

Overcoming Barriers in a Complex Adaptive System

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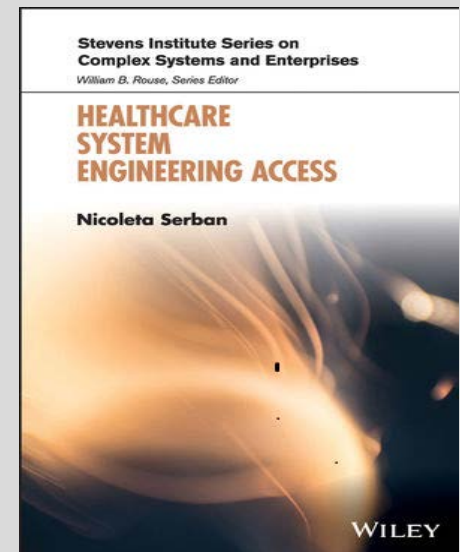
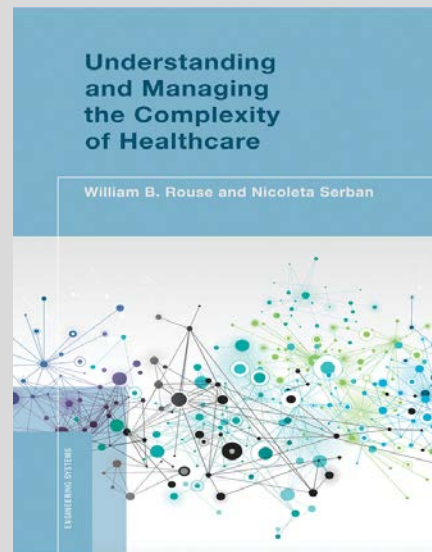


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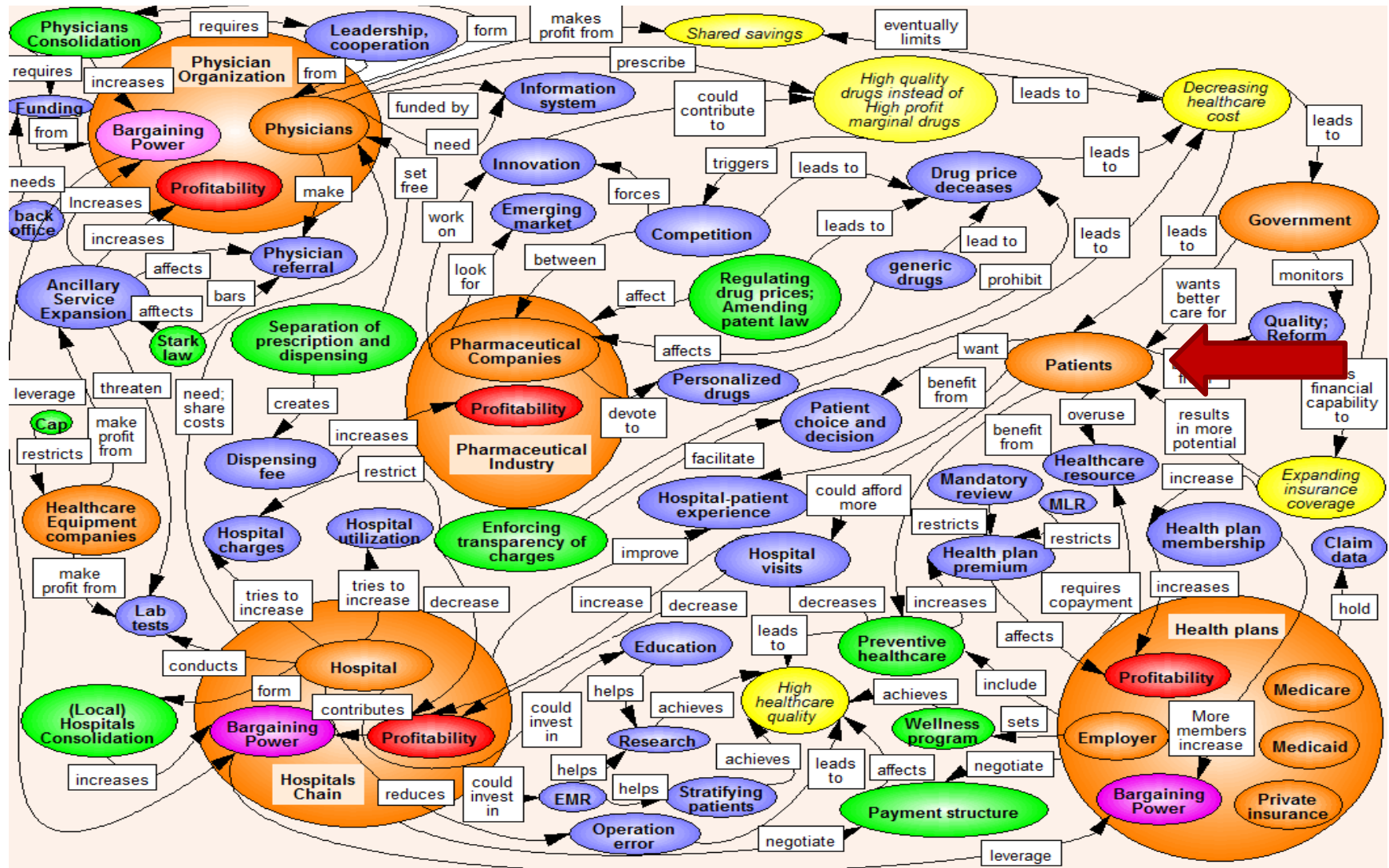
- Editor for Annals of Applied Statistics
- 60+ journal articles & 70+ presentations/seminars
- Collaborations: Children's Healthcare of Atlanta, DCH, DPH, VA, CDC among others

