

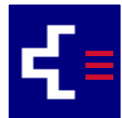


New Directions in HealthCare

J. Knox Singleton

Medical Automation International '07

“Vital Signs: Saving Lives, Cutting Costs”

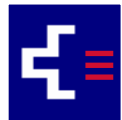


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Learning Objectives



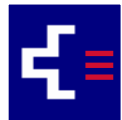
1. Understand principal challenges in health care delivery.
2. Identify most common areas of organizational strategic response.
3. Outline areas of high potential for application



Changes in Health Care Environment



1. Demographic changes
2. Payment pressures
3. Workforce shortages
4. Physician relationships
5. Clinical and information technology
6. Competition and regulation
7. Consumerism and transparency

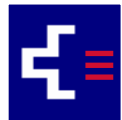


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Demographics Shifts



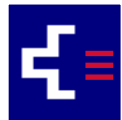
1. Aging-generated demand
2. Immigration-related demand
3. Graying of the baby boomers
4. Loss of coverage for pre-medicare population
5. Increasing disparity of health status



Payment Declines



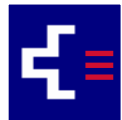
1. Utilization up/price down
2. Have and have not doctors
3. Trend to episodes of care
4. P4P
5. Return of capitation



Workforce Woes



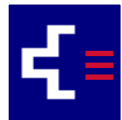
1. Disappearing nurses/inadequate resupply
2. 2.5 new MD's = 1 old MD
3. Public and private university consensus
4. Housing and transportation diminish supply



Declining Physician Economics



1. Rich get richer/poor get poorer
2. Medicare playing wack-a-mole
3. Stark laws limit outside income
4. Conflict changes in drugs/devices

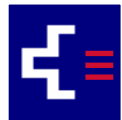


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Clinical & Information Technology



1. Transfer from employers to drug/device makers
2. IT spend – high and going higher
3. Consolidation of platform IT companies
4. Data mining and clinical process priorities

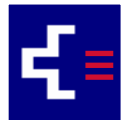


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Competition/Regulation



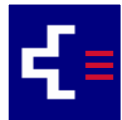
1. Competition ↓ Regulation ↑
2. COPN decline reversal
3. “Compete on quality and safety”
4. IRS benefit and service rules ↑



Consumerism/Transparency



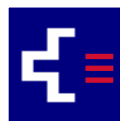
1. Institution and doctor-specific disclosure
2. Price disclosure requirements
3. Safety and quality event visibility
4. Ranking intermediaries grow



Challenges for Hospitals & Physicians



1. Declining practice economic vitality/doctor shortages
2. Declining hospital economics
3. Demand for services ↑
4. Large capital requirements for replacement infrastructure
5. Providing services to growing uninsured/underinsured populations

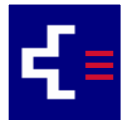


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Private Practice Decline



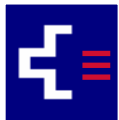
1. Growing shortage of MD's
2. Coverage of Emergency Departments and Inova
3. Aging practice style/skills shortage
4. Inability to expand services



Declining Hospital Economics



1. Lower margins/less debt/less spending
2. De-marketing certain services
3. Slower technology diffusion

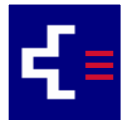


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Growing Demand for Services



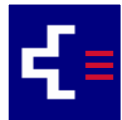
1. Aging and in-migration
2. Most demand is low pay/public payers
3. Shifting of payment responsibility to consumer
4. Technology growth still major factor



Capital Squeeze



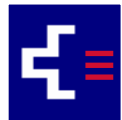
1. IT vs. bricks and mortar
2. Replacement vs. new technology
3. Safety required investments
4. Debt capacity/cash from operations sliding



Growing Uninsured



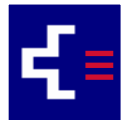
1. Focus of public policy
2. Lots of children
3. Increasing diversity and pre-medicare
4. Advent of chronic disease
5. Housing and home based care related needs



Hospital/Doctor Response?



1. Move to “focused factory” approach
2. Multispecialty “Mayo Clinic” model
3. Employed high acuity doctors
4. Ownership of health-related education
5. Promotion of system brands
6. Expanded investment in technology

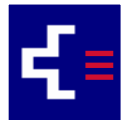


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Why Focused Factories?



1. High volume/low cost
2. High quality, safety, outcomes
3. Less capital/less duplication
4. Shared ownership potential

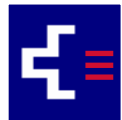


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Why Mayo Clinic Model?



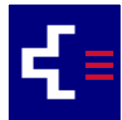
1. Internal referral
2. Economies of scale – IT, Ancillaries, Mgt
3. Better brand appeal to consumers
4. Better control of quality and productivity



Why Employed MD's?

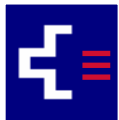


1. Aligned economics incentives
2. Malpractice coverage
3. Hospital/professional economic policy
4. Corporate employment benefits –
schedule, call, etc.



Why Owned Health Education?

1. Only alternative
2. Synergy with employment brand perception
3. Enhanced recruiting
4. Reduced turnover and orientation costs

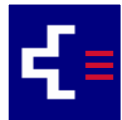


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Why System or Clinic Brands?



1. More consumer decisionmaking/more control
2. Inherent economies of scale
3. Build customer loyalty
4. Move allegiance from doctor to hospital (e.g. Mayo)

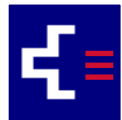


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Drivers of Technology Investments



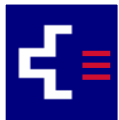
1. Improve productivity
2. Improve system efficiency
3. Improve clinical process safety and effectiveness
4. Create new system capabilities



Productivity Improvement



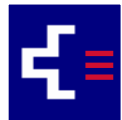
1. Cycle time, e.g. CAT scan, X-ray
2. Production costs, e.g. lab, pharmacy
3. Reduced errors/waste, e.g. pharmacy robots
4. Capital utilization, e.g. system-wide scheduling



System Efficiency



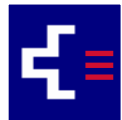
1. Home-based care, e.g. home monitoring
2. Doctor/hospital records, e.g. test duplication
3. Case management systems, e.g. reduced admissions
4. Patient flow softime, e.g. shortened ALOS



Improve Clinical Outcomes



1. Reduce drug errors, e.g. pharmacy bar coding
2. Reduced nursing errors, e.g. closed loop monitor systems
3. CPOE, e.g. less protocol variation
4. Reduced surgical errors, e.g. robotic surgery

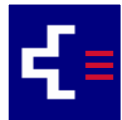


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Not So Futuristic Capabilities?



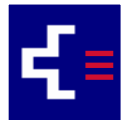
1. System-wide EMR/EHR
2. System-wide scheduling and access to services
3. Telework professional productivity, e.g. radiologists, pathologists, diagnostic interpretation
4. On line shopping and price feature comparison by consumers
5. eED, eConsults, eSecond opinions, eClinics



Self Assessment Questions



1. What are the principal changes occurring in the health care environment?
2. What are the primary challenges facing doctors and hospitals?
3. What are some of the strategic responses to these challenges?
4. What areas of health care currently utilize Automation and Technology solutions?
5. Where will opportunities be found for technology/automation robotics in the future?



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