Physician Leadership in IT

Challenges and Lessons Learned

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Outline

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- Brief background
- MemorialCare Strategies
- On-going challenges/Needs
- Lessons learned
- Predicting MD role in future
- Questions

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Background-Journey

- Undergraduate Fortran programmer
- 1985 completed fellowship in MFM
- 1992 beginning of CPOE in MC
- 1996 became Medical Director Informatics for Physician Society
- 2003 began assisting MDs in choice of EMR
- 2004 DBV role
- 2006 1st inpatient go-live MD adoption
- 2010 began AEMR role

Leadership Roles MD IT

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Administrative

CIO
CMIO
Medical Directors
Paid MDs

Medical Staff

COS/VCOS
Department Chairs
Subsection Chairs
General Staff

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Problem: Traditional structures

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- Built around medical staff structure and medical executive committees
- Designed for regulatory compliance, credentialing and disciplinary actions
- Hospital level structure, often lacks expertise since chosen mostly by clinical/administrative factors
- First response is to find the "geeks" who may/may not be "leaders" and/or fully understand clinical workflow
- Best choices have blend of technically savvy and "big picture" clinicians

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Traditional Administrative Support

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- Administrative positions like CIO may (or may not) be clinician
- CMIO role part/full time (60/60)
- Usually perceived as clearly part of administration
- Difficult role to be "Champion" and administration
- Line of authority not to medical staff
- EMR-clearly a "Clinical Project"

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MemorialCare Structure

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- 1996 formed the "Physician Society" as physician led entity responsible for system-wide development of EBM
- From start believe that clinical computing would be necessary
- Partnered with the traditional medical staffs to come up with common goals
- Spearheaded physician component of system selection, DBV and physician adoption

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Developing MD Leadership

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- MCPS and hospital oversight
- Involvement/education of the MEC
- Formation of formal PIC committees
- Requirements of physicians for training
- Oversight of MD usage, security and training, etc.
- Involvement of the rest of the system

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Governance-Physician Leaders

- Chiefs/past chiefs
- Special Meeting of the MEC
- Medical Director & Other Contracted groups (Anesthesia, ED)
- Physician Informatics Council
- Medical Staff Departments

System MD Leadership

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- 2003 formed CDAG
  - Participated in Epic DBV
  - Paid participation
- 2009
  - Transitioned CDAG into PILOT
  - Continued group to vet design issues
  - Began workgroups to address specific workflow challenges or new functionality
- 2010 began MASC as ambulatory equivalent

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MC Physician Governance 97-09

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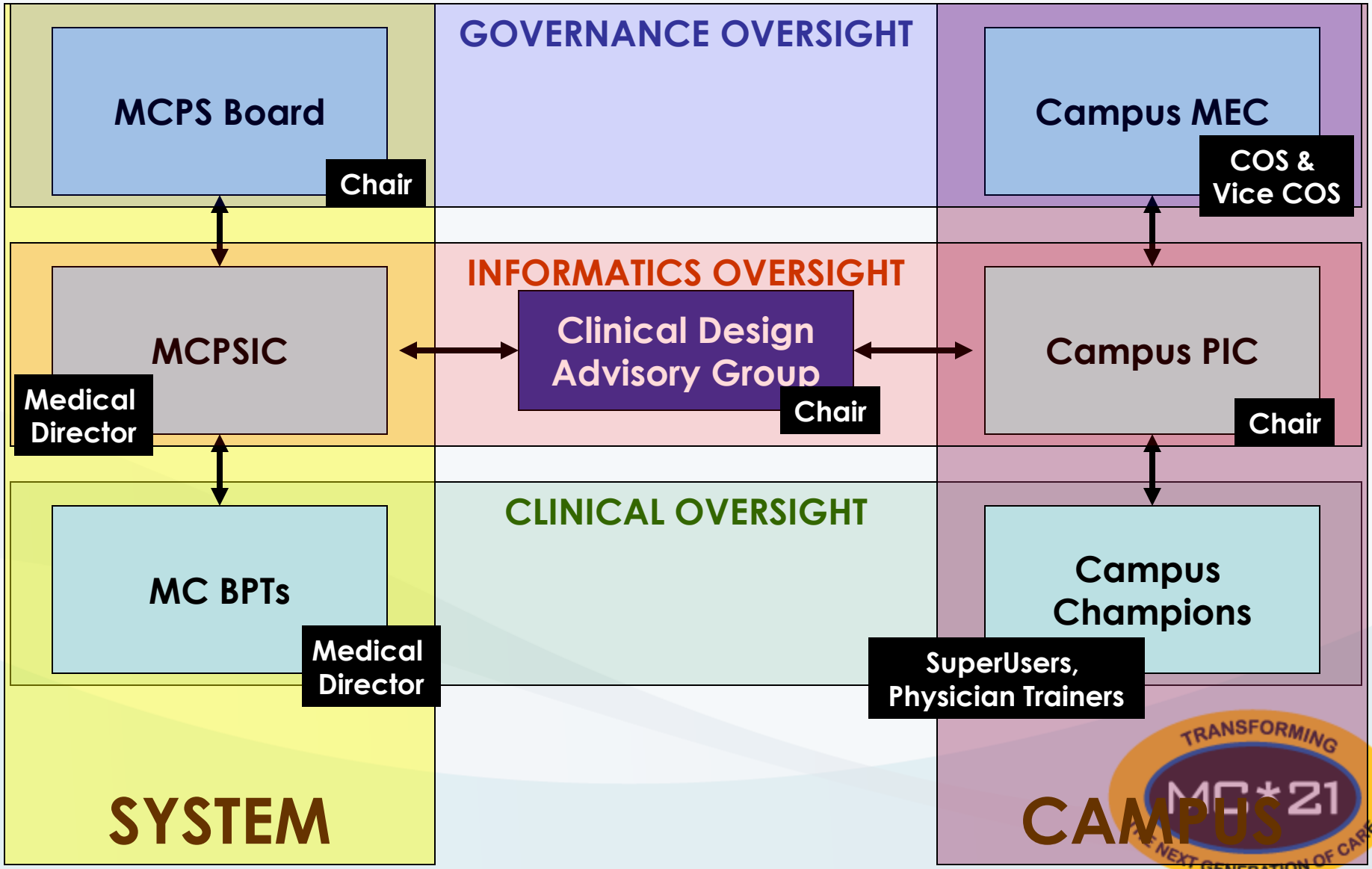