My favorite quote, a well-worn slogan “in God we trust—all others bring data.”

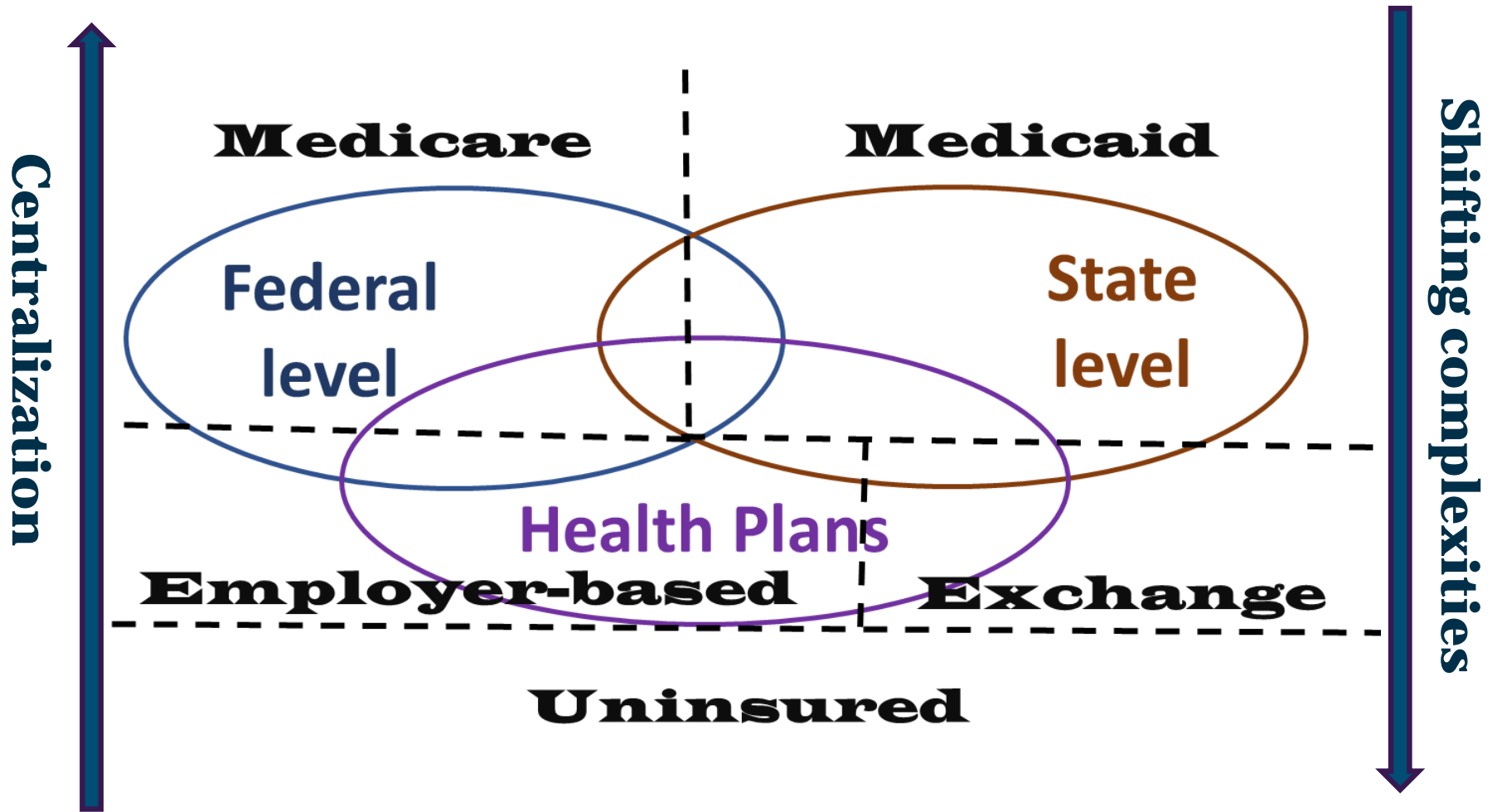


Healthcare Complexity

Healthcare Complexity



System Fragmentation



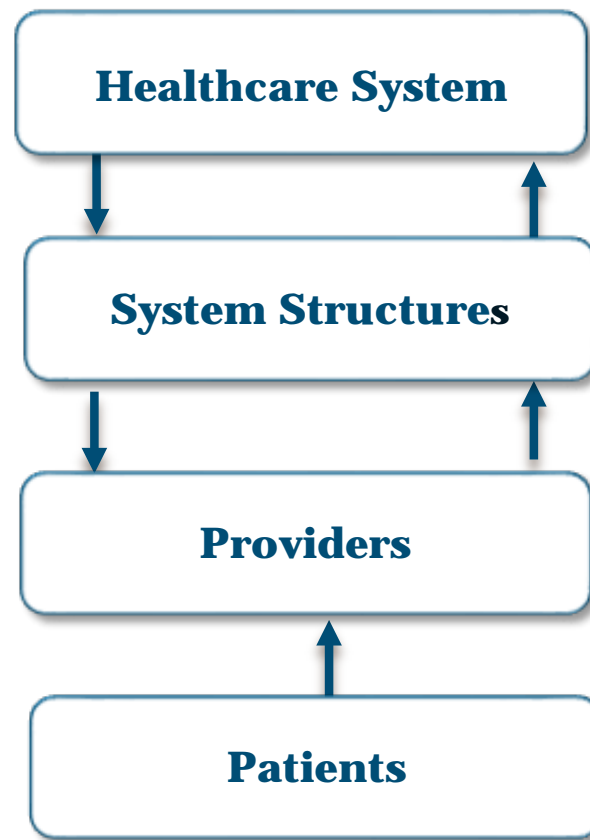
Policy: Who is in charge?

System-level policies (e.g. PPACA)
System-level oversight (e.g. FDA, CDC, HHS)

State-level policies (e.g. reimbursement, scope of practice, independence practice)
Health plan participation (e.g. marketplace)

Who? E.g. opt-in/out of health plans;
What? E.g. training requirements; services provided
Where? E.g. Clinic, home-based, school-based

