A Prescription for Success – The Business of Pharmacy: Reengineering Experience at Two Academic Medical Centers

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University of Massachusetts Medical School
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Medication Use Process

Ordering
Dispensing
Administering
Monitoring
Patient Outcome


Challenge #1: We Need Consensus - Pharmacy Services That Should be Consistently Provided at Academic Medical Centers

Practice Model Task Force
Presented by Paul Bush, Pharm.D., Chair UHC Pharmacy Executive Committee at the UHC Meeting December 2008

Services for all Patients

- Medication History
  - Admitted as inpatients
  - Admitted as 24 hour admits
  - Admitted to procedural areas
- Medication Reconciliation
  - Admitted as inpatients
  - Admitted as 24 hour admits
  - Admitted to procedural areas
  - During a change in level of care (i.e., transfers, postoperatively)
  - Targeted patients prior to discharge

Level of Support

0 - 49% 50 - 99% 100%

Services for Specific Patients Based on Need

- Anticoagulation management
- Resuscitation teams
- Antimicrobial stewardship
- Streamline medication orders
- Pharmacokinetic evaluation/monitoring/dosing
- Parenteral nutrition assessment and order change
- Renal medication dosing
- Collaborative drug therapy management
- Preventative and wellness programs

Services for all Patients

- Review all non-emergent orders prior to first dose administered
- Develop individualized treatment and monitoring plans
- Educate patients about new medications
- Monitor patient medication profiles daily
- Participate in patient care rounds
- Counsel patients on high risk drugs or complex regimens on their discharge meds
- Communicate patient’s meds to the patient’s pharmacy
- Participate as a member of the ED patient care team
- Participate as a member of the OR patient care team
Medication Safety
• High-alert medication policy
• Bar code medication administration
• Clinical decision support-based infusion pump technology
• Safe drug nomenclature
• Use of order sets
• Computerized prescriber-order entry
• Availability of patient information
• Medication administration record maintained by pharmacists
• Medication event prevention, monitoring and reporting
• Education of allied health professionals on medication safety issues
• Electronic medication management functionality designed and overseen by pharmacists

Challenge #2: Environmental Changes
• Ever increasing complex inpatient care
• Insatiable demand for care with limited resources
• Drug related morbidity and mortality
• Traditional Vs. Non-Traditional Payment system
• Financial incentives drive the new system
• Focus on quality outcomes at low cost
• More oriented to disease management than illness
• Focus on partnerships between providers
• Shift from fee for service to capitated contracts connecting formerly disparate healthcare organizations

Challenge #3: Cost Out of Control - National Health Care Spending
CMS annual tabulation of national health expenditures
Expected to reach $3.2 trillion in 2011

Health Spending Projections Through 2016
• 6.8% growth in health spending in 2006
• Average annual growth of 6.9% through 2016
• Total spending of $2.4 trillion in 2008, reaching $4.1 trillion by 2016
• 16% of GDP currently, reaching 19.6% by 2016.
• While overall spending has slowed in recent years, it is expected to accelerate from 2008 – 2016, due to cost and utilization demand
• Financial pressures on payers, providers, governments, patients and families

Percent Growth in Prescription Drug Spending, 1990-2006

Percent Growth in Hospital Drug Spending, 2000-2008

Source: Centers for Medicare & Medicaid Services, Office of the Actuary

Distribution of Hospital Drug Expenditures by Therapeutic Class, 2007*

<table>
<thead>
<tr>
<th>Therapeutic Class</th>
<th>Expenditure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biologicals</td>
<td>6%</td>
</tr>
<tr>
<td>Antineoplastic agents</td>
<td>12%</td>
</tr>
<tr>
<td>Blood growth factors</td>
<td>9%</td>
</tr>
<tr>
<td>Respiratory Agents</td>
<td>4%</td>
</tr>
<tr>
<td>Gastrointestinal agents</td>
<td>4%</td>
</tr>
<tr>
<td>Hemostatic modifiers</td>
<td>12%</td>
</tr>
<tr>
<td>Hospital Solutions</td>
<td>5%</td>
</tr>
<tr>
<td>Antimicrobial agents</td>
<td>4%</td>
</tr>
<tr>
<td>Diagnostics</td>
<td>5%</td>
</tr>
<tr>
<td>Others</td>
<td>28%</td>
</tr>
</tbody>
</table>


Healthcare’s “Perfect Storm”