MC Physician Governance 2011

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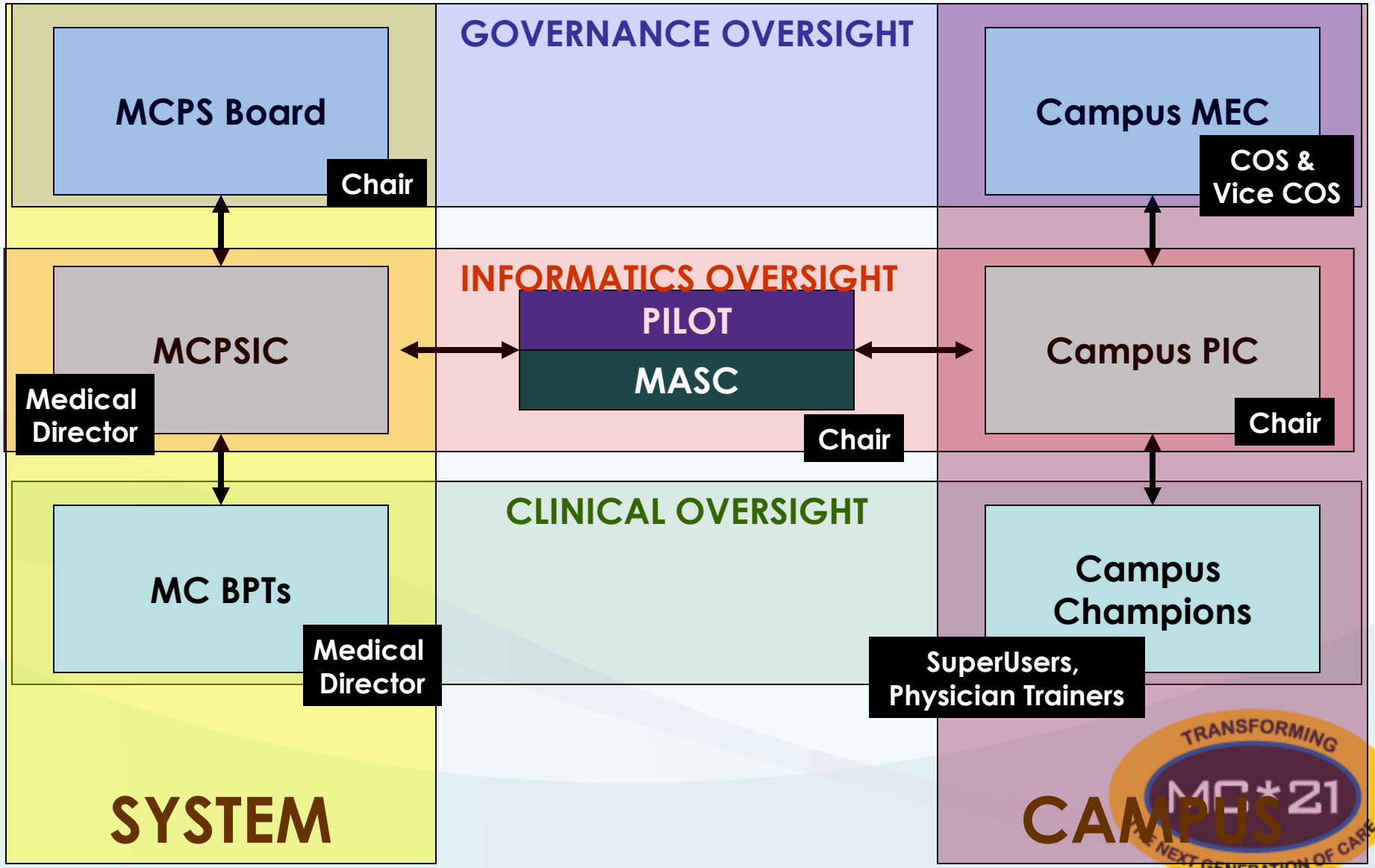

Leadership Nurseries

- Participation in many of these governance groups has identified and developed physicians with strong interest in informatics issues
- These have become our breeding grounds for tomorrow's medical leadership in informatics

Our Lessons Learned

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Lessons Learned

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- Must have good views from the trenches to 50,000 ft. levels
- Physician's perceptions and abilities of IT are changing with the rest of society
- Adoption is a complicated process which requires careful planning and patience
- MD Leadership is critical for success in the clinical setting
- "Workflow, not technical issues become the major challenge"

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Lessons Learned

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- USABILITY is key to success and ultimate cost benefit
- Good design is defined by how efficient the clinician is able to complete their workflow with the software
- Go-live is not for the faint of heart
- Success is defined when the user says "I would never go back"

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Who will be your next leaders?

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Embryogenesis

- We have found that physician leaders have come both from "natural conception" and from In-vitro Fertilization (from developing roles in various governance and DBV groups)
- Come from various clinical backgrounds
- Regardless successful leaders have a combination of understanding clinical workflow and technical limitations

