Kaiser Permanente Clinical Inquiry at the Point of Care

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About Kaiser Permanente

- **Nation's largest nonprofit health plan**
- **Integrated health care delivery system**
- **8.7 million members**
- **14,000+ physicians**
- **28,000+ nurses**
- **160,000+ employees**
- **Serving 9 states and the District of Columbia**
- **32 hospitals and medical centers**
- **416 medical offices**
- **$34.4* billion annual revenues**

* 2006 revenues

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Kaiser Permanente's Unique Research Environment
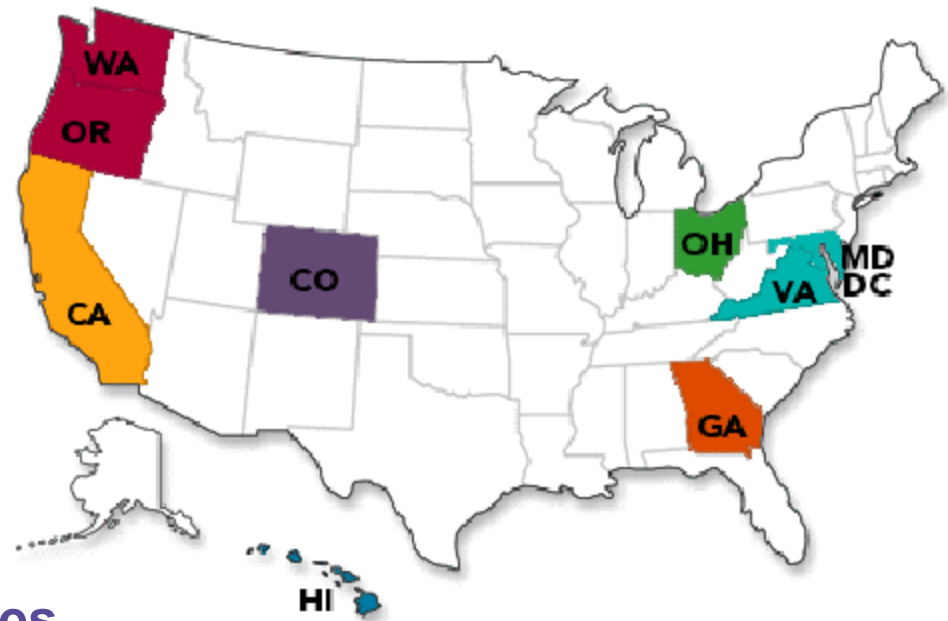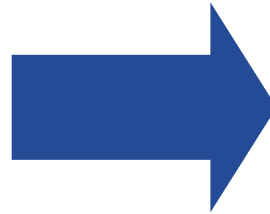
- **Stable and diverse (racially/ethnically, socio-economically)** <u>membership</u> **of over 8 million individuals**

- **Rich, longitudinal clinical electronic** <u>database</u> **that includes health care delivery, payment, decision-making and behavioral data -- in primary, secondary and tertiary care across inpatient and outpatient settings**

- **Committed and experienced** <u>research community</u>

- **Sufficient number of individuals with** <u>diverse disease conditions</u>**, e.g., asthma, HIV, diabetes, rare conditions, etc.**

- **External, well-established** <u>partnerships</u> **with traditional academic centers and research networks in which Kaiser Permanente brings unequalled value to the research collaboration**

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CER at Kaiser Permanente - Past Studies

- **KP researchers have created the largest database ever to address the safety of maternal medication use during pregnancy, and potential effects upon the developing fetus.**

- **Participated in the nation's largest post-marketing safety surveillance for vaccines, the CDC-funded Vaccine Safety Datalink (VSD) project.**

