Annual Meeting Syllabus

Saturday November 15 –Sunday November 16
Hyatt Regency Houston
Fostering Excellence & Professionalism in Internal Medicine

Yul D. Ejnes, MD, MACP
Chair-Emeritus, ACP Board of Regents
Clinical Associate Professor of Medicine
The Warren Alpert Medical School of Brown University

ACP: What Have You Done for Me Lately?

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Disclosure of Financial Relationships

Yul D. Ejnes, MD, MACP

Has no relationships with any entity producing, marketing, re-selling, or distributing health care goods or services consumed by, or used on, patients.
ACP’s Mission

To enhance the quality and effectiveness of health care by fostering excellence and professionalism in the practice of medicine.

2014-15 Priority Initiatives

- Discuss with the American Board of Internal Medicine (ABIM) reform of the Maintenance of Certification (MOC) process; and develop and implement a MOC Navigator...
- Help ACP members experience more joy in their professional lives...
- Expand ACP’s reach internationally...
- Increase knowledge and use of High Value Care (HVC)...

2014-15 Priority Initiatives

- Increase the impact of ACP Smart Medicine...
- Increase ACP’s visibility in academic centers/institutions...
- Support implementation of the Affordable Care Act...
- Improve the utility, safety, and quality of Electronic Health Records...
2014-15 Priority Initiatives

- Facilitate transitions to value based payment and delivery models...
- Support effective partnerships among patients, families and care teams...

ACP Membership Continues to Grow

- Effective June 30, 2014, total membership is 141,000 and international membership is nearly 12,000.
- ACP has 58 domestic chapters and 15 international chapters.

ACP Public Policy & Advocacy
Your advocate for Internal Medicine on Capitol Hill

ACP’s advocacy priorities:
- Permanent Repeal of the SGR
- Extending Medicaid Pay Parity
- Ensuring Successful Implementation of Key Components of the ACA
- Supporting Vital Health Programs through Appropriations
- Advancing Medical Liability Reforms
- Addressing Administrative Complexities

www.acponline.org/advocacy
SGR Repeal

- SGR Repeal and Medicare Provider Payment Modernization Act, H.R. 4015/S. 2000
  - Halts the SGR cuts
  - Positive baseline updates for 5 years
  - Additional updates possible from:
    - Merit-based incentive program
    - Alternative payment models (including PCMH)
  - Cancels PQRS and MU penalties
  - Cancels ↓ adjustments from Value Based Modifier
  - Unites PQRS, MU, VBP Modifier programs

SGR Repeal

- Passed by committees with jurisdiction in both chambers with bipartisan support
- Failed to pass both chambers due to disagreement on how to pay for it → “patch”
- Potential for action during lame duck session?
- If not passed by year’s end, back to the drawing board
- ACP plans strong advocacy effort (with other professional societies) during “lame duck” session

Advocates for Internal Medicine

- Grassroots advocacy network (formerly Key Contact Program)
- Join ACP’s network and contact your Senators and Representatives about issues important to internists

www.acponline.org/advocacy/aimn/
**Maintenance of Certification**

- ACP ≠ ABIM
- Meetings with ABIM leadership (some with other IM societies)
- Some of the concerns
  - Secure exam – relevance and feedback
  - Burdens of practice assessment modules
  - Cost of MOC
  - Patient survey requirement
  - Wording of participation status on website (Meeting Requirements/Not Meeting Requirements)

**Maintenance of Certification**

- Changes announced this year
  - ↓ data collection burden for practice assessment
  - ↑ CME options for medical knowledge
  - Patient survey → “Patient Voice” with multiple options
  - Failure on secure exam – grace period, ↓ retake fee
  - More feedback on test scores
  - Develop new language to report participating status in MOC

**Resources for Board Certification**

- MKSAP 16
  - Leading self-study program to prepare for the ABIM MOC exams in internal medicine
  - 1,200 self-assessment questions
  - Used by over 90% of residents for board preparation
- Board Basics 3
  - Board-prep pearls
  - Dozens of classic images, core content and tips on how to take the exam
- Courses
  - Live review courses
  - Audio and video recordings of live review courses.
Resources to help with Maintenance of Certification (MOC)

ACP members enjoy substantial discounts on the following MOC resources:

- **MKSAP 16**
  - the leading self-study program to prepare for the ABIM MOC exams
  - 1,200 self-assessment questions
- **Board Basics 3**
  - dozens of classic images, core content and tips on how to take the ABIM exams
- **ABIM MOC Exam Preparation Courses**
  - 2-3 day courses on new developments over the past 10 years
  - offered in 6 locations prior to Spring and Fall exam dates
- **Internal Medicine Board Review Courses**
  - 4-6 day courses
  - offered in 5 locations
  - available in audio/video recordings.
- **Virtual DxSM**
  - online image-based study program to prepare for the ABIM recertification exams
- **MOC Special Interest Group**
  - online discussion group

Addressing Administrative Complexity

- ACP Member Surveys and focus groups identified three “top hassles:”
  - Electronic health records (EHRs)
  - Quality reporting
  - Dealing with insurance companies
Addressing Administrative Complexities

Focused Advocacy Efforts
- National Legislative/Capitol Hill Outreach
  - Regulatory Outreach
- State
  - Work with Chapters/Governors – BOG meeting, letter writing campaign, identify issues in states, other approaches
- Policy Development
  - MIC Clinical Documentation Paper
  - Other policy development
- Private Payers
  - HIT & EHRs
    - Outreach to EHR vendors, Office of the National Coordinator (ONC), and other HIT vendor groups

Tools/Services & Practice Support
- Relationship & Collaborations
- Research

Existing ACP Resources
- Practice Advisor
- Physician & Practice Timeline
- ICD-10 Resources
- Home Health Care Forms
- HIPAA Manual
- ACP/MGMA Cost Survey

Planned/Potential New ACP Tools
- Physician and Practice Timeline (version 2.0)
- Genesis Registry

Relationships & Collaborations
- Research

Engagement With Other Stakeholders
- Patient/Advocacy Groups
  - AMA
  - AHIP
  - ABIM
  - HIT Groups
  - National Business Group on Health
  - Others?

Addressing Administrative Complexities

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  - Others?
Addressing Administrative Complexities

- "Practice Enjoyment Summit" – September 2014
- Issues identified
  - EHR operability
  - Practice redesign and delegation
  - Physician burnout

Practice Resources

- ACP Practice Advisor: online tool designed to help practices improve patient care, organization, and workflow
- American EHR Partners Program: web-based resource for EHR system selection/implementation
- Medical Laboratory Evaluation Program (MLE): Proficiency Testing service for those who perform diagnostic testing of blood and bodily fluids
- PQRSwizard: online tool designed to collect and report quality measure data to the Centers for Medicare & Medicaid Services PQRS payment program
Practice Resources (cont.)