Health education, health behaviors



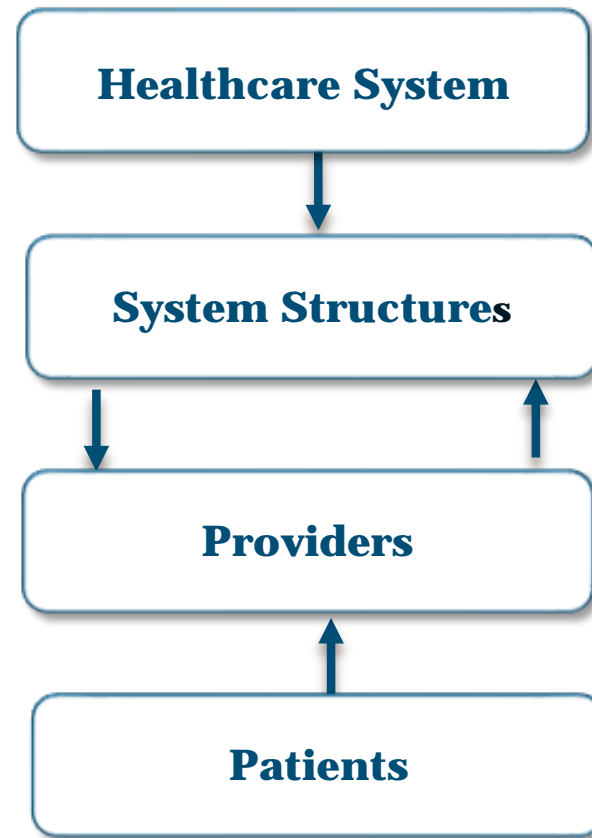
Cost: Who is in charge?

Expenditure: federal programs, state-level programs

Cost: reimbursement levels, services to be reimbursed; deductibles; premiums

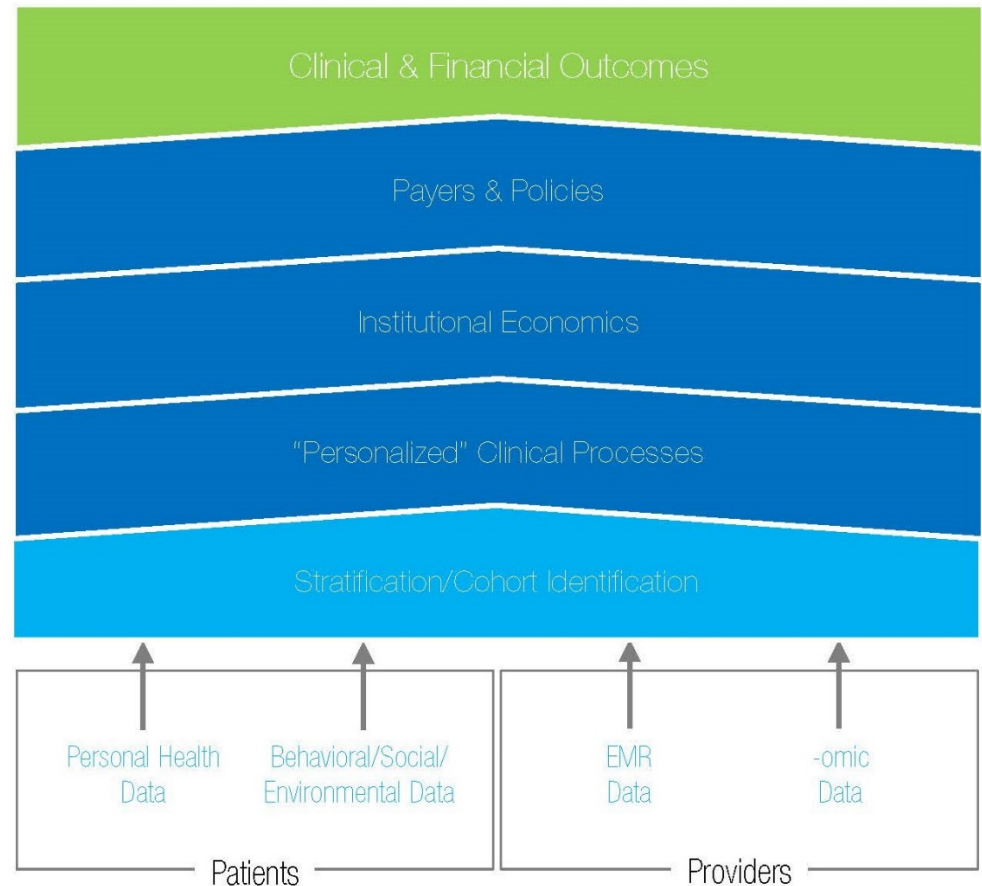
Cost: services submitted for reimbursement, services provided depending on cost levels, patient acceptance