- **Studies on effectiveness include:**
  - Venlafaxine versus other medications in the treatment of depression;
  - Use of financial incentives to increase adherence with guideline recommended care in depression;
  - Various anti-hypertensive agents as secondary-line therapy in hypertension;
  - Drug-eluting versus bare metal stents in patients with coronary heart disease;
  - Bariatric surgery versus usual medical therapy in obese patients with type 2 diabetes mellitus;
  - Different diabetes treatment approaches;
  - Treatment responses to darbopoetin versus epoetin, drugs used in cancer patients to treat anemia and increase hemoglobin levels; and
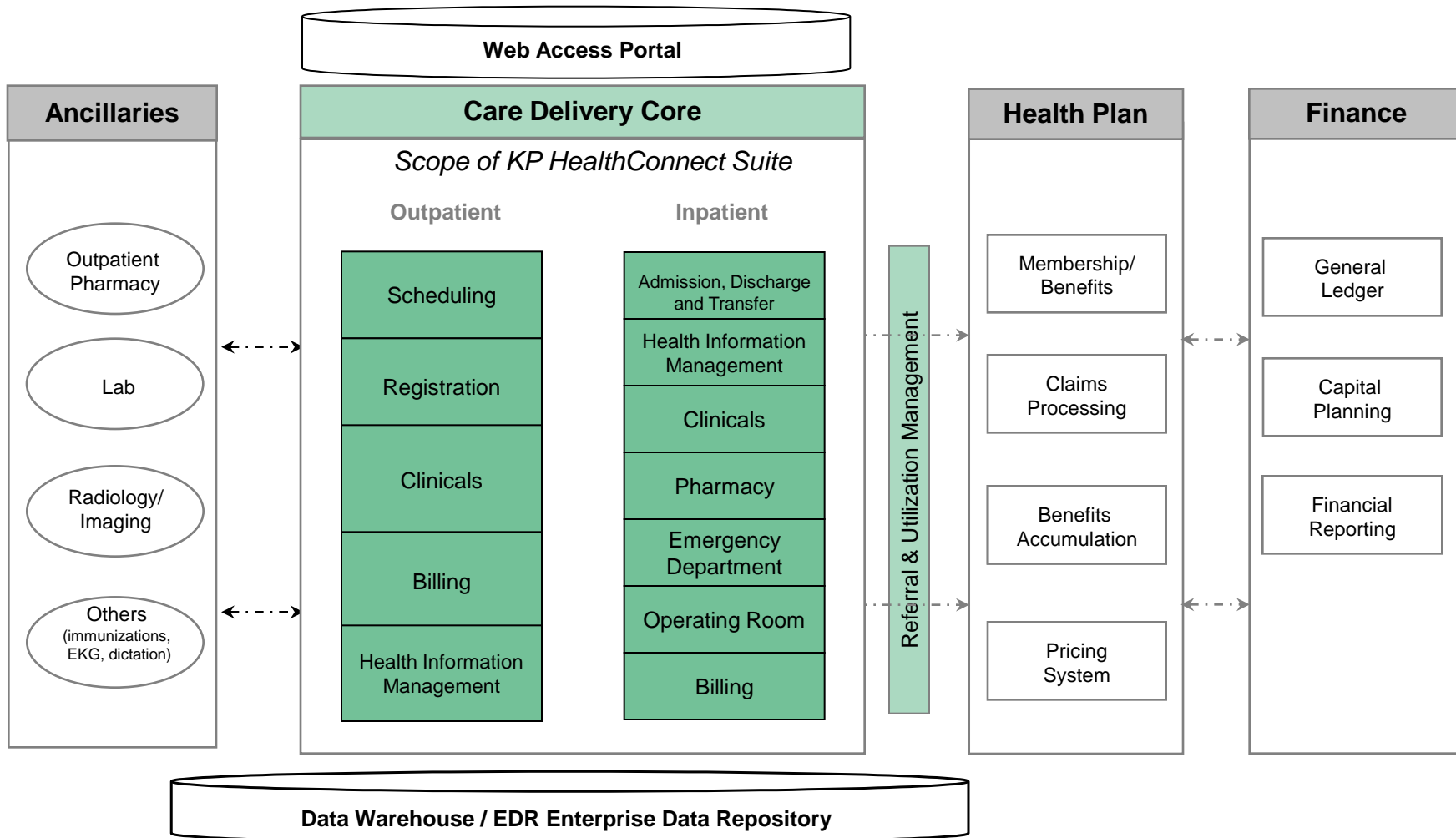 - Converting statin therapy from brand name Zocor to generic lovastatin.

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CER for a New Generation….

Marcus Welby, MD

"Marcia Welbyte," MD

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EMR Integration into Research

Web Access Portal

Ancillaries	Care Delivery Core	Health Plan	Finance

Scope of KP HealthConnect Suite

Outpatient / Inpatient

Ancillaries:
- Outpatient Pharmacy
- Lab
- Radiology/ Imaging
- Others (immunizations, EKG, dictation)

Care Delivery Core — Outpatient:
- Scheduling
- Registration
- Clinicals
- Billing
- Health Information Management

Care Delivery Core — Inpatient:
- Admission, Discharge and Transfer
- Health Information Management
- Clinicals
- Pharmacy
- Emergency Department
- Operating Room
- Billing

Referral & Utilization Management

Health Plan:
- Membership/ Benefits
- Claims Processing
- Benefits Accumulation
- Pricing System

Finance:
- General Ledger
- Capital Planning
- Financial Reporting

Data Warehouse / EDR Enterprise Data Repository

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Unique Data Source – Population Care Tools

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Information at the Point of Care

- Access to library of KP knowledge and best medical practices at the point of care

- Tools and templates that facilitate the delivery of evidence-based medicine

- Dynamic decision-support tools that enhance quality and patient safety

  - Drug-Drug Interactions Alerts
  - Drug Allergy Alerts
  - Best Practice Alerts
  - Health Maintenance Reminders
  - Alternative Order and Medication Alerts

- Patient education and tools to support self-care

Patient Engagement

KP HealthConnect allows members to send secure email, review lab results, medication lists, and other personal medical information via KP.org using a secure and password-protected Internet connection. At any time, day or night, members can schedule or cancel appointments, pay bills, request medication refills, and ask for referrals. Members' personal health information will be seamlessly integrated into KP.org to help them better understand the care they're receiving - and build a stronger relationship with their KP providers.