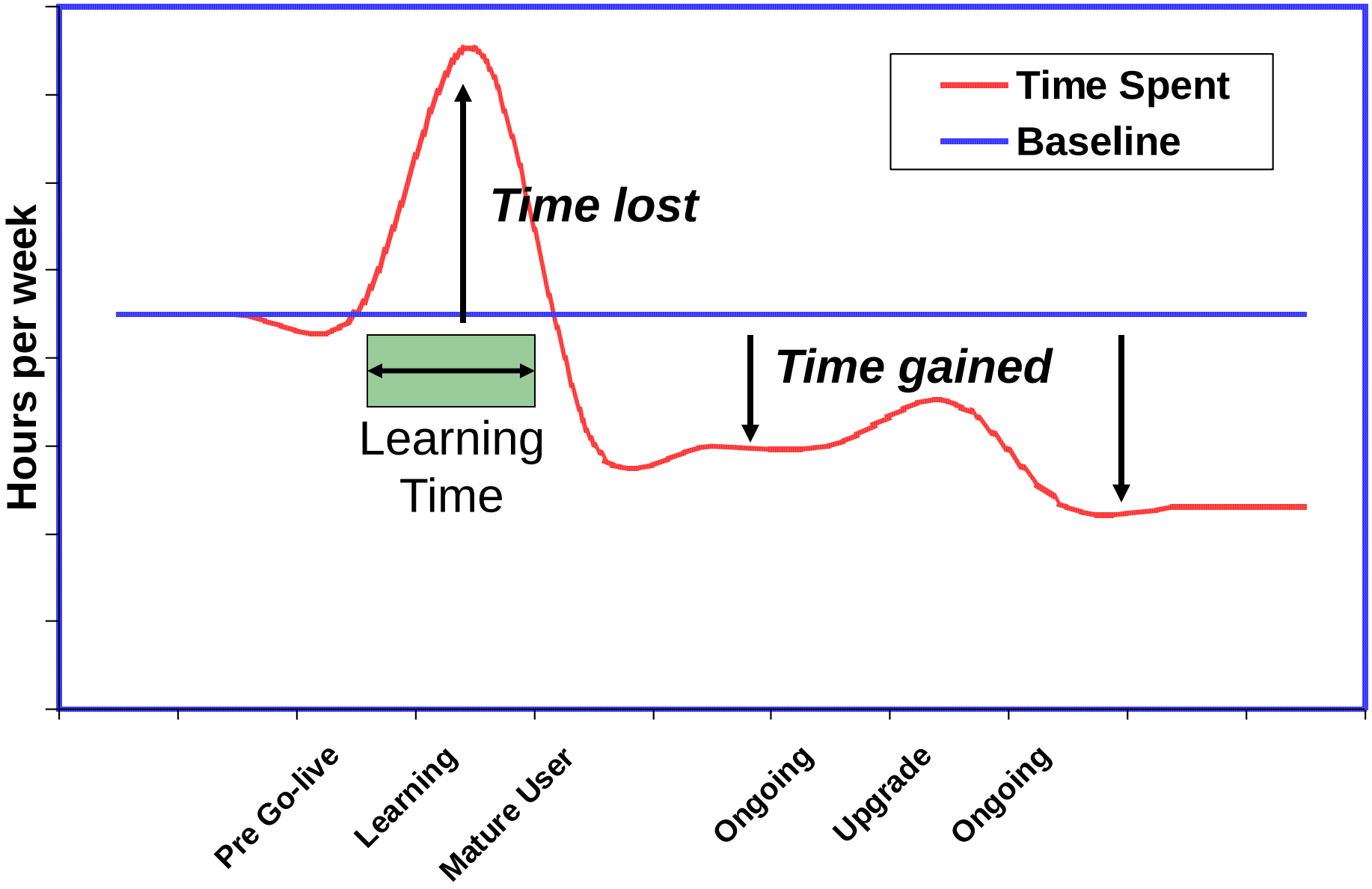
$$U = \frac{[D \times T \times S \times N]}{R^2}$$

Where
U = Total usage rate
D = Design factor
T = Training factor
S = Support factor
N = Need (perceived) factor
R = Resistance factor

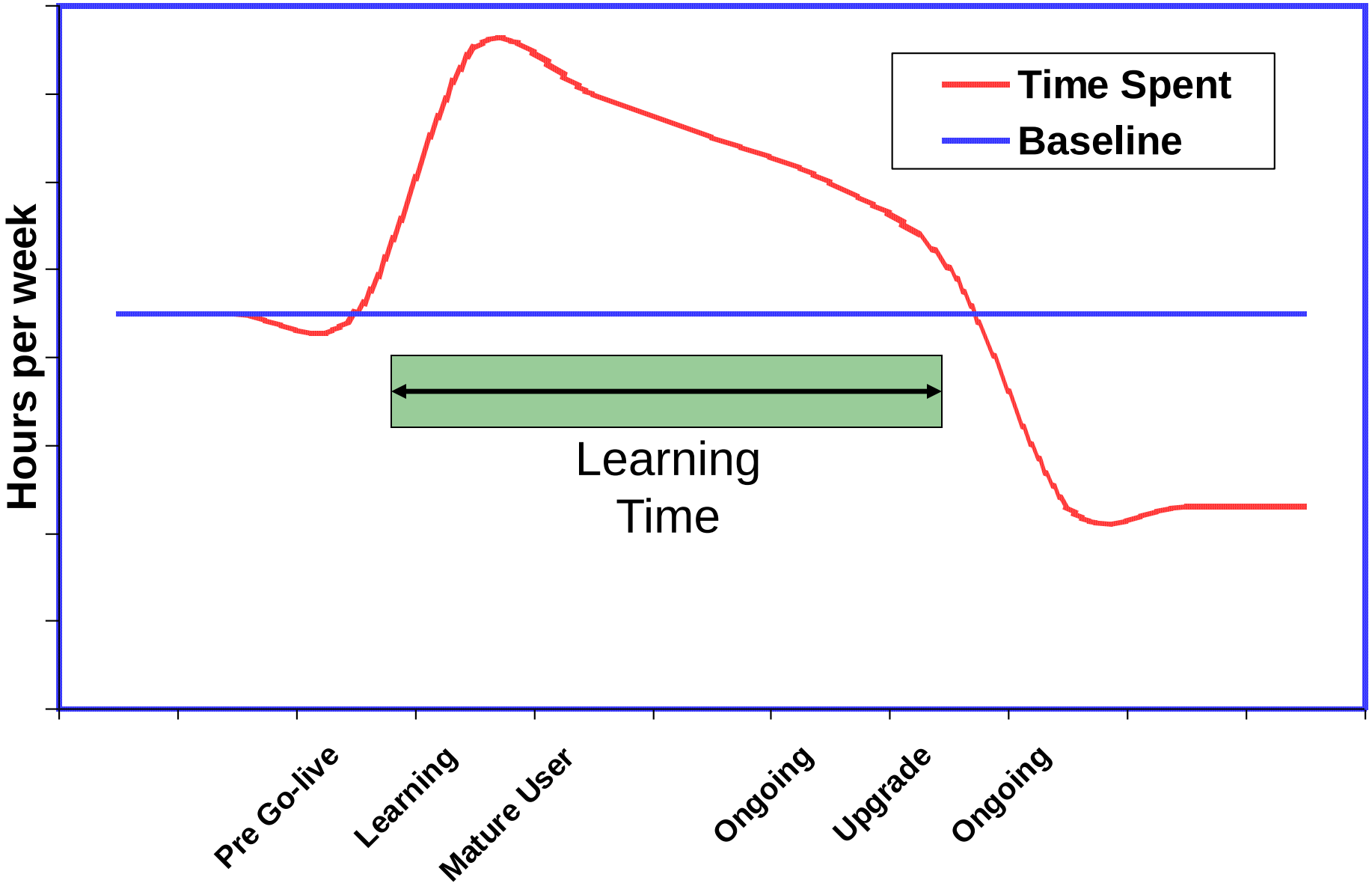
$$D = \frac{Ef \times P_r \times (P_o - Si) \times Net \times Eq \times (Fit)_2}{B_{sec} + B_{new}}$$