- **Physician & Practice Timeline** - Online tool that helps physicians track deadlines for a variety of regulatory, payment, educational, and delivery system changes and requirements

- **ACP Quality Connect** - Quality improvement resources, extending from point-of-care tools to a national QI network linked to the Physician Quality Reporting System (PQRS), that help physicians improve patient care and gain ABIM MOC practice assessment points

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A Key Benefit: ACP Fellowship

Recognizes excellence in the practice of internal medicine and is achieved through professional accomplishments within one, or across multiple pathways:

- Published Academician - author of at least two published articles in medical journals
- Commitment to continuing education - multiple certifications, recertification, or MKSAP for score
- Active involvement in ACP - at least 5 years of membership and participation in College activities including national or local committees/councils
- Senior Physician with a distinguished career in internal medicine

[www.acponline.org/FACP](http://www.acponline.org/FACP)

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Annals of Internal Medicine

ACP's world class peer-reviewed medical journal; current, evidence-based science at your fingertips

- **New!** Interactive Virtual Patient cases test the physician's decision-making skills through examination, diagnosis, and treatment of a virtual patient. Learners can earn CME credits and MOC.

- Laugh while you learn with Annals Consult Guys Videos, a series of educational videos that use humor to address and solve clinical problems.

[Download the App for Annals iPad edition and take the journal wherever you go.](http://www.acponline.org/AnnalsApp)
**MKSAP® 16**

The gold-standard of physician self-assessment for more than 45 years; discounted to ACP members

- Order the print version or MKSAP 16 Digital
- Use for Board preparation, recertification (MOC) preparation and credit, and updating medical knowledge
- Covers general internal medicine and 10 internal medicine subspecialties
- 1,200 multiple-choice questions
- Answers and critiques included

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**Evidence-based Clinical Guidance**

ACP’s Clinical Practice Guidelines, Guidance Statements and Best Practice Advice papers are rigorously reviewed based on the best evidence prior to publication.

Recent Clinical Practice Guidelines:
- Diagnosis of Obstructive Sleep Apnea in Adults (August 2014)
- Screening Pelvic Examination in Adult Women (July 2014)
- Treatment for Anemia in Patients with Heart Disease (December 2013)
- Screening, Monitoring, and Treatment of Stage 1-3 Chronic Kidney Disease (October 2013)
- Management of Obstructive Sleep Apnea in Adults (September 2013)

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**High Value Care**

Resources to help physicians provide the best patient care while reducing costs to the health care system

- Evidence-based recommendations
- High Value Care teaching curriculum
- High Value Care Coordination Toolkit
- Practice resources
- Public policy papers
- Patient education materials
- Videos about High Value Care

www.acponline.org/hvc
High Value Care Curriculum & Online Cases

For Educators, Residents, and Students
ACP’s High Value Care Curriculum, created by ACP and the Alliance for Academic Internal Medicine (AAIM), features six, one-hour interactive modules.

For Medical Students
A High Value Care Course designed specifically for students to help them evaluate the benefits, harms, and costs of tests and treatment options so they can make High Value Care a reality in clinical practice.

High Value Care Online Cases
ACP’s HVC cases offer clinicians the opportunity to earn FREE CME credits and ABIM Medical Knowledge MOC points.

Internal Medicine 2015: ACP’s Annual Scientific Meeting

April 30 – May 2, 2015
Boston, MA

- Over 200 educational, interactive workshops
- Case-based sessions and feedback on challenging patient management problems

Join us as we celebrate ACP’s 100-year anniversary!

Additional Clinical Resources

Monthly print publications - ACP Internist and ACP Hospitalist provide news and in-depth analysis of issues for inpatient and outpatient internists.


ACP Clinical Shorts - a series of short educational videos to help clinicians earn CME and MOC credits.
ACP Smart Medicine

ACP Smart Medicine is a FREE web-based clinical decision support tool that provides evidence-based recommendations for all point-of-care categories.

- Mobile-optimized access
- Links to Annals of Internal Medicine, ACP JournalWise, High Value Care Recommendations, Clinical Guidelines
- Evidence-based recommendations
- Earn free point-of-care CME

ACP JournalWise

- ACP JournalWise is a personalized, mobile-optimized updating service for clinical articles from more than 130 medical journals that is free to ACP members.
- Updated daily and available on Smartphone, tablet, or desktop, ACP JournalWise screens and provides customized alerts and summaries for articles categorized by specialty area, methods quality, and clinical importance.

ACP Immunization Resources

- ACP Immunization Guide for day-to-day practice
- Free ACP Immunization Advisor App makes it easy to find the right vaccines for patients by age or underlying circumstance based on current recommendations

www.acponline.org/immunization
Professional & Personal Benefits

- **The Doctors Company**: ACP-sponsored Professional Liability Insurance Program with nation's leading medical malpractice carrier offering aggressive claims defense and innovative rewards.

- **Marsh Affinity Group Services**: Offering personal insurance options including life, disability, long-term care, and auto/homeowners through leading insurance companies.

- **Bank of America**: Offering BankAmericard Cash Rewards™ Visa Signature® with low introductory APR and no annual fee, and including 24/7 complimentary concierge service, shopping protection and travel assistance/ protection.

ACP . . . Connected and Mobile

- **Social Media**: ACP and Annals of Internal Medicine are using social media more than ever to communicate and share information relevant to internal medicine.

- **Special Interest Groups**: ACP's online communities offer physicians an opportunity to share experiences, questions, and solutions with their peers.

- **Mobile Access**: ACP now offers mobile versions of Annals and MKSAP and Apps for several ACP products.

Support the Next Generation of IM

- Encourage a young person to understand the rewards of internal medicine as a career

- Convince a medical student to see the bright future of internal medicine

- Recommend general internal medicine to a resident

- Invite another internist to become an ACP member

- Suggest Fellowship to a member
Recruit a Colleague

- Recruit one colleague and receive a $100 credit toward your 2014-15 annual dues
- Recruit two colleagues and receive a $200 credit toward your 2014-15 annual dues
- Recruit three colleagues and receive a $300 credit toward your 2014-15 annual dues
- Recruit four colleagues and enjoy free annual dues in 2014-15

www.acponline.org/rec

Visit ACP Online

A quick and easy way to find all that you need

Thank you . . .

for your continued support of ACP and your commitment to internal medicine.
Do You Know Your Cyber Liability Risks?

Texas Chapter ACP Annual Meeting
November 15, 2014

John Southrey, CIC, CRM

TMLT Disclaimer

The information and opinions in this course and the supplemental materials should not be used or referred to as primary legal sources nor construed as establishing medical standards of care for the purposes of litigation, including expert testimony. The standard of care is dependent upon the particular facts and circumstances of each individual case and no generalization can be made that would apply to all cases. The information presented should be used as a resource, selected and adapted with the advice of your attorney.

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Learning Objectives

Upon completion of this program, participants should be able to:

- Recognize that breach vulnerabilities in healthcare are numerous and evolving;
- Identify what healthcare providers should do/consider to mitigate their cyber liability risks; and
- Comprehend the importance of having a cyber risk management plan and appropriate risk transfer.
Your Data Has Been Ransomed!

