Electronic Health Record Visualization
A Brief Overview of HCIL’s Work

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Lifelines (1996)

Plaisant et al. CHI 1996
Recent Focus: Multiple Records

- Observational studies
- Recruitment for clinical trials
- Hospital metrics
- Alarm design and testing
- etc.

- Visualize, Search, Aggregate, Compare
A different way to *visualize*
Lifelines2 (2007-2010)

- Multiple records
- Temporal, categorical
- Point events
- Platform for new techniques

Wang et al. CHI 2008
Video Demo

- Contrast and Creatinine Scenario

Radiology Contrast

Creatinine High

14 Days

- Want to find patients who exhibit this reaction
  - How many?
  - How Severe?
PatternFinder (2006)

Fails et al. VAST2006
PatternFinder in Amalga (2008)

Results for: Contrast and Creatinine AMIA
Aligned by: Sentinel Event

Plaisant et al. AMIA 2008
A different way to search
Similan (2008)

- Searching for Similar Patients
- Draw pattern
- Similarity search
- Ranked results
- Avoids search cut-off

Wongsuphasawat et al. VAST2009
Limitations of Lifelines2 & Similan

- Categorical events only
- Point events only
- Do not accommodate richer medical data, schemas
- Cannot show all patients at once
- Sometimes users do not know what to search for
- Next generation visualization: LifeFlow
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For more information:
www.cs.umd.edu/hcil/temporalviz/