- Demand for capital for building replacements
- Manpower
- “Inflection Point”
- Costs
- Medicare Part D

Project 25% increase in nursing salaries over 5 years

Challenge #4: Population under 65 without Health Insurance

Percent Uninsured

<table>
<thead>
<tr>
<th>Age Group</th>
<th>2000</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Children</td>
<td>16</td>
<td>17</td>
</tr>
<tr>
<td>Adults</td>
<td>78</td>
<td>30</td>
</tr>
</tbody>
</table>

Challenge #5: No One Is Happy

- Almost no one is happy with the healthcare system.
- It costs too much
- Excludes too many
- Fails too often
- Knows too little about its own effectiveness
- Mainly, though, it costs too much.
- Jobs shipped overseas because of health care cost
Challenge #6: C-Suite Traditional View of Pharmacy Department
- Poor understanding and how we differ from other departments and its implications for financial leadership and management.
- Typically categorized as ancillary – not clinical – services and viewed alternatively as revenue and cost centers as reimbursement models shifted.
- Cost and charges focused on cost of drugs rather than total costs, including drugs and the vital distributive and clinical services provided by pharmacy.
- Critical player in the care delivery process but not typically present at the C-suite table.
- Net result has been a tendency to view and manage pharmacy as a commodity provider rather than a vital product and clinical service provider.

Challenge #7: Impact of Current National Economic Crisis on Hospital Finances
- Debt markets stressed; very difficult for hospitals to get credit. Also true for 3rd party developers.
- Hospital operating margins continue to be bombarded:
  - Shrinking reimbursement
  - Reductions in elective healthcare spending
  - Increasing interest rates on variable-rate debt
  - Increasing bad debt expense associated with elevated levels of unemployment and loss of healthcare benefits
  - Steadily increasing supply costs
- Reductions in charitable donations and investment income
- MD practice acquisition strategies encumber funds limiting growth and clinical equipment purchases.

Ripple Effect
- Escalating cost under fire
- Medicare and Medicaid will be cut
- Quality and safety to drive payment schemes
- Access to capital more difficult
- Emergence of new payment and care delivery models

Challenge #8: Our Weaknesses
Pharmacy’s Hindsight Perspective
- Unable to create “niches”
- Pharmacists just “tending to business”
  - Cost v. revenue focus
  - Micro and macro attention to detail
  - Professional practice v. business focus
  - Communication failures
  - Lack of proactive strategy
  - Business acumen often suspected or misunderstood
- Not at the table for key decisions
- Lack of business skills
- Lack of data
- Right people

Reengineering Pharmaceutical Care - Designing Strategy and Tactical Approach
- Key financial considerations for managing the “business of pharmacy”
- “CREATE VALUE”: Demands a proactive and integrated approach to financial and patient care priorities.
- Establish clear communication lines, professional focus, and position of fiscal and clinical accountability for pharmacy leadership in the health-system structure.
- Assure pharmacy services managed with clear accountability for clinical outcomes, pharmacy basic services, medication safety.
- Collaboration with the prescribing physicians to harness the “power of the pen”
- Effective prioritization of safe and timely delivery of basic pharmacy services.

I. Six Key Financial Questions $$$$
1. Are we buying drugs at the best possible advantage?
2. Are sound business principles and practices being applied to all pharmacy operations? (i.e., Is the pharmacy business being approached as a large business enterprise it has become?)
3. Are patient billing and revenue processes for pharmacy sound and routinely monitored?
4. Are pharmacy resources, including drugs, supplies and manpower, properly controlled and managed?
5. Are patient outcomes and medication safety concerns properly balanced with financial considerations in the pharmacy department?
6. Are all pharmacy entrepreneurial opportunities identified, explored, and pursued when appropriate?
#2: Resource Management

- Typical drug expenditures 70-75% of all pharmacy costs: how are we controlling costs?
- Managing personnel costs: Ongoing monitoring of expenses
  - Technicians versus pharmacists: hours and utilize established internal benchmarks
  - If external benchmarks are expected by leadership, pharmacy leadership proactively accounts for clinical programs, FTE's, hours, and scope of services
- All clinical programs, special services, and any unique pharmacy programs are documented and accounted for regarding ROI so that each is distinguished from pharmacies that do not include them and their expenses
- Routine communication with the “C suite”
  - ROI and justification are clear prior to any challenges
  - Continual process of communication with the staff to enhance accountability