Ransomware takes people's data captive and holds it for ransom. Source: fox5sandiego.com/

Breach Vulnerabilities Are Many in Healthcare

"Companies fail at the basics. Whether it's a large company or small, the amount of private information that we find companies putting on laptops and other devices with hardly any controls or encryption is amazing.

We see companies with very good security measures and millions of dollars in security budgets get hit."

Mark Greisiger, Feb. 2014
President of NetDiligence

Providers are “Low-hanging Fruit”

Reuters reported that the FBI has privately warned healthcare providers their cybersecurity systems are lax in comparison to other sectors, making them vulnerable to attacks by hackers searching for Americans' personal medical records and health insurance data.

Medical Liability Monitor
May 2014, Vol. 35, No 5

Healthcare will be a hotbed of consumer data breaches in 2014, according to Experian report, "2014 Data Breach Industry Forecast."

InformationWeek HealthCare
**What Constitutes a Breach?**

*A breach is, generally, an impermissible use or disclosure under the [HIPAA] Privacy Rule that compromises the security or privacy of the protected health information.*

An impermissible use or disclosure of protected health information is presumed to be a breach unless the covered entity or business associate ... demonstrates that there is a low probability [aka "LoProCo"] that the protected health information has been compromised based on a risk assessment of at least the following factors:

<table>
<thead>
<tr>
<th>Low Probability of Compromise (LoProCo)</th>
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<tbody>
<tr>
<td>1. The nature and extent of the protected health information involved, including the types of identifiers and the likelihood of re-identification;</td>
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<tr>
<td>2. The unauthorized person who used the protected health information or to whom the disclosure was made;</td>
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<tr>
<td>3. Whether the protected health information was actually acquired or viewed; and</td>
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<td>4. The extent to which the risk to the protected health information has been mitigated.</td>
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<table>
<thead>
<tr>
<th>Three Breach Exceptions</th>
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<tr>
<td>1. The unintentional acquisition, access, or use of PHI by a workforce member or person acting under the authority of a covered entity (CE) or business associate (BA), if it was made in good faith and within the scope of authority.</td>
</tr>
<tr>
<td>2. The inadvertent disclosure of PHI by a person authorized to access PHI at a CE or BA to another person authorized to access PHI at the CE or BA, or health care arrangement in which the CE participates.</td>
</tr>
<tr>
<td>3. If the CE or BA has a good faith belief that the unauthorized person to whom the impermissible disclosure was made, would not have been able to retain the information.</td>
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</table>
The Breach Notification Rule requires covered entities to notify the affected individuals, the Secretary of the U.S. Department of Health & Human Services (HHS), according to prescribed timelines, and in some cases, the media when they discover a breach of a patient’s unsecured PHI.

The HHS’ Office for Civil Rights (OCR) is charged with enforcing these rules.

"The government [HHS/OCR] is done offering guidance and letting entities off the hook without any financial harm. … based on settlements and other indications, the gloves are off and any and all HIPAA Entities are fair game for the imposition of penalties. … Not only will enforcement be going up, but the fines will also rise. Tolerance of violations while never very high is clearly shrinking even further. … HIPAA Entities must act now."

"Now’s the Time: Get HIPAA Compliant"
Mirick O’Connell’s Health Law Blog
Matt Fisher, Esq.
**Types of Breaches – 500+ Records**

- Hacking/IT Incident: 7%
- Improper Disposal: 5%
- Unauthorized Access/ Disclosure: 20%
- Lost: 14%
- Theft: 51%
- Unknown: 3%

Source: Office for Civil Rights (through January 2013)

**Medical Identity Theft Harms Patients**

- A patient in Texas used a California man’s medical identity to obtain radiation treatment and other care. When the thief’s records and the patient’s records merge, healthcare providers will think the patient has a condition he doesn’t have.

- A woman couldn’t get physical therapy following neck surgery because a Miami clinic that she had never visited claimed her insurance benefits had been maxed out.


**Medical Identity Theft is Profitable!**

According to Politico:

“A medical record with a complete identity profile can be worth up to $500.”

“As reported in PIAA.”
According to a '14 Washington Post analysis of the U.S. Dept. of Health and Human Services' (HHS) breach database, since federal reporting requirements began in 2009, HHS has tracked 944 major breach reports (>500 people) affecting the sensitive personal information of about 30.1 million people:

- 17.4 million from theft;
- 7.2 million from data loss;
- 3.6 million from hacking; and
- 1.9 million from unauthorized access

*These numbers don’t include the 2014 Community Health Systems breach involving 4.5 million patients!

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**2013 Texas Breaches >501 Records**

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**Redspin Report: ‘13 a Bad Year for Data Breaches**

“With PHI data on more portable devices used by more ‘under-educated’ employees, it is a virtual certainty that there will be more breaches. Mitigating that risk must become a higher priority throughout the entire industry.

Malicious hackers are not the only group to realize the value of a stolen health record when used for illegal purpose—it may be your own employees.”
The Costs of a Data Breach

THE AVERAGE HEALTHCARE BREACH COSTS $188 PER RECORD

- FORENSICS
- LEGAL FEES
- CALL CENTER
- PUBLIC RELATIONS/CRISIS RESPONSE
- CREDIT MONITORING
- CREDIT MONITORING
- NOTIFICATION COSTS

The Costs and Impact Can Be Staggering!

“The threat landscape continues to evolve as cyber-attacks grow in sophistication, frequency and financial impact.”

Frank Mang, V.P. of HP Enterprise Security Products

- The direct costs can include expenses for:
  - Consultants and counsel;
  - IT forensics, repair and restoration;
  - Public relations;
  - Patient notifications and credit monitoring services;
  - Call center support; and
  - Regulatory fines and penalties.

- The indirect costs can include loss of:
  - Revenue and extra expenses;
  - Patient goodwill and loss of reputation; and
  - Employee & business productivity.

4th Annual Benchmark Study on Patient Privacy and Data Security – the Ponemon Institute
**The HIPAA Privacy Rule and Security Rule**

**Privacy Rule**
- Assures that individuals’ health information is properly protected;
- Allows the flow of health information needed to provide & promote high quality health care; and
- Protects the public’s health and well being.

**Security Rule**
- Protects the confidentiality, integrity, and availability of ePHI;
- Is technology neutral and scalable; and
- Protects ePHI against any reasonably anticipated threat or hazard, and improper use or disclosure.

**The Big Three HIPAA Security Safeguards**

**Administrative Safeguards** focus on workplace training and contingency planning. The foundations are a security risk assessment and ongoing risk management, both of which are required.

**Physical Safeguards** deal with access both to an entity’s physical structures and its electronic equipment. All ePHI must be protected from unauthorized access, and having policies and procedures is required.

**Technical Safeguards** deal with establishing policies that limit access to only those authorized and having policies to protect ePHI from alteration and destruction.

**The OCR is Serious About HIPAA Compliance**

“Among the areas likely to be a focus of OCR [Office for Civil Rights] examinations in 2014 is whether organizations have conducted a timely and thorough HIPAA security risk assessment, because that was a common weak spot found across the board … in previous breach investigations.”

