Interactive Web Page for Embedding Guidance In the Kaiser Permanente Electronic Health Record

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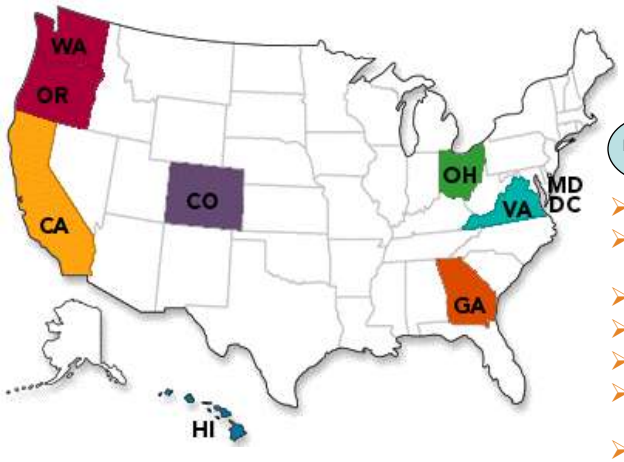
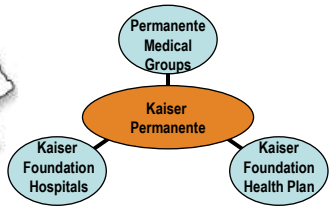
Kaiser Permanente: Largest Non-Profit Health Care Program in the United States





- Founded in 1945
- 8 regions in 9 states and District of Columbia
- 8.6 million members (as of 12/09)
- 15,129 physicians (as of 12/09)
- 164,098 employees (as of 12/09)
- KP Care Management Institute (CMI)
- KP National Guideline Program (NGP)

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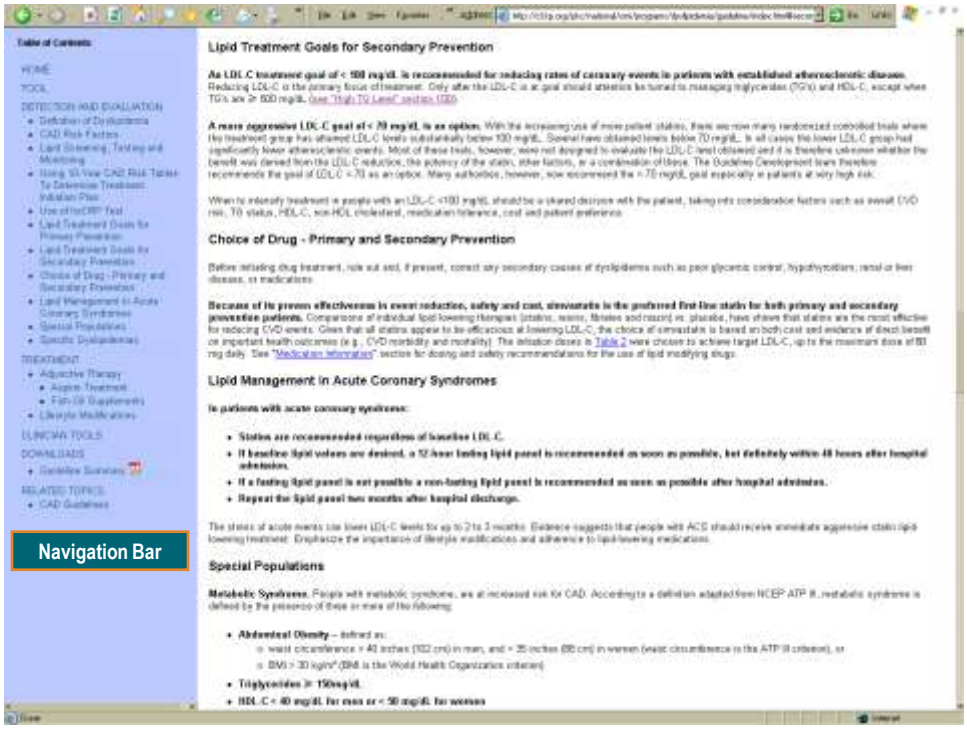
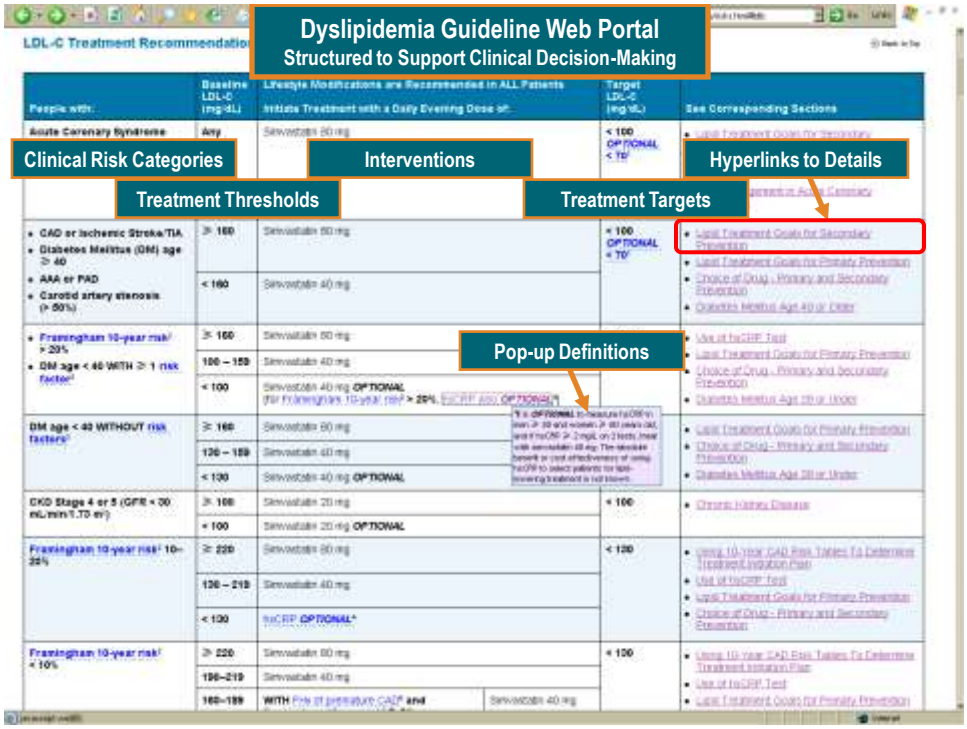
Overview

