10x10 Course in Health Care Visualization and Analytics
Goal

• To develop a 10x10 course and curriculum on Health Care Visualization and Analytics that is educational, realistic, valuable to health care professionals (in academic medical center and industry)

• Secondary goal is to fulfill open education mission (maybe recorded content is free, but the effort to attain certification is at a cost)
Idea Team and Team members

- Randall Young, CDC
- Michael Ginda, CNS
- Liz Scheufele, CH by Deloitte
Benefit and Impact

- Increasing statistical and visualization literacy of the audience (currently has a very poor foundation) and help them mature to consume and produce information from and for data visualization

- Help with learning the practice of the design of visualization and applying analytics to health care data
  - Better marry the viz/analytics to the purpose of the use case
  - Helps design research questions more specifically and data requirements (bottom up approach)

- Better understanding of limitations and barriers to data (e.g., cleanliness, completeness, etc.) via hands on approach

- Already some professional course for health care visualization and analytics
  - Other courses appear to be more superficial, or do not go deep enough; our course is catered to professionals with experience in informatics and health care environment
  - (also have international known experts at our faculty)
  - Aligning with AMIA brings in a built in level of approval, audience, expectations
Audience

• Health care executives
• Health care professionals
• Industry professionals in health care
• Health care biostatisticians
• IT/Data analysts/Business analysts working in health care visualization and analytics
• Grad/med students
Resources

• University/College to support, facilitate
• Expertise for content development and teaching:
  • Data visualization experts
  • Health care informatics and visualization expert if possible
  • Health information research experience
  • Biostatisticians in health care
  • Data scientist in health care
• Datasets for study, projects
• Tools, techniques and technologies
  • LMS, common model for access
• Online Model
  • ?Live interaction?
  • Live F2F? At AMIA conference?
Resources

- **Prerequisites**
  - Background in Biomedical Informatics (recommend 10x10 course that is introductory)
  - Basically, health care content knowledge

- **Course topics**
  - Foundations in Visualization Techniques
  - Foundations in Biostatics and Analytics
  - Workflow design and Data processing
  - 3 prong approach
    - Theory (information visualization theory – about 3 classes)
    - State of the art techniques that are being implemented
      - Case study
    - Hands on experience with canned dataset
  - **Constructive Critique**
    - Monitored peer review (peers review, with teachers reviewing the reviews, with rubrics to follow)
Course Topics
Target