Susan McAndrew
Former OCR Deputy Director for Health Information Privacy

OCR’S Plan for Random HIPAA Audits (announced in 9/14):
- 200 Covered Entities + On-site Audits
- Business Associates
"Dear Dr. _____:

Please be advised that the Department of Health and Human Services (HHS), Office for Civil Rights (OCR), received a complaint on October 30, 2013 …

Specifically, the complaint alleges that the office computers [unencrypted] were recently stolen, that the office was unable to access patient electronic records during appointments, and that the office failed to notify patients of the breach of protected health information."

Per the OCR’s Data Request: “A copy of the most recent security risk assessment performed by or for the covered entity.”

The scope of privacy and security protections under HIPAA have increased, as well as the enforcement actions and civil fines and penalties for non-compliance.

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<tr>
<th>ACTION</th>
<th>MINIMUM PENALTY</th>
<th>MAXIMUM PENALITY</th>
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<tr>
<td>Revisit did not have (and by operating responsible diligence would not have known that such devices were unsecured)</td>
<td>$100 per violation, with an annual maximum of $25,000 for each violation.</td>
<td>$10,000,000 per violation, with an annual maximum of $1,5 million.</td>
</tr>
<tr>
<td>HIPAA violation is due to willful neglect</td>
<td>$1,000 per violation, with an annual maximum of $100,000 for each violation.</td>
<td>$10,000,000 per violation, with an annual maximum of $1,5 million.</td>
</tr>
<tr>
<td>HIPAA violation is due to willful neglect that is corrected</td>
<td>$2,000 per violation, with an annual maximum of $20,000 for each violation.</td>
<td>$5,000,000 per violation, with an annual maximum of $750,000.</td>
</tr>
<tr>
<td>HIPAA violation is due to willful neglect that is not corrected</td>
<td>$50,000 per violation, with an annual maximum of $1,5 million.</td>
<td>$10,000,000 per violation, with an annual maximum of $1,5 million.</td>
</tr>
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The Need for Cyber Risk Management

A privacy and security risk assessment should be the basis of a practice’s cyber risk management:

- It’s required by law if they create, maintain, transmit or store ePHI.
- It’s required annually of practices participating in meaningful use.
- It will be requested if the practice has an investigation or audit.
- It will be requested if practice has a meaningful use audit.
- It will identify vulnerabilities in the practice – hopefully before a breach!
In Summary, To Avoid Non-Compliance

All covered providers should:

- Update their HIPAA Notice of Privacy Practices and policies & procedures
- Conduct a thorough HIPAA Security Risk Analysis;
- Conduct employee training that complies with the HIPAA Omnibus Rule & Texas Medical Privacy Act;
- Identify all of your BAs, and determine if you had a existing BAA with them prior to 03/26/13 and revise by 09/22/14 to comply with the Omnibus Rule;
- Implement safeguards, such as encryption, for ePHI stored on portable devices or e-transmitted; and
- Develop an Incident Response Plan to provide guidelines for your staff, if a breach occurs.

To Further Minimize Risks: Use Encryption

- Encryption provides access control to sensitive data by encoding the information in a such a way that only authorized parties can view it. The information is encrypted by using algorithms to make it unreadable, unless you have the decryption key.

  Encryption should be used to protect sensitive data-at-rest in portable storage and mobile computing devices and data-in-transit when being transmitted via a network, the Internet, or wireless connection.

… Use HIPAA-Compliant Text Messaging

- Use secure email or a HIPAA-compliant mobile and desktop app (e.g., DocBookMD).

  If the content of a text message contains PHI, then the text message must comply with HIPAA.

  All it takes is one piece of identifying information (e.g., a patient’s name) and one piece of private information (e.g., a diagnosis) and the text message is ePHI.

  Texting unsecured ePHI should never be done when there is a chance that it could be compromised.
Test Your Medical Privacy and Security IQ

1. Did you revise your NPP in 2013 to reflect the changes in the HIPAA Omnibus Rule? Points: Yes (50) Unknown (10) No (0)
2. Has your practice done at least one HIPAA Security Risk Analysis since going to EHR? Points: Yes (50) Unknown (10) No (0)
3. Does your practice use secure HIPAA-compliant text messaging? Points: Yes (50) Unknown (10) No (0)
4. Are new employees trained on HIPAA within 90 days? Points: Yes (50) Unknown (10) No (0)
5. If selected for a random HIPAA audit would you have their requested documents? Points: Yes (50) Unknown (10) No (0)

HIPAA Score

- Genius: 160+
- Smart: 90-159
- Average: 1-89
- Challenged: 0

Reported Cyber Claims – by Quarter

The vast majority of claims reported fell under: 1. Security and Privacy; 2. Patient Notifications and Credit Monitoring; and 3. 1st Party Data Recovery.

Overview of Cyber Liability Coverage: Third-Party Liability

<table>
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<tr>
<th>Third-Party Liability Coverage</th>
<th>Coverage Details</th>
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| Privacy Regulatory Defense & Penalty Coverage | Covers regulatory investigations, fines and penalties imposed on you as a result of violations of federal, state, or local privacy statutes and regulations. For example, a violation of HIPAA, the HITECH Act, or the Texas Medical Privacy Act, which has more stringent safeguards for PHI than HIPAA.
| Multimedia Liability Coverage | Covers claims arising out of defamation, invasion of right of privacy, plagiarism, copyright, trademark infringement, and domain name infringement.
| Security & Privacy Liability Coverage | Covers claims arising out of unauthorized access to a computer system, or to prevent a denial of service attack, or to prevent malicious code or a computer virus. Both online and offline information and a patient’s breach of confidentiality or rights to privacy are also covered. |
Overview of Cyber Liability Coverage: First-Party

First-Party Coverage

Network Asset Protection Coverage

Note: Typically this coverage is limited to the insured's data and computer programs and does not cover computer hardware.

Covers expenses you incur due to a covered cause of loss. For example, this could be to restore or reacquire lost or damaged data or to prevent future losses. Includes business interruption expenses to continue normal operations and to avoid or minimize a suspension of your practice.

Privacy Breach Response Costs, Patient Notification Expenses & Credit Monitoring Expenses

Covers the costs to notify patients of a breach of their PHI. For example, legal fees; notification costs (up to 1 year of free credit monitoring); IT forensic costs; and advertising and postage expenses. Additionally, covers the costs to employ a public relations consultant to avert or mitigate harm to your reputation.

Cyber Extortion Coverage

Covers extortion expenses and the payment of monies (subject to NAS’ consent) to respond to a cyber extortion threat or demand. For example, you receive a demand to pay monies to terminate a threat.

Cyber TERRORism Coverage

Coverage for acts of cyber terrorism associated with force or violence for political, religious, ideological or similar purposes, including business interruption (loss of income) and extra expenses.