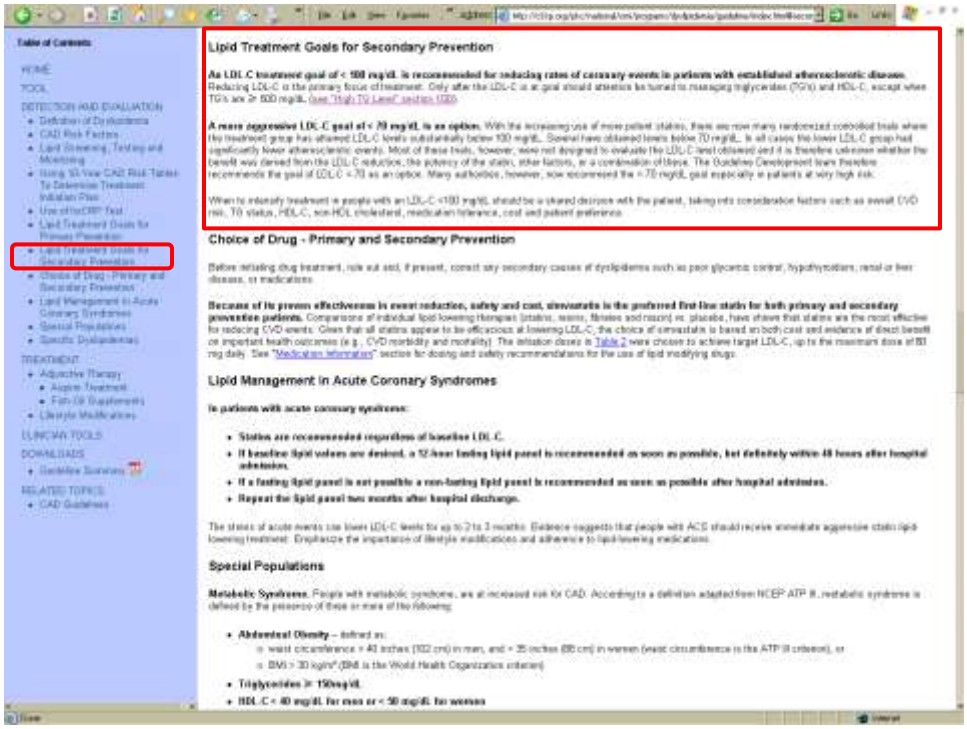
- Background:
  - Guidelines must be implemented to impact health outcomes
  - Guidance can be embedded in interactive web pages
  - Linking interactive web pages to electronic health records (EHRs) has significant potential for impact
    - Automated individual-level data transfer
    - Meta-tagged links
      - Place Orders from a web page into an EHR

Learning Objectives

- After this session, attendees will be able to:
  - Describe elements of a guideline web page that can address the needs of clinical users at the point of care
  - List three levels of potential interactivity for guideline web pages
  - Explore the pros and cons of interactive web pages for embedding guidance in their own systems

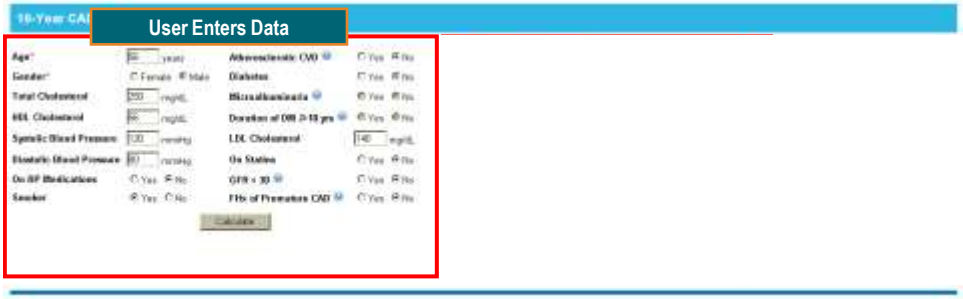

Navigation Bar
Lipid Treatment Goals for Secondary Prevention
Choice of Drug - Primary and Secondary Prevention
Lipid Management in Acute Coronary Syndromes
Special Populations