Expenditure: deductible, premium, opportunity cost, lost productivity,



Data Challenges

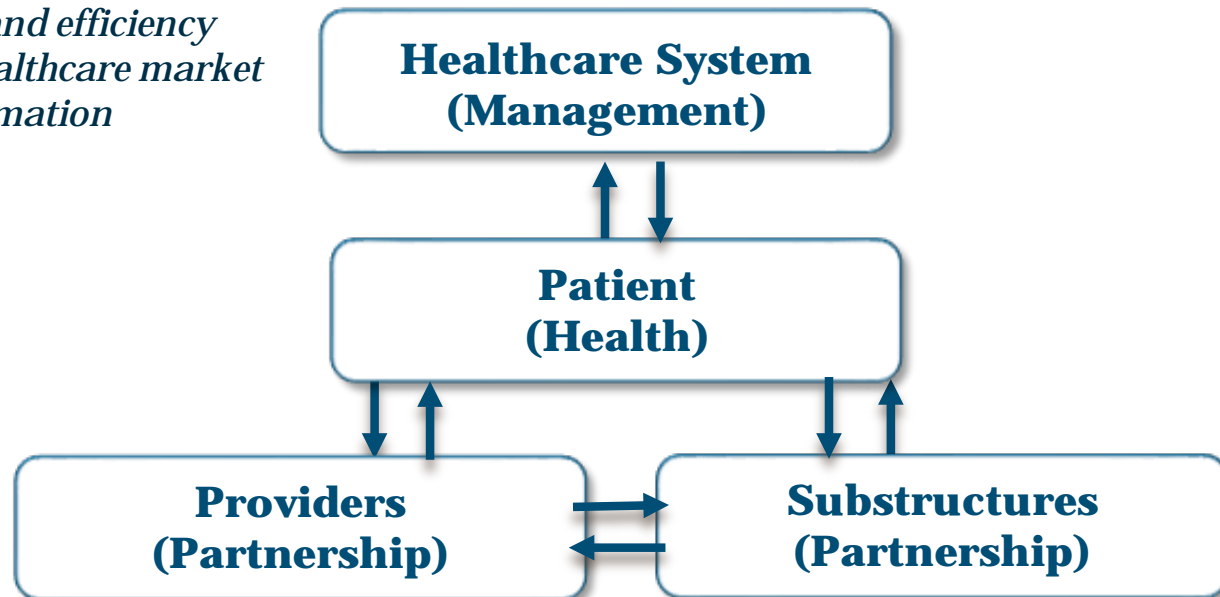
- Data sources and availability: *What data? Where to get data?*
- Data integration: *How standardized?*
- Data access: *Who to use the data? Who own them?*
- System transformation: *What is the evidence?*