Si = Simplicity factor
Ef = Efficiency factor
P_r = Presentation factor
P_o = Power factor
Net = Networking factor
Eq = Equipment factor
Fit = Fit of the design to the particular user's workflow
B_{sec} = Burden of Security factor
B_{new} = Burden of new tasks added to the individual user

Efficiency Curve for Extensive User



Efficiency Curve for Extensive User
Poor Training



Facilitators

- Clinical Training Specialists (CTS) team

- Year-end Stats
  - 2400 office visits
  - 800 correspondences
  - 495 new Secure Remote Access accounts
  - 554 new PACS accounts
  - 405 new ESA accounts

Medical Staff Involvement

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- From Day 1 we sought input from our medical staffs on key aspects:
  - What did they want and need?
  - What were important imperatives to interactions
  - Fix a timeline for their schedule
  - Involvement in design
  - Involvement in training

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Physician "Needs" in an EMR White Paper

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- MCPS PIC organized **physician retreat** of 54 physicians from medical staffs leadership for 2 day seminar on EMR
- Group comes up with **list of "Must Haves"** in new system
- Results refined by physician focus groups
- Over **450 physicians** participate in process
- **White paper written** and presented to MCPS board and used as reference for selection and build

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Key Imperatives to Working with Physicians

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1) Show Strong but Limited Resolve with Holdouts
2) Use Internal Expertise
3) Never Lose Momentum
4) Transfer Responsibility, but Demand Accountability
5) **Build Based on Best Practices, as Supported by Direct Observation**
6) **The Key Elements Are: Good Design, Quality Product and the Right Content**
7) **Target Physicians Based on Their Contributions**
8) Over-Invest in Access
9) Keep Physicians Focused on Technology
10) **Create a Great Place to Train**
11) Most Physicians Pride Themselves in Being Computer Savvy, Those Who Aren't Won't Admit It
12) Physicians are Out of Time
13) Have Amazing Technical Support
14) **Over-Communicate**
15) Only Display Crucial Alerts

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On Going Challenges

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Challenges

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- Everything takes longer than expected
- The technology is constantly improving but cannot keep pace with user's expectation
- Provider interoperability (MD/RN/RNP/PA/etc.)
- Evolution of the processes and stages requires evolution of the governance structure
- "Fuzzy borders of healthcare team"
  - Healthcare consumers going for best of breed
- Understanding the 50,000 foot view but remembering the effect in the trenches

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Just when you know the answers….

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- Constantly changing demands and goals
- Healthcare restructuring
- Limited funding
- Interfacing with multiple outside EMRs
- "Part time users"
- Always upgrades
- New modalities of input/output

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On-Going Challenges

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- New staff training and adoption
- "Casual User" physician
- Continued SmartText and Order Set development
- Updates: How do we successful communicate and train?
- Interfacing with the "paper" world

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The never ending saga…

- "But I thought we were done after go-live!"
- "You know what would be really neat…"
- Kaizen for everyone and everything

Toyota? How do we relate to these guys?

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Kaizen: Continuous Incremental Improvement of an activity to create more value

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Step	Objective
Sponsor meeting	Clarify the business intention
Develop theme page	Document the objectives
Sponsor approval	Sanction the event
Data collection and planning	Collect data using standard and custom Lean tools and techniques
Kaizen / implement	Conduct the kaizen and implement the improvements
Sustain and improve the gains	Track progress and remove obstacles

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Developments

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- Complexity of healthcare delivery
- Terabytes of clinical data
- Increasing demand for interoperability
- Building system to achieve "Accountable Care"
  - Quality
  - Service/Communication
  - Efficiency (cost containment)