Contract Due Diligence

“Dear John: The following are the contractual requirements that XYZ hospital wants us to agree to:

(a) computer processor/computer consultant professional liability insurance (Technology Errors and Omissions) covering the liability for financial loss due to error, omission or negligence of Consultant. With a minimum amount of $5 million per claim and $5 million annual aggregate;

(b) Privacy and Network Security (“cyber”) insurance covering loss arising out of or in connection with loss or disclosure of confidential information or confidential medical information, in a minimum amount of $5 million per event;

(c) third-party liability coverage, including blanket employee dishonesty and computer fraud insurance, for loss arising out of or in connection with fraudulent or dishonest acts committed by the employees of Consultant, with a minimum amount of $1 million per loss.

... including additional insured status on a primary and non-contributory basis; certificates of insurance with 45 day policy cancellation or coverage change notification; and a waiver of subrogation.”

Check Your Cyber Liability Limits

Consider your cyber exposures to loss to determine if you have appropriate risk transfer in place.

- Cyber Liability Limits: Deductible
  - Privacy Regulatory Defense & Penalty Cov.
  - Multimedia Liability Coverage
  - Security & Privacy Liability Coverage
  - Network Asset Protection Coverage
  - Privacy Breach Response Costs
  - Cyber Extortion Coverage
  - Cyber Terrorism Coverage

$X each claim / $X in the aggregate

27
<table>
<thead>
<tr>
<th>A Major Caveat About Cyber Insurance</th>
<th>Providers May Need Expert Guidance</th>
<th>Conclusion</th>
</tr>
</thead>
</table>
| **NOTE:** There is no substitute for a good cyber risk management program! Growing cyber risks and potential regulatory violations require cybersecurity to be integrated into your business risk. **Complacency** is not a risk management strategy! | **As the level of technology usage by healthcare providers increases—so will their cybersecurity risks. Therefore, providers will likely need to seek assistance in dealing with the proliferation and diversity of their cyber risks, including help with their:**  
  - IT Systems;  
  - EHR Selection & Implementation;  
  - HIPAA Privacy and Security Risk Assessments;  
  - Staff Privacy Training; and  
  - Risk Transfer (cyber insurance). | **“… organizations recognize that good security isn’t just about preventing attacks and breaches. It’s also about accepting that attacks are inevitable, and implementing tools and techniques … to enable rapid detection and remediation.”**  
*RSA The Current State of Cyber-Crime 2014*  
 **Questions?** |
John Southrey, Manager
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512-425-5976
DARLING'S TALE
Histoplasmosis in Harlingen: A Fatality of Geographic Ignorance

Karishma I. Balani, MD
Internal Medicine

DISCLOSURES

• None

INTRODUCTION

• Joseph S. Alpert MD (The American Journal of Medicine. 2007; 120, 379)
  - White crows and Aesop's fables
    • Progressive disseminated histoplasmosis (PDH) in patient with undiagnosed AIDS

• HIV/AIDS
  - HIV screening improved from 36.6% (2000) to 45.0% (2010) [NHIS]
  - As of 2010, 19% of people living with HIV were not aware they were infected.

• Histoplasmosis
  - Most common endemic mycosis in AIDS patients
  - 1% of opportunistic infections
  - Not notifiable disease
CASE

A 55 year old Hispanic male construction worker was admitted for unintentional weight loss of 38 lbs over 5 months. He was evaluated in Mexico on 4 separate occasions by his PCP, who addressed his complaints with lab work, MVI and appetite stimulators. He was admitted to the hospital for evaluation of abnormal labs.

- He denied promiscuous sexual activity, previous IV drug use, or transfusions. He was tachycardic, febrile, jaundiced, with upper extremity edema, oral thrush and hepatomegaly.

- Labs showed pancytopenia and an abnormal liver profile. His CXR suggested bilateral reticulonodular infiltrates. A gallbladder evaluation revealed choledolithiasis with CBD obstruction without biliary duct dilatation.

- A peripheral smear displayed intracellular inclusions suggestive of Histoplasmosis. The hepatitis panel was negative and HIV tested positive with a CD4 <5 and viral load of 374,662 copies/mL.
CASE

During his hospitalization, he developed a GI bleed with ulcerated esophagitis and gastritis. BAL disclosed macrophages packed with intracellular budding yeasts on GMS fungal stain consistent with Histoplasma morphology. AFB stains and Pneumocystis jiroveci antigen were negative. His LDH level was 6171, stool was positive for Cryptosporidium and Histoplasma antigen was detected in the urine >25 suggesting PDH.

The patient succumbed to septic shock with ARDS, DIC and full-blown AIDS with PDH and suspicion for AIDS-related cholangitis secondary to Cryptosporidium. After multiorgan failure, he expired 12 days after admission.

CDC Last updated February 13, 2014

Histoplasmosis in Mexico

Areas Endemic for Histoplasmosis

Highly endemic
Moderately endemic
Mildly endemic
Suspected endemic
HIV

• USPSTF (2013)
  – Adolescents and adults age 15-65 years, younger adolescents and older adults at increased risk for infection, and pregnant women (Grade A)

• HIV related stigma and discrimination
  – Social desirability bias

CONCLUSION

• “Aesop’s fable” – 3 critical points:
  – Importance of HIV screening
  – Concern for “social identity” undermines risk factors
  – Socioeconomic factors contribute to delay in diagnosis

• Dilemma of cross border medicine
  – Differences in healthcare systems
  – Difficult access to medical records
  – Interruptions in continuity of care

• Global versus national prevalence of Histoplasmosis
  – Travel history is important for heightened clinical suspicion and early diagnosis
  – Lack of information – not reportable disease
ACKNOWLEDGEMENTS

• James F. Hanley, MD, FACP
  – Internal Medicine Program Director, UTHSCSA-RAHC
• Kathleen Carter, MLIS
  – UTHSCSA-RAHC Librarian

Thank You
Coronary artery bypass grafting in a patient with active Idiopathic Cryoglobulinemia: Revisiting the issue

Hafiz Abdul Moiz Fakih MD, Emmanuel Elueze MD, Rajiv Vij MD

Good Shepherd Medical Center, Longview, TX

Introduction

- Cryoglobulinemia is of unique relevance in cardiac surgery because of the use of hypothermic cardiopulmonary bypass (CPB).

- Cryoglobulins can cause catastrophic precipitation during CPB leading to severe leukocytoclastic or necrotizing vasculitis, expressed as ischemic events.

- Management of CPB and systemic protection in this rare but unique scenario is challenging.

History

- A 59-year-old man
  - Chest pain for two hours, and racing heart.
  - The pain started at rest, substernal, crushing in nature, constant, 7/10 in severity, non-exertional, not relieved by rest or nitroglycerin.

- With the pain not getting any better, he decided to come to the emergency room.

- Found to be in atrial fibrillation with rapid ventricular response.
Past Medical History

- Established diagnosis of idiopathic cryoglobulinemia x14 years
- Rx with plasmapheresis and rituximab in the past.
- Multiple leukocytoclastic vasculitic skin lesions involving his trunk and extremities, gangrene of right first and second toe and left index finger requiring amputations.
- Last flare 6 months ago.
- Hx of acute renal failure with nephrotic syndrome 12-months back-treated with plasmapheresis and steroids.
Additional History

- Other past history
  - Hypertension,
  - Coronary artery disease status post two stents; the last one placed 7-years ago,
  - Gout,
  - Degenerative joint disease,
  - Left eye surgery for retinal detachment.

