

Population Health Colloquium

The Leading Forum on Innovations in Population Health

A framework for the next generation of advanced analytics: Thoughts for hospitals and payers



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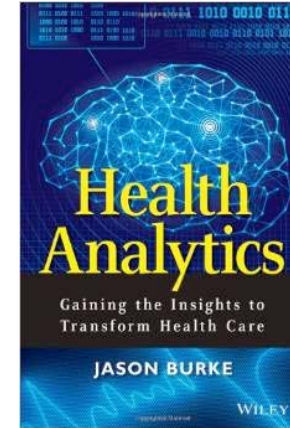
UNC
HEALTH CARE



UNC
SCHOOL OF MEDICINE

Introductions

- Jason Burke
 - Senior Advisor, UNC Innovation Center
- Michael Cousins, PhD
 - President and CAO, Forecast Health



Health Analytics:
Gaining the Insights to Transform Health Care
Jason Burke, Wiley Publishing, 2013

Agenda

1)Advanced analytics framework

2)Predictive performance with claims vs EHR/consumer data and white box analytics



Where are your analytics looking?



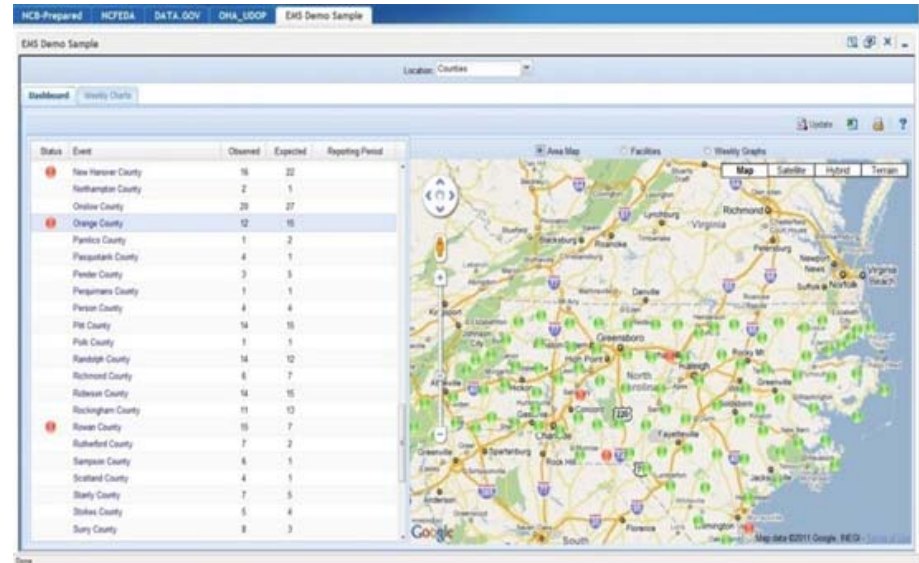
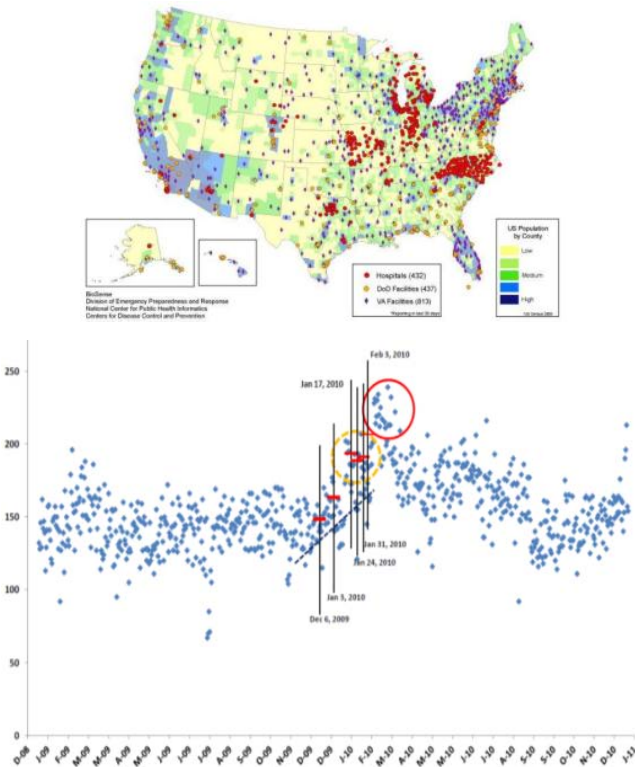
The Promise of Population Health Analytics