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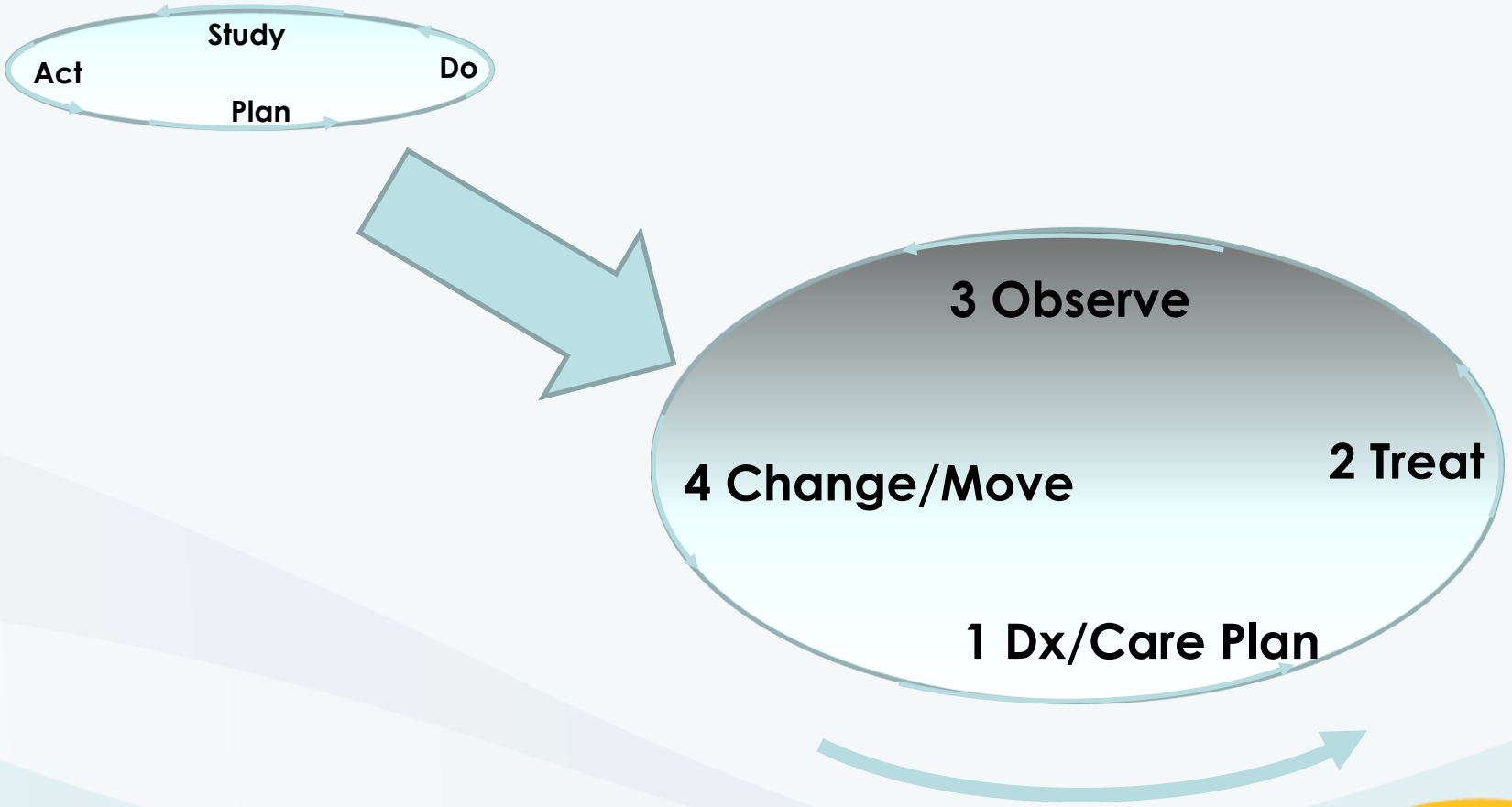