Overcoming Barriers

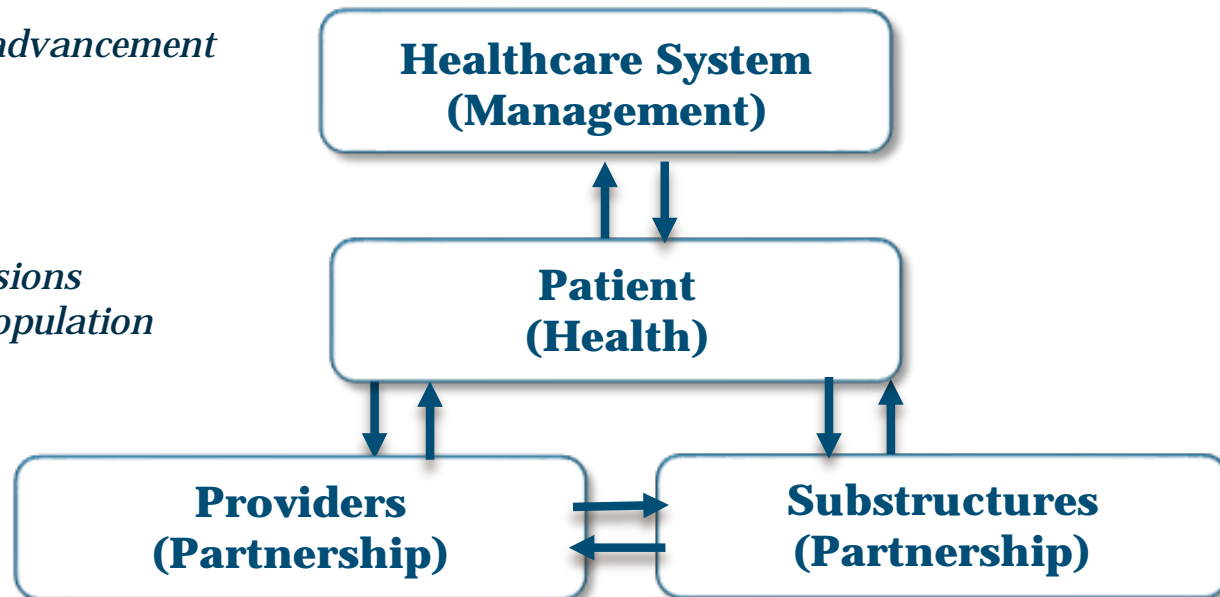
Opportunities for Change: Policy

- *Aligning incentives with quality and efficiency*
- *Correcting price signals in the healthcare market*
- *Producing and using better information*
- *Emphasize health not healthcare*
- *Empower decision making*
- *Reduce complexity*
- *Partner in management, design and value generation*