*Population health analytics is the domain of advanced analytics focused on providing strategic insights into the inter-dependencies in health outcomes, profitability, and preferences and behaviors. **



* Burke, J (2011) "The Next Era is Here", A Shot in the Arm, SAS Institute

Example: National Collaborative for Bio-Preparedness



Public / Private Partnership



THE UNIVERSITY OF NORTH CAROLINA IN CHAPEL HILL



Homeland Security



Do we care about “big data” or “big insights”?



Data Issues

Storage
Structure
Timeliness
Semantics &
Language
Validity
Reliability
Triage
Pedigree



Insight Issues

Innovation
Health Outcomes
Profitability
Productivity
Translational
Science
Customer Intimacy
Risk
Value

PQRI, Meaningful Use, ACO, Medicare, NQF, NCQA, AHRQ...

**In an industry with more than
1,000 measures, how will we
know which ones actually matter?**

Example: Health Outcomes Analysis

What Happens with “Patients Like This One”



Credits: Flickr user jonicdao

Claims vs EHR/consumer-based models ... and white box analytics

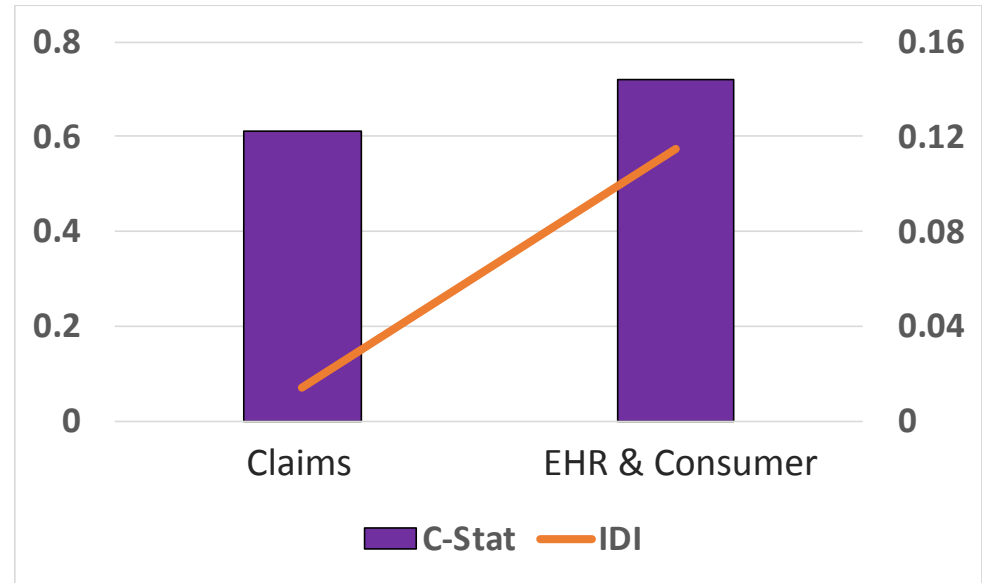
**Finding patients “like this one” then ...
predicting patients like this one:**

- Use claims data for in/out of system utilization
- Use EHR and person-level consumer data for detailed profiling and more accurate predictions

Then ... knowing why patients like this one are at risk:

- Use white box analytics, not black box analytics, to understand a patients' risk drivers and take action
- Use black box analytics for exploratory data mining

Readmission Prediction



EHR and consumer-based models as compared to claims:

- C-statistic 18% higher
- Integrated Discrimination Improvement 721% higher

Summary

- 1) Need forward-looking analytic perspectives
- 2) It's time to converge multiple sources of data to obtain insights
- 3) Just because data is available doesn't mean it's important – we need to be skeptical and focus on what's actionable
- 4) Success is not just about “big data” -- use better data and better analytics to get better insights

Thank you!!

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