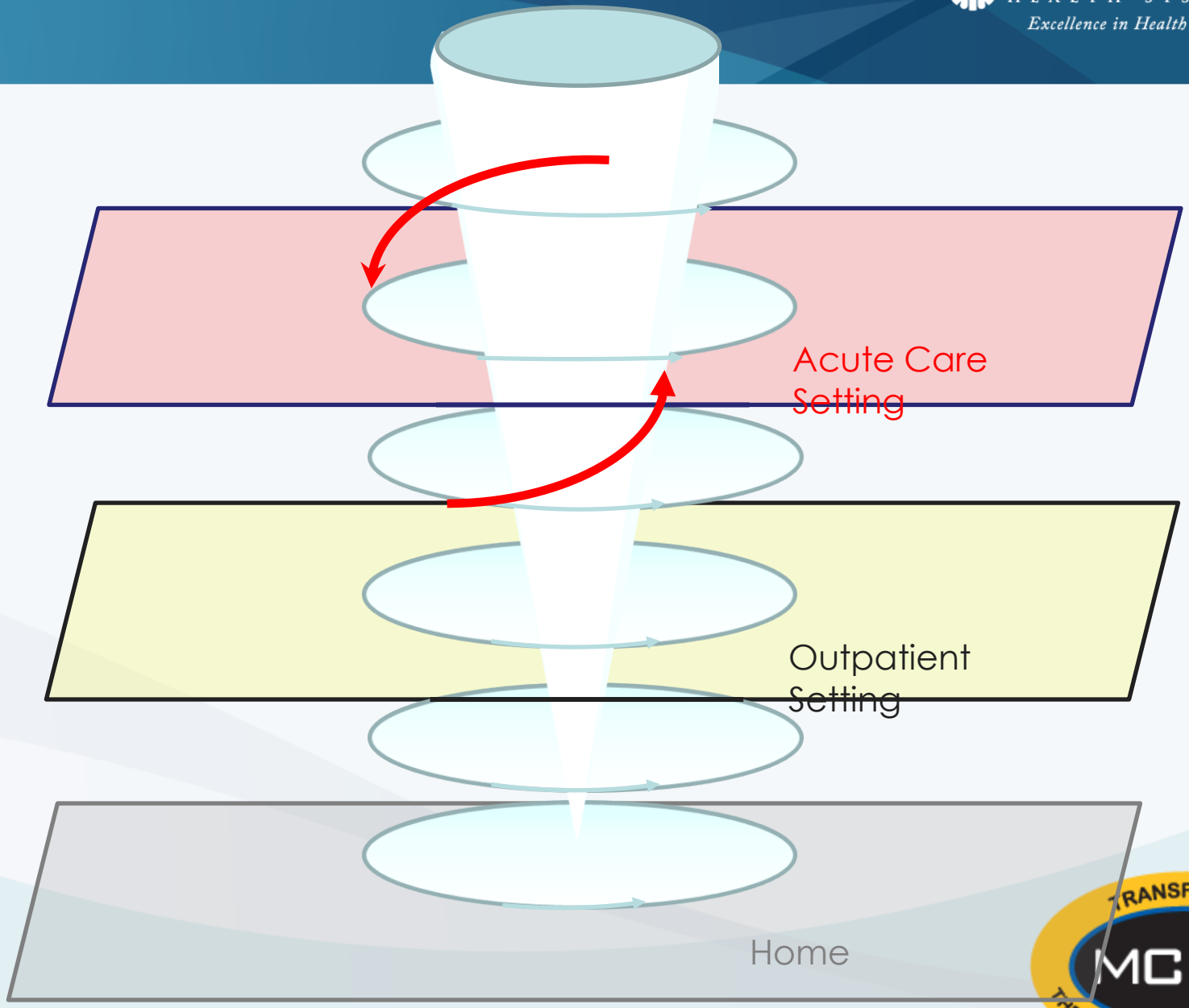
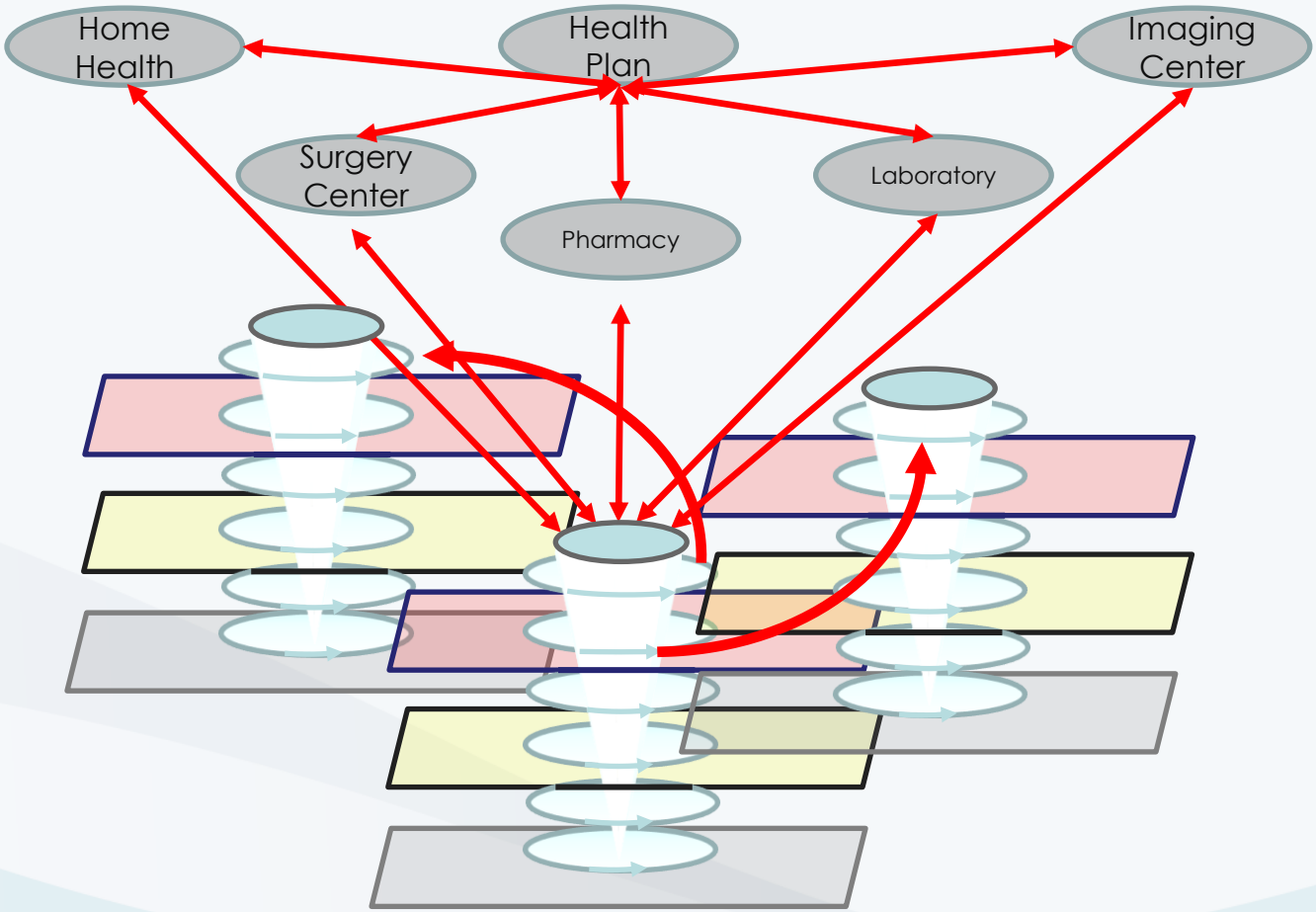
The "Care Cycle" Model