Social Hx: No smoking, drinking or illicit drug use.

Medications: Allopurinol, prednisone (80 mg PO daily), sotalol and lisinopril.

Physical Examination

- Vital signs at presentation to the ER:
  - BP141/91, Pulse 150/minute irregularly irregular, Respiratory rate 22/minute, Pulse oximetry showed 97% saturation on room air.

- Skin examination: Areas of palpable purpura with no discharge or bleeding bilaterally on the knees and abdomen.

Diagnostic studies

6-hourly serial troponins were:
0.04, 1.27, 1.56 (normal range <0.04ng/ml)

He was found to have significant three vessel disease by cardiac catheterization and was planned to have CABG.
Summary

- We describe the case of a 59-year-old Caucasian male with clinically significant idiopathic cryoglobulinemia and Hx of recurrent skin lesions and toe amputations secondary to cold exposure.
- He presented with 2-hour duration of chest pain and new onset atrial fibrillation.
- After cardiac catheterization, a diagnosis of three-vessel coronary artery disease was established and CABG was scheduled.

Pre-operative course

- Given the high risk, a coordinated form of management strategy was established between nephrology, cardiac surgery and hematology/oncology services.
- Patient needed an intervention to prevent peri-and post-operative complications.
- At admission his qualitative cryoglobulin was positive. We performed two sessions of plasmapheresis with 4 liter plasma volume with 5% albumin exchange.
- On the third day, the cryoglobulins by qualitative analysis were negative.

Operative course

- The patient was put on CPB.
- The heart was arrested using blood cardioplegia at 31°C which was given every 20 minutes throughout the case. No topical cooling was used.
- Total aortic cross-clamp time was 1 hour and 42 minutes. CPB was discontinued after 2 hours. There was no electrocardiographic or biochemical evidence of perioperative myocardial infarction.
- The minimal nasopharyngeal and bladder temperature during the procedure was 32.4°C.
Post-operative course

- Postoperatively, patient did not have any complications associated with cryoglobulinemia such as renal failure or skin rash.
- At discharge the patient was again restarted on his home dose of prednisone of 10 mg per oral daily.
- His total postoperative stay in the hospital was 6 days.

Discussion

- Cryoglobulins are serum proteins or protein complexes that undergo reversible precipitation at low temperatures
- CPB with systemic hypothermia (core temperature ≤34°C), cold crystalloid, or blood cardioplegia, and topical myocardial cooling are common techniques during modern cardiac surgery.
- Management of patients with cryoglobulins during cardiopulmonary bypass:
  - Double filtration plasmapheresis
    - Pre- and post-operatively as well as during CPB
  - Normothermic CPB with continuous warm blood cardioplegia
  - Preoperative steroid therapy and plasmapheresis

Discussion (cont)

- This case illustrates the importance of:
  - Recognizing potentially fatal complications that can occur in cryoglobulinemic patients undergoing CPB
  - That individualized pre-operative management may prevent these complications.
- Surgery, in particular cardiac surgery, is a challenge in these patients given the fact that case reports have described adverse outcomes in patients with cryoglobulinemia.
Discussion (cont)

- After extensive literature search,
  - Many case reports regarding management of CPB and cold agglutinin disease.
  - But only six reported cases of CPB in patients with cryoglobulinemia, the last one reported more than 7 years ago.
- Plasmapheresis transiently removes the circulating cryoglobulins.
- Has been advocated (in conjunction with immunosuppressive therapy) to be effective in reducing mortalities associated with cryoglobulinemia.

Discussion (cont)

- The objectives of plasmapheresis are:
  - To remove plasma cryoglobulins, and pathogen component, thus
  - altering the antigen-antibody ratio,
  - to eliminate cytokines,
  - and to increase immune complex clearance.
- Only three case reports have been reported previously which used plasmapheresis for managing patients with cryoglobulinemia undergoing CPB.
- But all three used different techniques and combinations.

Conclusion

- No guidelines for the management of patients with cryoglobulins during CPB and only few experiences are reported in this field.
- One of the reasons for this vignette is to review this rare yet challenging scenario.
- The fundamental questions that still remain unanswered include
  - How many plasmapheresis sessions should be used
  - When should these sessions be performed.
Take home points

- We came to the conclusion that the management should be individualized depending on the severity of the clinical disease preoperatively and that there should be a balance between risk and benefit.

- A collaborative and coordinated strategy between nephrology, hematology/oncology and cardiovascular surgical services is of utmost importance.

Acknowledgements

- Patient and family
- Cardiovascular Surgery
- Hematology/Oncology

Thanks
The Body Doesn’t Lie!

Texas ACP

Pratik Naik MD
Department of Internal Medicine

MAJ Nicholas Batchelor MD
Division of Pulmonary & Critical Care
Department of Internal Medicine

William Beaumont Army Medical Center
Nov 15, 2014

Disclaimer

- The views expressed in this presentation are those of the authors and do not reflect the official policy of the Department of the Army, Department of Defense, or U.S. Government.

Case Presentation

- 27 year old active duty male medic
- Initial Emergency Department (ED) Presentation:
  - 3 month complaints of:
    - Recurrent syncope
    - Hemoptysis
    - Dyspnea with exertion
- ED Evaluation:
  - ROS
    - GEN Generalized body ache
    - HEENT Headache
    - CV Lightheadedness
ED History

- **Past Medical/Surgical History:**
  - Post Traumatic Stress Disorder
  - Migraine headache
  - Insomnia
  - Chronic pain

- **Medications:**
  - Fluoxetine
  - Zolpidem
  - Oxycodone/Acetaminophen 5/325mg as needed

- **Family Hx:** unremarkable

- **Social Hx:**
  - Non-smoker
  - Non-drinker

  - Denied intravenous drug use

ED Physical Exam

- **Vitals**
  - HR 95, BP 128/75, RR 18, T 98.7 F
  - O2 sat 86% RA

- **GEN**
  - A&Ox3, NAD

- **HEENT**
  - PERRLA

- **CV**
  - Normal S1 & S2, no murmurs/rubs

- **Pulm**
  - Clear breath sounds b/l without rales, rhonchi or wheezing, no conversational dyspnea

- **ABD**
  - Soft, NT, ND

- **Neuro**
  - CN II-XII intact, 5/5 strength b/l UE and LE, sensation intact

Labs

- **CBC:**
  - WBC 4.1
  - Hg 14.2
  - Hct 41.9
  - Plat 194

- **Renal panel:** WNL

- **Hepatic Panel:** WNL

- **Cardiac Enzyme:** Negative

- **Coag panel:**
  - PT 12.7
  - PTT 29.6
  - INR 1.12

  - **D-dimer:** 943

  - **ACE:** 88

- **Drug screen:**
  - Positive for opiates
Admission to Internal Medicine

- The patient underwent cardiac and neurologic workup for syncope that included:
  - Echocardiogram: unremarkable
  - Rhythm monitoring: uneventful
  - Cardiac stress test: low risk
  - Brain MRI & MRA: normal
  - EEG: no seizure activity
  - Carotid ultrasound: unremarkable
  - Lumbar puncture: normal cell count & negative cultures
  - ANA panel: negative