Unique Pharmacy Cost Mix

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total drug spend</td>
<td>76%</td>
</tr>
<tr>
<td>Manpower</td>
<td>20%</td>
</tr>
<tr>
<td>Other</td>
<td>2%</td>
</tr>
</tbody>
</table>

III. Are Patient Outcomes and Medication Safety Properly Balanced with Financial Considerations?

- Optimal drug distribution and clinical services??
- Critical balance between sound financial management of the business and responsibility for patient outcomes, assuring accurate, timely, and efficient delivery of drugs to the patient
- Management must wear business hat simultaneously with professional and clinical hat
- Successful balance provides great financial dividends in patient safety initiatives and avoiding the high cost of litigation and other risk management failures
  - Significant medication errors and adverse events cost on average $1.5 million in litigation related costs

IV. Value of Clinical Services

- Estimated annual savings in this single unit: $270,000.
- Decline in ADE for ICU patients with clinical pharmacists on rounds (Preventable ADEs per 1,000 patient days)
  - Baseline: 9-Month Follow-up
  - 66% decline

Source: Leape LL et al. JAMA 1999;282:267-270

V. Are all pharmacy entrepreneurial opportunities identified and pursued when appropriate?

- Many new entrepreneurial opportunities in the ambulatory care arena to increase pharmacy revenues and expand the portfolio of profitable pharmacy business, for example:
  - 340B qualifications and related unique services (transplant, employee prescriptions, specialty clinics (HIV, Hep C, etc.)
  - Pharmacy on the table to review PBM contracts
  - Pro-active approach in minimizing charge denials
- As much as 25% of the net profit for the entire institution has been generated by expanded pharmacy ventures as new business opportunities
### VI: Tips for Managing Drug Cost: Budget Process

**Obtain Data**
- Utilization forecasts
  - Interviews with clinical leadership
  - Administration forecasts + New programs
- Strategic expansion of existing programs
- Annual forecast from AJHP

**Review Past Performance**
- Last full fiscal year vs budget
- Annualized current fiscal year vs current budget
- Current fiscal year vs actual last fiscal year
- Performance on current cost-containment initiatives
- Identify causes of variance

### Managing Drug Cost: Budget Process

**Build High Priority Budget**
- Identify products with highest total cost (Top 60 to 70 PRODUCTS (not line-items) often represent 80-90% of total budget)
- Focus detailed planning efforts on that list
  - Plot historical spending patterns
  - Identify utilization by prescriber or service
  - Cost trend by class and agent from AJHP paper
  - Identify impact of price, expected utilization changes, potential brand to generic
- Develop product specific budget

**Build New Product Budget**
- Pipeline information from various sources
  - AJHP forecast & Other sources
- Identify those that will affect your facility
- Identify price cautiously
- Volume estimate
- Estimate of release date

**Build Non-Formulary Drug Budget**
- Separate out non-formulary drug use and budget separately
- Critical for financial performance monitoring
- Track by prescriber for intervention
- Remainder of products not included in high-priority budget
- Product shortage - Use estimates of contract price available from various sources, particularly GPO (often only 2-3%)

**Final Step**
- Calculate a preliminary total budget and compare vs expected target
- Identify variance
- Identify cost containment opportunities (generally in high-priority budget) to make up variance
- Communicate with senior management

### Recap: Questions

1. It is expected that national health care spending is going to escalate in the coming years. A. True; B. False
2. What are the primary challenges faced by hospitals around the country? A. escalating cost; B. falling reimbursement; C. increased risk of uninsured patients; D. shrinking capital for building replacements; E. all of the above
3. Pharmacy is NOT faced with one of the following challenges: A. managing drug cost; B. unlimited access to expand pharmacy services; C. poor senior management perception of “the business of pharmacy”; D. not at the table for key decisions relating to pharmacy and pharmacists
4. Which of the following critical financial considerations that must be addressed by any successful pharmacy business? A. are we buying drugs at the best possible advantage; B. are sound business principles and practices being applied to all pharmacy operations; C. are pharmacy resources, including drugs, supplies and manpower properly controlled and managed; D. are patient outcomes and medication safety concerns properly balanced with financial considerations; E. all of the above
5. Which of the following steps are critical for formulating drug budget? A. Obtain data on utilization, strategic expansion of programs; B. review past performance; C. build high priority budget; D. Build new product budget; E. all of the above

