

NANT 2018
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The Economics of Dialysis

What do we mean by Economics?

- Economics is a social science concerned with the production, distribution and consumption of goods and services.
<https://www.investopedia.com/terms/e/economics.asp#ixzz59dH9lPP6>
- Macroeconomics studies the overall economy.
 - Today's Focus: Our industry in the U.S.
- Microeconomics focuses on how individual consumers and producers make their decisions.
 - Today's Focus: Providers
- Thomas Carlyle, 1849: The Dismal Science
 - Malthus?

Macroeconomics

Economic Indicators

- **Gross Domestic Product**
 - Valuation of Goods and Services
- **Retail Sales**
 - Measure of volatility/inflation
- **Industrial Production**
 - Capacity Utilization
- **Employment Data**
 - Economic Growth/Currency strength
- **Consumer Price Index**
 - Inflation

Industry

- **Payor Focus (CMS) Changing**
 - Bundled Services
 - ESRD Quality Incentive Program
 - Star Rating System
- **Private Payors Following Suit**
- **Technology**
 - Healthcare Management
 - Billing
 - Data
 - Automation

Macroeconomics

Growth

- Improved Outcomes = Census Growth
 - Patient Oriented Outcome
 - Industry Oriented Outcome
- Census Growth = More Technology
- More Technology = More Data

Data

Data Generation

- Healthcare Management
- Equipment Technology
- System Automation

Data Usage

- Volume
- Data Mining
- Data Analytics

The Paradox of Technology

Sidebar:

What can be done by Tech?

Past: Human touch

Present: Rule bound

Future: What will AI bring?

1. New Technology

1. Simplifies life by improved function.
2. Harder to learn and use.

2. Technology has unintended consequences.

1. Email dramatically improved communication.
2. Email consumes our work hours.

3. Innovative Technology in Healthcare Acts Abnormally

1. Technology Reduces Costs in Most Industries

1. Computers: Better, faster, cheaper than ever.

2. Improved Technology in Healthcare tends to increase costs.

1. Largely systemic; no incentive to use less expensive tech; Drs. don't know costs

<https://www.technologyreview.com/s/518876/the-costly-paradox-of-health-care-technology/?set=518866>

Disruptive Influences

Disruptive Technology

- Ford
 - A better horse
 - A better process
 - Japanese Industry
- Personal Computers
 - Ubiquitous
- Pocket Computers (Cell Phones)
 - Not disruptive as phone
 - Disruptive as replacement for PC.

Disruptive Innovation

- Apple IIe and Digital Equipment
 - Same tech, marketed as a toy
- Online Stock Brokers
 - Same product, new method
- Telehealth
- Home Dialysis
 - NxStage
 - Not new tech
 - New approach to specific segment.

<https://hbr.org/2015/12/what-is-disruptive-innovation>

Carl Christensen

Microeconomics

Patient Care

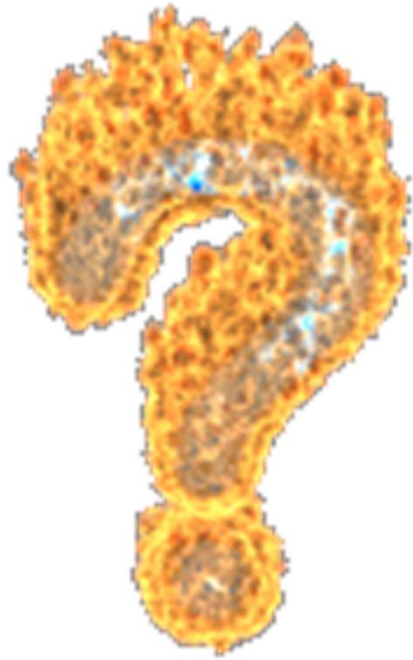
- Increased focus on outcomes
 - More time with patients
 - More interface with nursing staff
 - More details in orders
- More Technology/Automation
 - Patient care
 - Seeing/delivering orders
 - Less time in back of house
 - More time on floor
- KSA increasingly important and complex

Biomedical

- Increased job complexity
 - Devices more sophisticated
 - More devices
- Reduced ancillary role
 - More time on medical devices and other related tech.
- KSA increasingly important and complex

What Should You Be Doing?

- Being here at NANT is great!
- Become Expert
- Lifelong learning
- Computers
 - Literacy
 - Learn applications
 - Drive out fear
- Accept and adapt to change.



Burning Questions