- Syncope diagnosis: vasovagal secondary to cough and hypoxia

Admission to Internal Medicine

- Hemoptysis/hypoxia evaluation:
  - Chest X-ray
  - Computed Tomography (CT) Chest

Imaging
Differential Diagnosis

- Sarcoidosis
- Interstitial lung disease
- Pneumoconiosis
- Tuberculosis
- Emphysema
- Opportunistic infections
  - Pneumocystis
  - Cytomegalovirus pneumonia
- Neoplasms
  - Broncho-alveolar carcinoma
  - Lymphoid malignancy

Further work up

- Bronchoscopy with bronchoalveolar lavage (BAL):
  - Progressively bloodier return consistent with alveolar hemorrhage
  - BAL cultures: negative
  - Cytology: negative for malignant cells
- Biopsy of lung was performed

Pathology

H & E stain: peri- and intravascular collections of exogenous material
Pathology

Final Pathology Report

Polarized microscopy

Peri- and intravascular collections of exogenous material morphologically consistent with crospovidone (PVP), microcrystalline cellulose and starch collocated within foreign body type granulomas

Interpretation:

- All three materials are inactive ingredients of oral pill form medications
- Location of this material within pulmonary blood vessels is consistent with intravenous injection of medication intended for oral administration

Diagnosis

- Pulmonary Foreign Body Granulomatosis
  - Rare complication of IV injection of medications intended for oral administration
  - Cases of extrapulmonary disease documented in the eyes, uterus, liver
  - The exact pathophysiological mechanism of foreign body granulomatosis is unknown
    - Foreign body embolization results in an initial inflammatory arteritis
    - Granulomas later develop after migration of particles to the surrounding peri-vascular and pulmonary interstitial tissue

Pulmonary Foreign Body Granulomatosis

- Symptoms/Signs range from asymptomatic to fulminant
  - Non-specific complaints
    - Progressive exertional dyspnea
    - Dry cough
    - Weight loss and night sweats
  - Progressive Disease
    - Adult respiratory distress syndrome
    - Massive fibrosis
- Physical examination is typically unremarkable

Work Up

- Laboratory values are also usually within normal limits
  - In our case, the patient had elevated D-dimer and positive drug screen
- Imaging:
  - Chest X-ray:
    - Widespread, 2 to 3 mm, well-defined nodules
  - High-resolution CT:
    - Diffuse fine nodular pattern
    - Ground-glass pattern with emphysema
- Bronchoscopy and biopsy are necessary for definitive diagnosis

Pulmonary Foreign Body Granulomatosis

- Prognosis:
  - Patients have poor outcomes and experience a progressive decline in pulmonary function
  - One 10-year follow-up of six patients described an irreversible progression of radiographic abnormalities

References:

Pulmonary Foreign Body Granulomatosis

Treatment:
- No well established treatments
- As needed oxygen
- Discontinuation of intravenous drug administration
- Avoidance of cigarette smoking
- Successful steroid use has been reported in one patient but further data are lacking
- Associated pulmonary hypertension should be treated with vasodilators
- Lung transplantation is a last resort for patients with end-stage disease

Patients Treatment Course
- Discharged with the following:
  - Home oxygen
  - Outpatient pulmonary function tests
  - Referral to military substance abuse program
- Returned to the ED weeks later
  - Full cardiac arrest
  - Died

References
Acknowledgements

- MAJ Laura Cashin, DO; Department of Internal Medicine
- MAJ Sonny Huitron, MD; Department of Pathology
- MAJ Domingo Rosario, MD; Department of Pathology

Questions?
“21st Century Medicine – A Team Sport.”

Kenneth I. Shine, M.D.

Potential Conflict of Interest:

Member, Board of Directors, United Health Group

Heart Health Care Team

- Physicians
- Residents
- Nurses
- Pathologist
- Psychiatry Consultant
- Social Worker
- Ward Clerk
- Patients
Team - Merriam Webster

- A group of people who compete in a sport, game, etc., against another group
- A group of people who work together
- A group of two more animals used to pull a wagon, cart, etc.

Team

“A team is any group of people organized to work together interdependently and cooperatively to meet the needs of their customers (patients) by accomplishing a purpose and goals.”

Susan M. Heathfield

Key Words

- “organized”
- “interdependently and cooperatively”
- “meet the needs”
- “purpose and goals”
- Team Leader
Leadership

- Vision
- Communication
- Integrity/Trust
- Credit
- Blame

Health Care Teams

- Operating Room
- Oncology Team
- Orthopedic Team
- Diabetes Care Team
- Primary Care Team

  Change/Leadership

U.S. Health Care

- Most expensive in the World by any parameter
- 17.6% of GDP
- 1 ½ - 2 X Other OECD Countries
U.S. Health Cost Drivers

- Fee for Service
- Third Party payment system
- Technology
- Chronic illnesses
- Aging population
- Fragmentation of Care
- Defensive medicine?

Health OUTCOMES

- Life Expectancy At Birth
  78.3 years
  36th in the world
  Tied with Denmark and Cuba
- Infant Mortality
  Deaths - 6.3/1000 Live Births
  33rd in the world
- Under Five Mortality
  Deaths – 7.8/1000 Live Births
  32nd in the world

United Nations Population Division

Systems Characteristics

- Population Based/Patient Centered
- Continuity of Care 24/7
- Team Care-Multiple Players
- Realigned Incentives
- Outcomes vs. Processes
- Quality Measures
- Technology
- Evidence Based
Aligning Incentives

- Alternatives to fee-for-service reimbursement
  - Capitation – full or partial
  - Bundled/Episode Payment
  - Gain Sharing and Shared Savings
  - Pay for Performance Incentives
  - Decreased/No Pay for Preventable Events
    - Birth trauma/injury; pre-term inductions, cesareans
    - Hospital Acquired Conditions and Infections
    - Admissions for Ambulatory Sensitive Conditions
    - Readmissions

Imperatives for Change

- Delivery Systems
- Reimbursement Methodology
- Moving From Processes to Outcomes
- Paying too much for too little health

Opportunities

- Health Homes
- Accountable Care Organizations
- Bundling
- Gain Sharing
- Time/Effort Reporting
- Systems Engineering
- Outcomes
- Comparative Effectiveness Research
“A team is any group of people organized to work together interdependently and cooperatively to meet the needs of their customers (patients) by accomplishing a purpose and goals.”