### Medication Formulary

- Objectives of the formulary system:
  - Ex: Process to keep unsafe and poorly tested medications from routine clinical use: Development of evidence-based criteria and ensure positive clinical effectiveness
  - Drive cost efficiency
    - Even if meds were free, would still need something to ensure safety, quality and effectiveness but cost IS an issue
  - Role of pharmacist as “drug cop”
  - Accept responsibility for both clinical and financial implications of medication use
  - Methods to protect relationships between pharmacists and prescribers

### Active Formulary Management Tools

- Benefit design components (pharmacy inclusion)
- Automatic clinical interventions
  - IV to PO conversion
  - Renal dose adjustment
  - Dose rounding protocols
- Manage non-formulary orders (exceptions that make the rule)
- Formulary restrictions
  - Agents with substantial toxicity profile, limited benefit (for narrow patient population), high cost
  - Restrict to indication (antimicrobials)
  - Restrict to dose (limits on dose)
  - Restrict to prescriber group
  - Restrict to administration setting
  - Caution – “work-arounds” often worse than the agent being restricted!
Active Formulary Management Tools

- Peer review requirements for prescribing
  - Anti-infectives requiring ID consultant approval
  - Caspofungin
  - Linezolid
  - Daptomycin
  - Tigecycline
  - Nesiritide requiring cardiology consult
  - Drotrecogin requiring critical care specialist review and approval
  - NovoSeven requiring hematology consultation

Therapeutic interchange

- If therapeutic equivalence (indistinguishable outcomes) can be established
- Market share shift provides only source of leverage against price inflation

Prior authorization (PA)

- Unique blend of clinical practice guideline and active restriction
- Establish evidence-based criteria for use
- Require prescriber to secure PA before coverage (in ambulatory setting) or dispensing (in-patient)
- “Appeals” or reconsideration process necessary

Innovative Formulary Management Initiatives

- Financial incentives for appropriate prescribing
  - Alignment of incentives for efficiency
- Hospitalist strategies
- Prescriptive authority for pharmacists
- "Artificial intelligence" in prescribing systems (e.g., order sets, CPOE, etc.)
- Prior authorization for clinic administered injectable medications and chemotherapy

Case Study I: Circa 1998 Pharmaceutical Care at SUNY-Upstate Medical University

- Manual distribution System
- 2 satellites involved in dispensing and order processing
- Very little clinical involvement
- No academic involvement
- Poor credibility
- No community involvement
- Keep nurses happy: “drug availability problem? increase floor stock”
- No control over nursing MAR – “20% - 30%” Inaccuracies
- No Formulary: “Hey, we are a teaching institution: house staff has the right to write for anything”
- Revenue – Very low: drug diversion??
- Recruitment major problem

Circa: 1998

- P&T role: ???
- Very little IV admixture service
- Staff accountability ???
- “Working hard and doing the best”
- Centralized management
- Morale problem – “us vs them”
- Union issues
- Team work – what is that?
- Services fragmented

A Goldmine…..

- Distribution System
- Clinical monitoring
- Poor facility design
- Staff involvement

Circa: 1999 - 2007

- Integration of services
- Drug distribution system changed: Pyxis profile system in all nursing units; anesthesia units, pyxis in all clinics
- Clinical Services: 7 satellites, residency program; pharmacy managed drug protocols; team rounds; pharmacy managed therapeutic drug monitoring service; prospective drug therapy monitoring process, Pharmacy managed T1 protocols
- Staff competence- Daily pharmacology rounds for all staff, students, residents
- Techs certified
- Research/publication: Numerous
- Academia: 2nd year medical students; elective clinical pharmacology rotation for 4th year medical students; graduate level course at nursing college; clinical rotation site for Pharm.D. students (30-40 students); grandround presentations
- Community- Provider of CME/CE programs for local health care professionals, numerous drug therapy related lectures for the community; leadership role in local, state and national pharmacy organizations
Accomplishments

- Increased revenue
- Staff accountability: assigned staff participation in unit based nursing groups and quality matrix groups
- 7 satellites and one ambulatory clinic
- Clinical involvement – Majority of patients monitored by pharmacists
- Cost awareness among medical staff (individual drug cost/service area for monthly meetings)
- Drug use based on efficacy, cost justification and literature and input from key practitioners
- State of the art new pharmacy 2005
- UHC best medication management system 2005
- Numerous patient safety awards
- One of the lowest drug cost provider (UHC benchmarking)