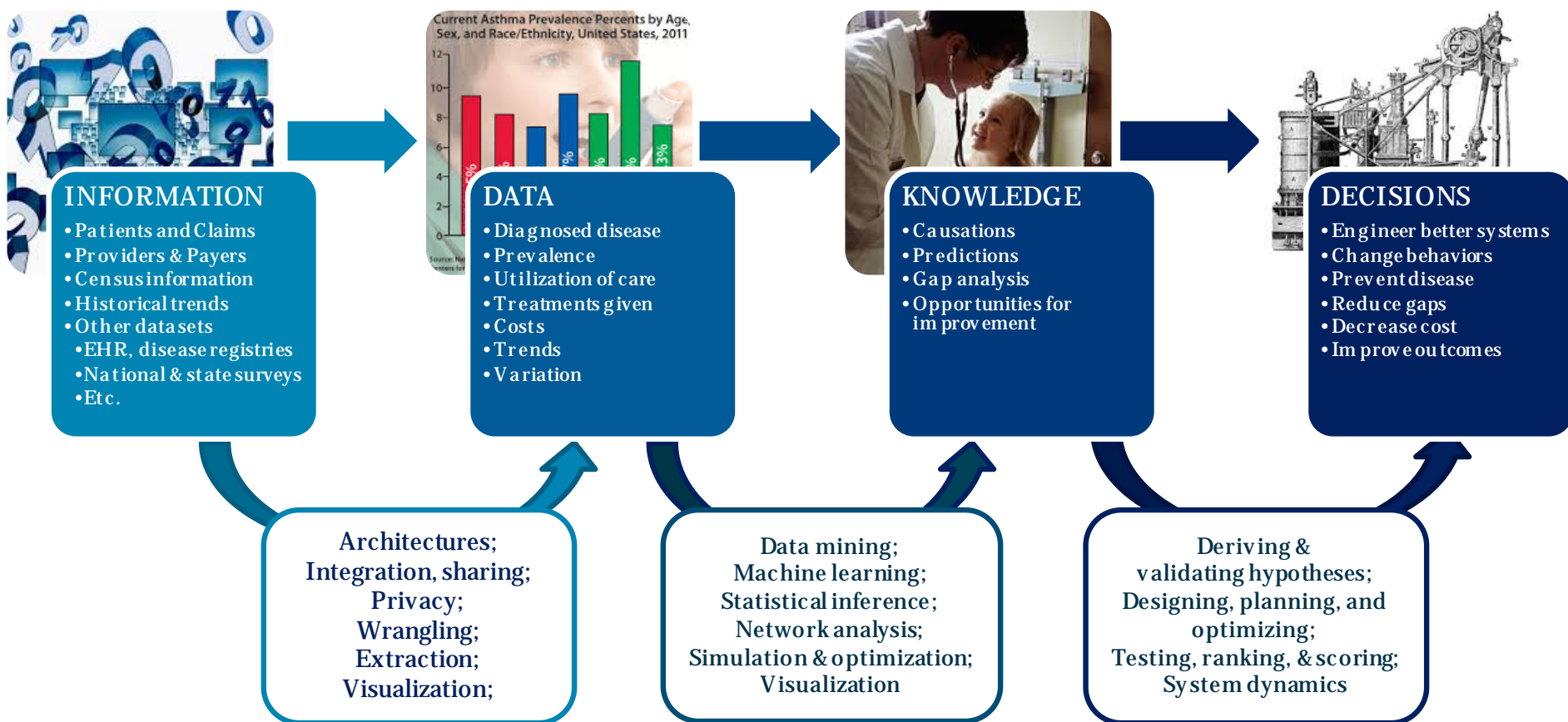


Opportunities for Change: Cost

- *Align medical and technological advancement with value generation*
- *Apply system engineering*
- *Enable making value-based decisions*
- *Target prevention to high-risk population*
- *Promote transparency in costs*
- *Adopt new revenue models*
- *Develop data systems*



Healthcare Engineering and Analytics

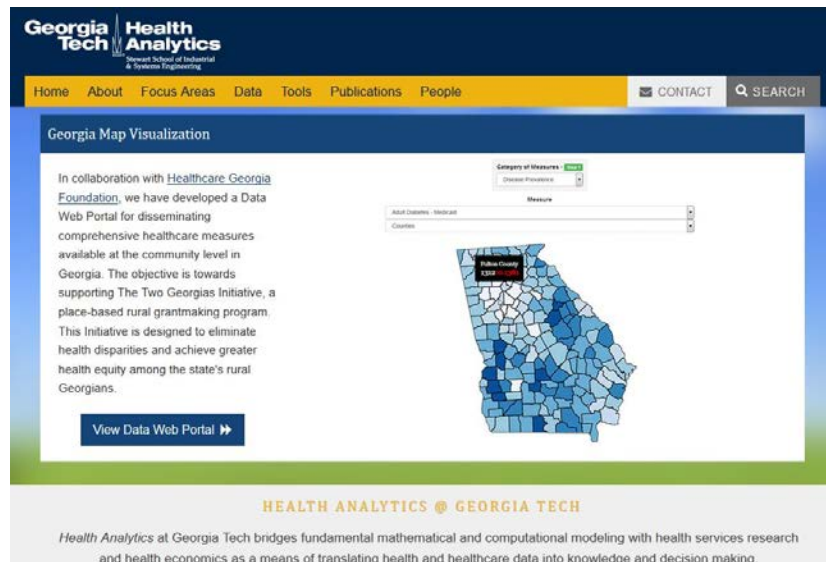


Contact

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<http://healthanalytics.gatech.edu>

A screenshot of the Georgia Health Analytics website. The header features the Georgia Tech Health Analytics logo and a navigation bar with links: Home, About, Focus Areas, Data, Tools, Publications, People, CONTACT, and SEARCH. The main content area is titled 'Georgia Map Visualization'. It contains a text block on the left describing a collaboration with Healthcare Georgia Foundation to develop a Data Web Portal for disseminating comprehensive healthcare measures available at the community level in Georgia. The text mentions 'The Two Georgias Initiative' and aims to eliminate health disparities and achieve greater health equity among rural Georgians. A 'View Data Web Portal' button is located below the text. On the right, there is a map of Georgia with county-level data visualization. Above the map, there are dropdown menus for 'Category of Measures' (set to 'Chronic Prevalence') and 'Measure' (set to 'Adult Diabetes - Standardized'). A tooltip for 'Fulton County' shows a value of '13.0%'.