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CER and Clinical Pathways

- Start with the evidence
  - Randomized controlled trial to consensus-based evidence

- Workflow process
  - How those steps fit together and who does them

- Informatics and clinical decision support
  - The tools that make the right thing the easiest thing to do

- Analytics and evaluation
  - Are the steps being accomplished reliably, and are the expected outcomes being achieved
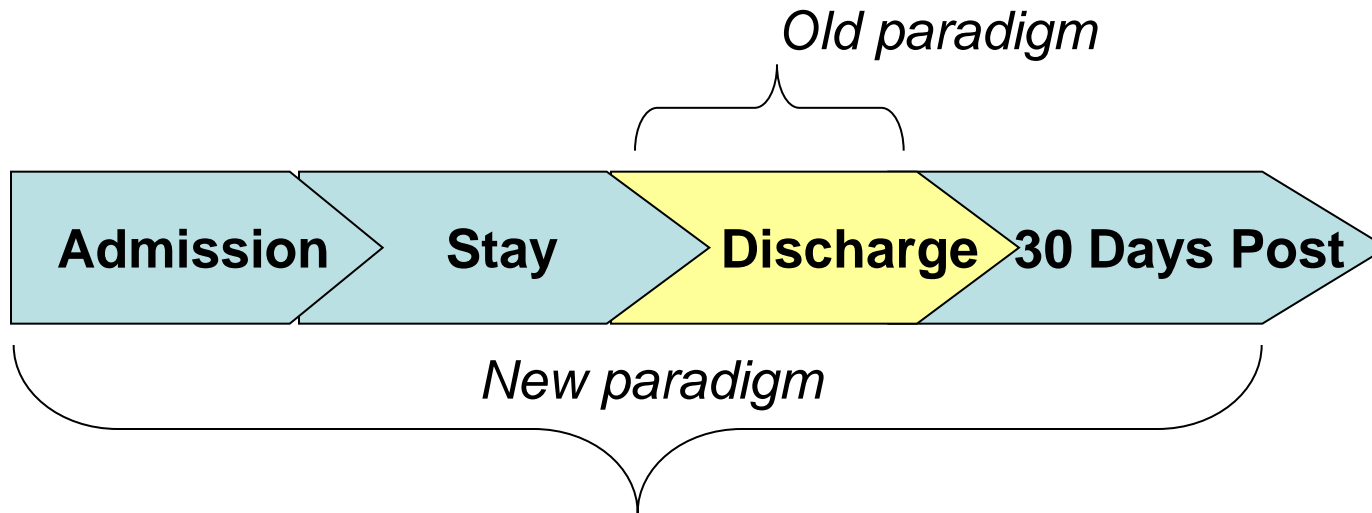
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A-L-L and Archimedes

- Launched in 2004

- Targeted 400,000 KP members in 8 regions

- Diabetics $\geq$ 55, and all CAD patients

- Aspirin, ACEI, and lipid-lowering medications

- Health benefits predicted by Archimedes modeling

- Successful practices used health IT systems and registries to identify eligible members

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Compare Clinical Pathways - Complex Care Demonstrations

Setting	Program	Description
A	Adv Care Panel	• High Likelihood of Hospitalization (LOH) • Home-based primary care • MD lead, RN, Pharm D, SW
B	KPCares	• Institutionalized Elderly • SNF/ALF based primary care • NP lead, SW, Pharm D, RN
C	Special Care Initiative	• High LOH, DM, CHF, CAD diagnosis • Telephonic complex case management • RN, SW, PharmD, NP
D	CVD program	• High LOH, CVD diagnosis • Clinic-based disease management • NP, Pharm D, LPN

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KAISER PERMANENTE. thrive

Old paradigm

Admission > **Stay** > **Discharge** > **30 Days Post**

New paradigm

Assessment of Patients Needs/Risk Stratification

Develop a Plan of Care

Medication Management

Accurate and Timely Exchange of Health Care Information

Appropriate Follow-up

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KAISER PERMANENTE. **thrive**

- Investigators can be fully integrated in the care environment

- Merge of both traditional evidence-based <u>medicine</u> and evidenced-based <u>practice</u>

- Extrapolation occurs on the ground as care is delivered

- Allows learning to occur from shared baselines and practice

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Critical Components

- Identify Priority Populations, pathways and conditions
  - Understand the clinical problem

- Capture data as care is delivered

- Create networks of providers with shared pathways and across all care settings

- Analytics integrated with care delivery

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