Evolution of Technology Time Frame

- Pyxis system; Inpatient Units/Anesthesia/ Clinics – 1999-2003
- PACS System – 2004
- CPOE Order Sets – 2004
- CPOE Implementation – 2005
- Pharmacy Carousel System – 2005
- Wireless Communication System (Vocera) – 2006
- Smart Pump Implementation – 4th Quarter 2007

CPOE Implementation: Outcome

<table>
<thead>
<tr>
<th></th>
<th>Pre-CPOE</th>
<th>Post-CPOE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Order clarification by pharmacy</td>
<td>461/month</td>
<td>154/month</td>
</tr>
<tr>
<td>Prescribing errors</td>
<td>846</td>
<td>245</td>
</tr>
<tr>
<td>Use of order sets</td>
<td>0.32%</td>
<td>40.95%</td>
</tr>
<tr>
<td>Transcription errors</td>
<td>23</td>
<td>4</td>
</tr>
<tr>
<td>Stat CXR</td>
<td>81 minutes</td>
<td>44 minutes</td>
</tr>
<tr>
<td>Time needed for clarification of illegible order</td>
<td>18 minutes</td>
<td>0 minutes</td>
</tr>
</tbody>
</table>

Implementation of Wireless Based Instant Communication System

- Voice controlled light weight badge operates over a wireless LAN
- Allows users to communicate instantly with others in all locations
- Significant impact on number of incoming and outgoing telephone calls
- Phone call volume reduced by 3600 calls per month
- Significant patient care improvement

Pharmacy Carousel System
Patient Monitoring By Risk Stratification

New Antimicrobial Orders

Pharmacist Alert: Open Intervention

Automated Daily Report

Seamless Care: Streamlined Monitoring

Antimicrobial Cost Comparison
UH vs. UHC

Impact on Length of Stay:
Pneumonia and Cellulitis

Case Study II. UMass Memorial
Healthcare Background

- Largest health care system in central and western Massachusetts
- Clinical partner: UMass Medical School
- Six hospitals- numerous clinics
- 1111 beds; 13,500 employees
- 1,600 physicians
- Currently responsible for University, Memorial and Hahnemann campus
- Seven cost centers: University inpatient; University infusion center, Memorial inpatient, Memorial infusion center, University prescription center, Hahnemann prescription center, Hahnemann OR services
- $40 million drug budget- 155 employees
- Pharmacy staffing in eICU

Challenges December 2007

- Silos
- Uncovered patient care areas
- Revenue loss
- Lack of cross coverage
- Lack of transparency
- Lack of team work
- Lack of staff driven PIs
- Staff and management not empowered
- Takes too long to get anything done
- Lack of integration among staff
- Fragmented clinical pharmacy services

Accomplishments So Far

- Expanded clinical programs and coverage of patient care areas
- Job responsibilities changed
- Integration + cross coverage
- Open book: financial performance, medication events- “lesson learned”
- Staff ownership/accountability – pharmacists responsible for practice areas; technicians for drug storage areas
- No longer central management
- “Things happen”- Staff empowerment
- Staff selected and driven performance initiatives: clinical and operation group meets every two weeks
- Enhanced hands off communication
- Re-work of daily tasks – elimination of attending “unnecessary” meetings
- Rules engine software to optimize high risk drug monitoring, core measure performance

Accomplishments So Far

- Enhanced automated drug distribution process
- Expanded collaboration with pharmacy colleges (60 students)
- Additional clinical coverage by two pharmacy college faculty to cover transplant and peds area
- Weekly financial performance report to managers
- Weekly late charge reports to nursing managers
- Weekly med management accomplishment review with the staff and senior management
- Getting ready for new HIS
Aligning Accountability and Departmental Goals With Pay for Performance

- Financial
- Operational/Automation
- Human Capital
- Performance improvement initiatives

Things Are Changing: New Expectations from the C-Suite

- Clear and defined role for pharmacy expertise to be available at the point of care
- Distribution of products and information across all points of care – inpatient, ambulatory, clinics, retail, physician offices and through the employer health plan
- Redefinition of the basic systems and services to meet the changing organizational model
- Creative and innovative solutions that align with organizational goals and direction
- “Balancing act” that requires collaboration and new skills

Redesign Requirements for Meeting New C-Suite Expectations

- Pharmacy managed as an effective business consistent with sound business principles in all areas
- Patient care and medication safety properly balanced with financial priorities to avoid risk management costs
- Collaboration with the medical staff is assured so that support for pharmacy clinical and financial goals is understood
- Pharmacy has a handle on drug costs with tight methods to detect trends, losses, and initiate controls where appropriate, in all points of service including the employee health plan
- Pharmacy leadership has a program in place to proactively address all six financial concerns of system leaders