Acute Care Setting
Outpatient Setting
Home


Home Health
Health Plan
Imaging Center
Surgery Center
Laboratory
Pharmacy

Future State Data Collection Process

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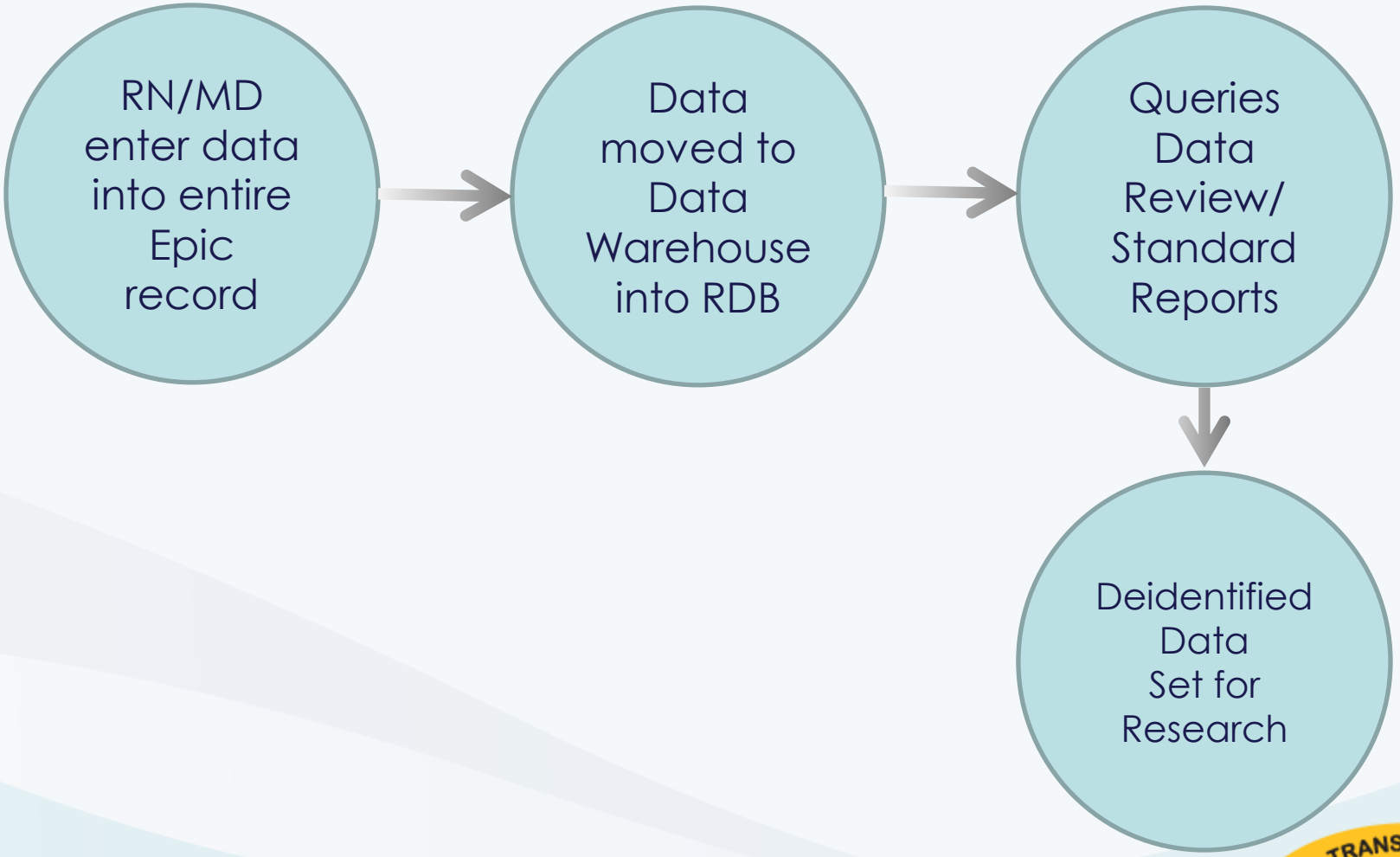

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Data Roles for MDs

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- Which quality/research goals
- What data elements
- Interpreting results
- Turning data into information and then into actions and changes

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At What Level is Health Information Exchanged?

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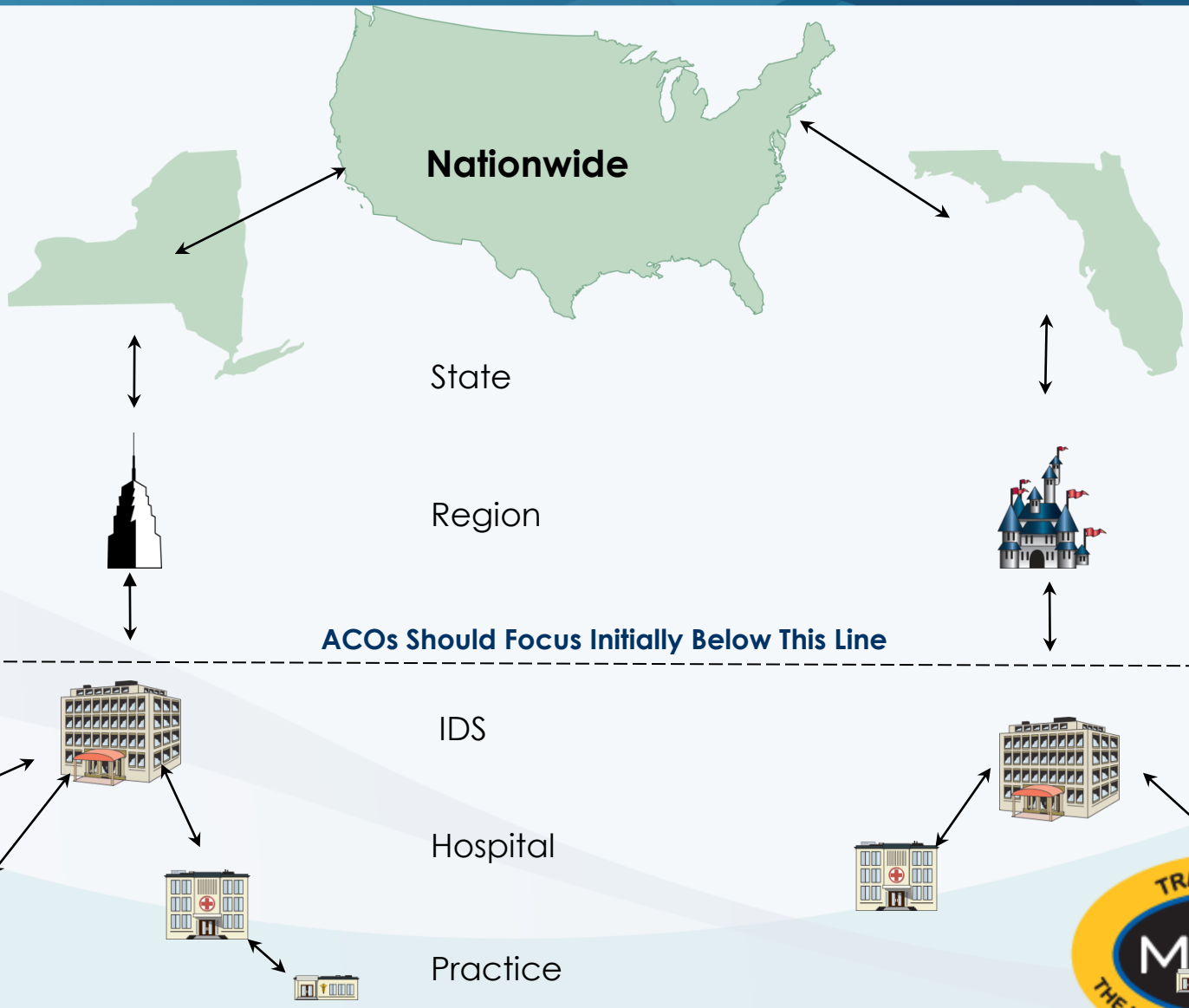

Source: Advisory Board research and analysis

Our Vision….