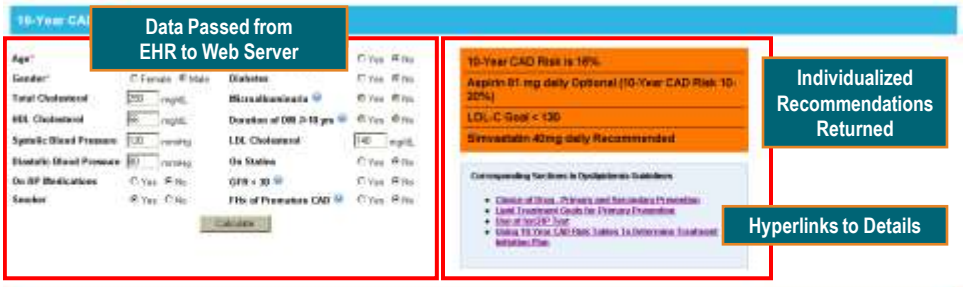

Dyslipidemia Guideline Web Portal
Structured to Support Clinical Decision-Making
Clinical Risk Categories
Interventions
Hyperlinks to Details
Treatment Thresholds
Treatment Targets
Pop-up Definitions



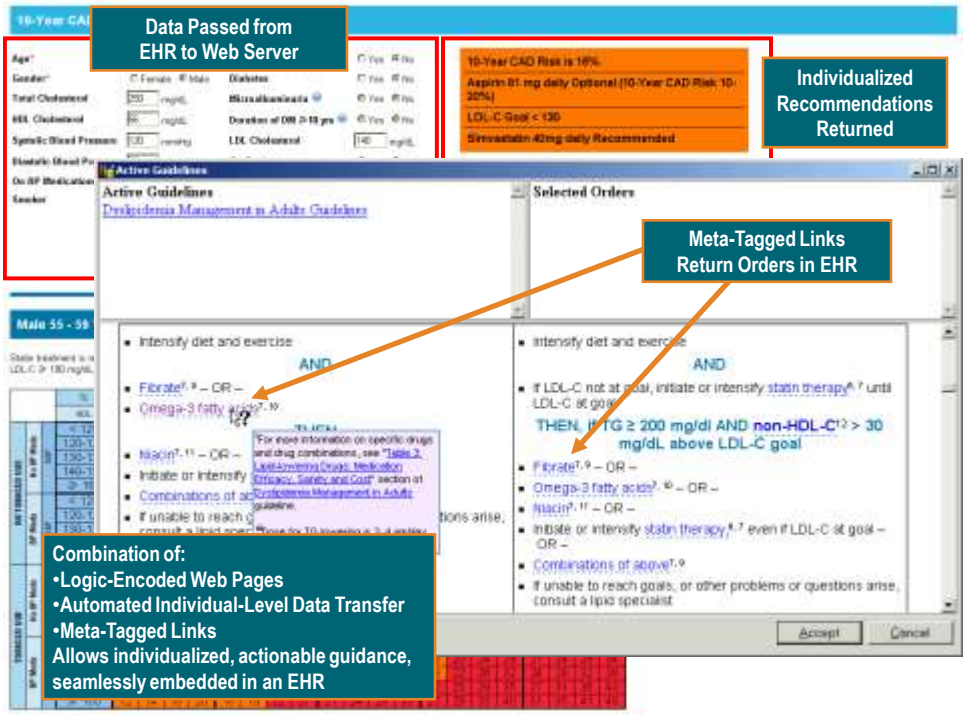
Logic-Encoded Web Pages, Data Transfer, & Meta-Tagged Links

- Logic-encoded web pages
  - Require manual data entry
  - Return individualized recommendations
- Automated individual-level data transfer
  - Pass detailed information from EHR to web servers
- Meta-tagged links
  - Pass Orders from web servers to EHR
  - "Actionable" recommendations & graphic/text algorithms
- Combination allows individualized, actionable guidance, seamlessly embedded in an EHR


User Enters Data


Data Passed from EHR to Web Server
Individualized Recommendations Returned
Hyperlinks to Details


Male 55 - 59 Years Old
CAD Risk Placed in Context with Gender/Age Group & Other Risk Factors



Interactive Web Page Conclusions

- Interactive web pages can support the needs of clinical users at the point of care
  - Present actionable guidance
  - Provide entry point into larger guideline document
- Data transfer from an EHR to a web page can automate the presentation of guidance
- Functionality exists to turn interactive web pages into individualized, actionable guidance in an EHR
- Decision support logic can be encoded in the web pages, rather than built into EHR tools

Embedding Guidance in the Kaiser Permanente EHR

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