What I Have Learned: Successful Pharmacy Reengineering Strategy

- Lead by example
- Honesty, integrity, openness
- Through restructuring where needed, moving pharmacy to a fiscal and clinical position of strength and effective communication
- Making the management and staff accountable for both financial and clinical success
- Tools
  - Accountability
  - Integration
  - Transparency
  - Integration
  - Establish clear expectations
  - Staff driven department
  - Recognition
  - Communication
  - Visibility

What I Have Learned: Pitfalls to Avoid

- “Walk the walk” – not “talk the talk”
- Accepting pharmacy leadership that cannot deliver as both a business manager and a clinician
- Failure to establish clear accountability, structure, and leadership as a unique business and clinical department
- Failure to recognize the ongoing communication with the “C suite” is essential to maintain an understanding of pharmacy’s role and responsibilities
- Failure to assure the basics of pharmacy dispensing and distribution are done well as pharmacy expands into clinical and other areas and programs
- Establishing clinical initiatives and cost controls within the pharmacy team without building adequate credibility and support with medical staff

It is the People………People… and People…

- Linked to practice vision
- Common shared vision
- What pharmacists are doing
- What technicians are doing
- How are we using students and residents
- Are we making a difference?
Why Now Is the Right Time? A Transformation Taking Place………

• Patient care focused culture
  > Purpose
  > People
  > Process
  Theme
  > Trust
  > Engagement
  > Accountability
  > Professionalism
  > Team work
  > Communication flow
  > Staff development
  > Reward and recognition
  > Process improvement

We Cannot………

• Ignore challenges
• Turf ideas any longer..
• Run from things
• Use excuse: “too busy”

Yes, We Can

• Seek/recruit opportunities
• Be proactive and creative
• Combine clinical expertise with sound business principles for financial viability/operational excellence

President Obama and the New Administration - What’s Different in Washington

• President Obama’s health care platform
  - Expanded coverage
  - Control cost
• New direction for the FDA
• Majority view: “healthcare reform part of the solution to dealing with economy in long run”
• Consensus among decision makers
• Enhanced Medicare rates for compliance with HIS
• $20 billion discretionary grant funding for IT projects
• $90 billion additional federal Assistance Funding

Recap: Questions

#6. Which of the following can be used for active formulary management? A. automatic clinical interventions; B. formulary restrictions; C. peer review requirements for prescribing; D. therapeutic interchange; E. all of the above

#7. Patient care and medication safety must be properly balanced with financial priorities to avoid risk management costs. A. true; B. false

#8. Which of the following can lead to delivery of poor pharmaceutical care? A. collaboration with other health care professionals; B. failure to maintain a balance between drug distribution and clinical services; C. staff driven performance improvement initiatives; D. building credibility with medical staff; E. none of the above

Few True Stories…..How is Helga?

• A sweet grandmother telephoned Memorial Hospital and asked, “is it possible to speak to someone who can tell me how a patient is doing?”
• Operator – “I’ll be glad to help, dear- what’s the name and room number?”
• Grandmother in her weak, tremulous voice said ‘Helga Jackson Room 212’
• Operator – ‘Let me place you on hold while I check with her nurse’
• After a few minutes, operator – ‘Oh, I have a good news. Her nurse just told me Helga is doing very well. Her pressure is fine, her blood work came as normal and she is scheduled to be discharged tomorrow morning’
• Grandmother – ‘Thank you. That’s wonderful! I was so worried! God bless you for the news.’
• Operator – “You are more than welcome. Is Helga your sister?”
• Grandmother – ‘No, I’m Helga Jackson in 212. No one tells me s__’
Why Doctors Hate Science?!

• Sharon Begley

Why Doctors Hate Science

Scaremongers warn that ‘effectiveness research’ threatens the lives of Americans.

From Newsweek issue dated Mar 9, 2009

Charles Darwin

• “It is not the strongest of the species that survives, nor the most intelligent that survives. It is the one that is the most adaptable to changes.”

A Medical Madoff:
Anesthesiologist Faked Data in 21 Studies

Scientific American March 10, 2009

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– Vladeck BC. You can’t get there from here: obstacles to improving care of the chronically ill. Health Aff. 2005; 24: 175 – 179
Recap Questions from Slides

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