- Research centers established in all eight KP regions
- Topics range from health services to longitudinal genetic studies
- Able to leverage clinical data from KP membership
- Recognized importance of firewall between clinical operations and research (Common Rule)

Example:

Diabetes Care Quality in the Veterans Affairs Health Care System and Commercial Managed Care: The TRIAD Study
Annals of Internal Medicine
17 August 2004 | Volume 141 Issue 4 | Pages 272-281

The Future

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- Widespread adoption of EHRs (KP HealthConnect) will enhance the availability of accurate and actionable secondary data
- Integrated systems (virtual or real) will have the ability to “learn” from clinical and population outcomes
- Data driven feedback will become more and more real time

Conclusions

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- Secondary data will be increasingly available from multiple sources
- Integrated delivery systems are currently aligning and utilizing data for multiple purposes, e.g. quality, safety, etc . . .
- Standardization is critical to maximize the utilization of data
- EHRs remain the key tool for data collection and provision of evidence based care

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Thank You

Internal Data Sources

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- KP HealthConnect (KPHC)
  - Integrated EHR across all eight KP regions
  - Powerful tool for data collection and aggregation
- Legacy data systems
  - Conversion essential and ongoing
  - Mix of clinical and business / financial data
- Population Care Information System / Registries
  - Panel Management
  - Essential component to manage chronically ill populations

Secondary Data Aggregation: Issues for consideration

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- Applicable across virtually all medical conditions
  - Particularly useful for chronic or complex conditions
- Critical barrier regarding source and quality of data
  - Information is widely dispersed, in paper format, proprietary or in non-clinical (billing) systems
  - Aligned systems strive to mitigate this issue
- Ability to organize data into care episodes remains difficult. Many technologies exist but remain proprietary, making comparability difficult.

Federal Regulatory Structure: Quality Improvement

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- The HIPAA Privacy Rule establishes a foundation of Federal protections for Personal Health Information
- HIPAA permits a covered entity to use and disclose protected health information, with certain limits and protections, for treatment, payment, and health care operations activities
- This includes conducting quality assessment and improvement activities, population-based activities relating to improving health or reducing health care costs, and case management and care coordination

Federal Regulatory Structure: Research

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Human Subjects Protection ***Office of Human Research Protections and Food and Drug Administration (DHHS)***

Federal Funds Administration ***Office of Management and Budget (White House)***

HIPAA Privacy Rule ***Office of Civil Rights (DHHS)***

Research Misconduct ***Office of Research Integrity (DHHS)***

Training ***National Institutes of Health (DHHS)***

Conflicts of Interest ***Public Health Service (DHHS)***