Simplified (no kidding)

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MemorialCare Link
Affiliated Physicians (No EMR)
Affiliated Physicians w/EMR
Bristol Park (NextGen EMR)
HealthShare Clinical Viewer and Composer
Affiliated Physician Group
Clinical Hub (NextGen HIE)
Monarch (NextGen)
EPIC Instance
MemorialCare Foundation (EPIC AEMR)
MyMemorialCare (MyChart)
Private HIE
HEALTHSHARE
OMG!
MemorialCare Hospitals (EPIC)
MPI
Longitudinal Patient Record
PHR (Google Health, etc)
National Public Network
NHIN
HIEs &RHIOs
Connected IDNs
HealthShare Service Bus (optional)
Data Warehousing
CareEverywhere
CareElsewhere
CareEpic
3rd Party Reference Labs
Local Public Network
OCPRHIO & WHIN
WHIN
EPIC Hospitals (CareEPIC Enabled)
Area Hospitals Non-Affiliated
Robust Data Exchange
Limited Data Exchange (CCD)
Data Push/Event Notification
View Only

So it's not that simple

- Technical and security/privacy issued are being addressed
- The challenge for the individual physician and offices is to choose the degree integration with this developing network of information
- Like patients, their payers will expect such exchange and coordination of care

HIE Services by Providers Served

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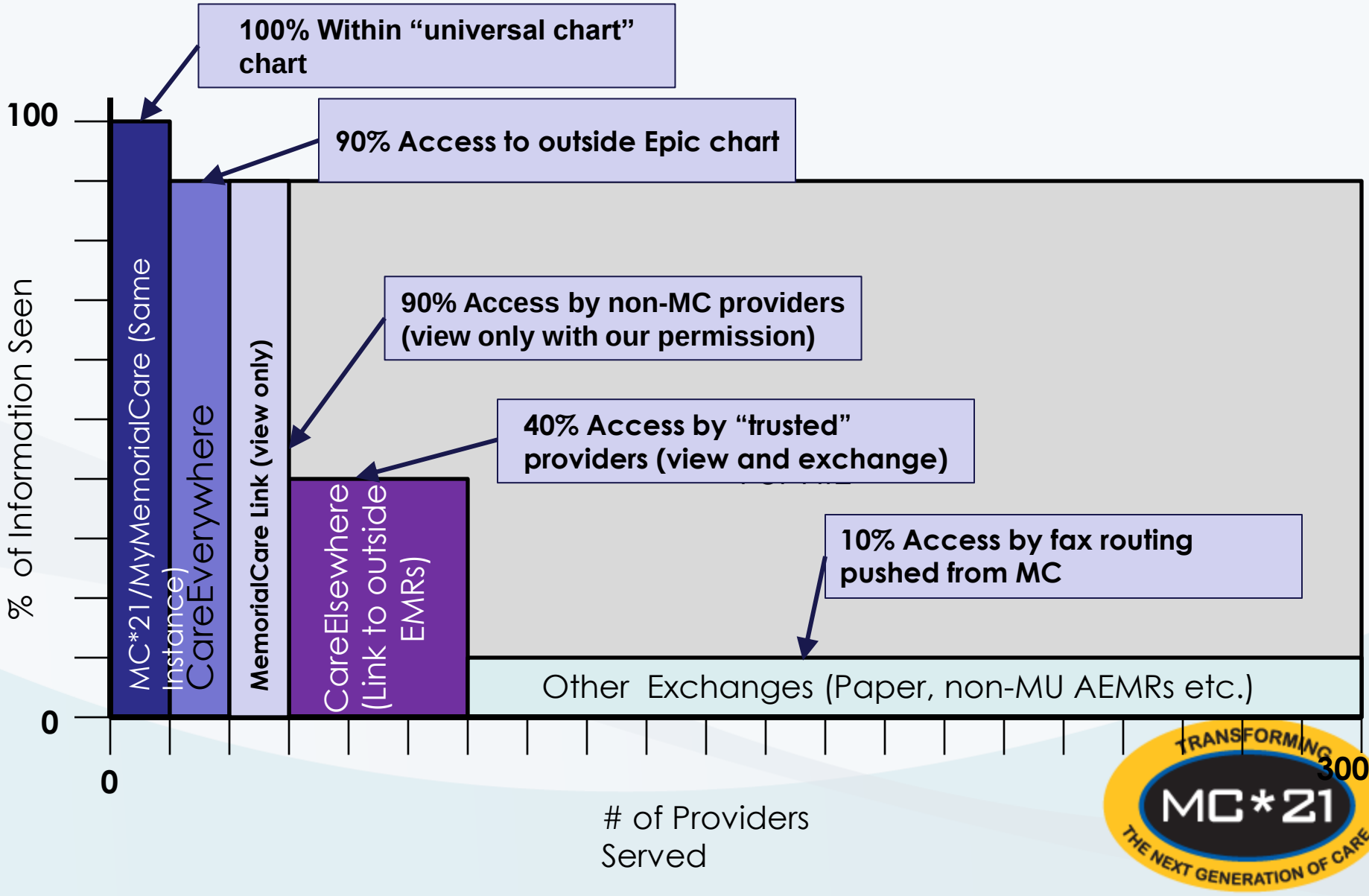

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Conclusions

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Conclusions

- We firmly believe our "culture of focusing on quality" and intensive efforts to involve physicians in all aspects of our project was important to our success
- Separate computer design from BPTs but ongoing continually work together
- Physician engagement requires extensive planning and resources
- Engagement is an on-going function with new physicians and keeping in touch

Culture Needed

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- Transparency
- Shared governance
- Commitment to quality
- Comfortable with change
- End user first

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MD Leadership Qualities

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- Unquestionable "part of the team"
- Share and can expound the vision
- Be highly visible "On the point"
- Knowledgeable about the whole project
- Show enthusiasm but always under control
- Enhance communication between the physicians and the project team
- "Never take it personal"
- Get them to understand how this will always be a work in progress and that's okay!

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