Susan M. Heathfield

Systems of Care

- Our healthcare system is not a system
  - Physician practice as a cottage industry
  - Burdened by myth of the doctor-patient relationship (in 15 minutes?)
  - Fragmented, siloed, contradictory, causing harm

- Goals for a high performance healthcare system
  - Improve the patient’s care experience
  - Improve health for the community population
  - Reduce the cost of care

- Systems thinking is the critical innovation
  - The human body is a system of systems, so too the healthcare system

Chronic Care Delivery Models

- Planned, systematic approach
- Attention to information and self-management needs of patients
- Multi-disciplinary teams
- Extensive coordination required across settings and clinicians, and over time
- Unfettered and timely access to clinical information is critical
Value Definition

The relationship between cost and the quality of care provided.

\[
\text{cost} \quad \text{outcomes} \quad \text{process}
\]

UT’s Success Stories

- Clinical Safety & Effectiveness Program
- Patient Safety Grants
- HIT grants focus on applications to improve care
- Meaningful Use as a path for Clinical Quality Reporting Initiative
- Bundled payment developments
  - Begin with analysis of patient-centered outcomes
  - Refine protocols, processes to increase reliability and control risk
  - Analyze costs, set a price
- Systems Engineering Initiative

Systems Approaches

- Emergency Room Care
- Operating Rooms
- Perinatal Care
- Clinic Functions
- Care Models – health homes, ACOs
- Reimbursement Model
Education Implications

- Multidisciplinary Learning
- Effective use of IT
- Continuous Quality Improvement
- Joint Problem Solving
- Team Management

21st

- Autonomy
- Solo Practice
- Continuous Learning
- Blame / Shame
- Knowledge

- Teamwork
- Systems
- Continuous Improvement
- Problem Solving
- Change
Our history shaped our culture

- Forged from the Great Depression
- World War II as a building block
- Responding to a post-war building boom
- Bringing farm boys to the city
- Getting city slickers to hang sheetrock
- The influx from the North
- Transitioning to an immigrant workforce
- The challenges today/putting Millennials to work
What drives us

- A workforce second to none
- A workforce worth protecting
- Embracing technology

Workforce Development

- Performance measurement
- Continuous training
- Clear career paths
- Personalized touch/Mentoring/Coaches
We’re all about safety

- Intertwined in the business
- Driven from the top down
- Training is key
- Embedded in our culture
- Accountability at all levels
- All about the employee

Culture is the catalyst

- Respect for the individual
- Recognize achievement
- Reward accomplishment

How that looks

- Statement of values
- Owner presence
- SOC’s
- Relevance of the working man
- Value of a craft worker
- Individual performance awards
- Service awards/dinners
- Instill pride in the men & women who build our projects
**Statement of Values**

- **Customers** – The Marek customer is the lifeblood of our business. Without them, nothing else we do matters. We want our customers to be beyond satisfied. We expect our customers to hold us to a higher standard for the products and services we deliver.
- **People** – We value the people who work for us, the people we work with, and the people we’ll never meet who will experience our projects years from now long after we’ve left the jobsite. Marek puts people first like we have for the last 75 years.
- **Safety** – For a quality workforce to thrive, our employees must be safe. Marek is committed to efficient planning and training that makes the safest possible workplace a reality.
- **Ethics** – We believe in doing the right thing even when no one is looking. Marek will never cut corners.
- **Excellence** – Marek redefines the industry's standards with each project we complete through innovation, diversification of people and services, and attention to detail and teamwork. We strive to ensure the best job we've ever done is the one we do for you.
- **Community** – Whether we're constructing future landmarks or just lending a helping hand, Marek employees take pride in their communities. That's why we share our resources with those in need and support public policies that make life better for all.
- **Financial Stability** – The Marek difference flows from a bedrock of financial stability. Without making a fair profit from quality work, we could not care for our employees or consistently deliver the best products and services to our customers.

---

**Vision 2014**

The year 2014 offers reason for optimism. We saw the corner turned on profitability in 2013, but not soon enough to overcome the early deficits created in some of our operations. However, the New Year wipes the slate clean, giving us a fresh start with active markets, healthier backlogs, and improved margins.

The strengths we have, particularly our people, give us assurance that we can capture the bounty that 2014 promises. What lies between us and the success we strive for will be our ability to execute.

We are engaged in a great battle to keep construction work as an honorable, long term career. The high road we have taken in building a sustainable workforce through good hourly pay, benefits, safety, training, and workforce development makes our path a noble one, but not an easy one.

What is needed now is a personal commitment from each of us to do the best we can. Our greatest strength has always been working as a team to maximize our own potential and be the leader in our industry as well.

The Marek Family

---

**Embracing Technology**

- Job cost is critical
- Gathering time
- Building Information Modeling/BIM
Virtual to Reality

It’s Good for Your Business

In addition to increasing the ability to attract and retain skilled labor, a virtual design and construction (VDC) environment can significantly enhance performance and project execution.

- Productivity was up by as much as 34%
- Turnaround was down by as much as 43%
- Site absenteeism was down by as much as 15%
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- First aid cases were reduced by as much as 56%

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Questions and Answers
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Texas Voice Center

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  Clinical Professor of Otorhinolaryngology, Weill Cornell Medical College
- Apurva Thekdi, MD, Laryngologist
- Jeremy Hathaway, M.A., CCC-SLP
  Speech and Language Pathology
- Sharon L. Radionoff, Ph.D
  Singing Voice Specialist
- Margarita Rodriguez
  Medical Coordinator
- Stephen King, DMA
  Singing Voice Specialist, Professor of Voice, Rice University

Houston Methodist Hospital Center for Performing Arts Medicine is the official health-care provider for the:

- Houston Symphony
- Houston Ballet
- Houston Grand Opera
The Methodist Center for Performing Arts Medicine focuses on three issues to help our performing artists:

- Education
- Research
- Patient access
Hearing Loss in Musicians and Protective Devices

How we hear:

- Sound is made up of pressure waves which strike the eardrum causing it to vibrate → mechanical energy → hydraulic energy → electrical energy to brain

Etiologies for hearing loss:

- Noise exposure
- Age (the body’s warrantee wears out)
- Certain inflammatory diseases (Rubella)
- Trauma
- Several medications (certain antibiotics)
Tinnitus (abnormal perception of sound)

- Usually caused by damage to inner ear
- May be caused by certain medications
- "Phantom limb phenomenon"
- Difficult to treat – should be evaluated by ENT physician, however as there are some causes which can be treated

---

Note-Frequency Conversion Table

Examples of the frequency (in hertz) of select notes on an 88-key piano keyboard. The frequencies are rounded to the nearest whole number (no decimals).

Note: C4 is middle C, and A4 is the A used to tune an orchestra.


Few examples:
- C4 = 261 Hz
- F-sharp = 370 Hz
- A4 = 440 Hz

---

Musical Dynamics and Decibel Chart

<table>
<thead>
<tr>
<th>Musical Dynamics</th>
<th>Abbreviation</th>
<th>Meaning</th>
<th>dB Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>pianissimo</td>
<td>pp</td>
<td>very soft</td>
<td>30 dB</td>
</tr>
<tr>
<td>piano</td>
<td>p</td>
<td>soft</td>
<td>40 dB</td>
</tr>
<tr>
<td>mezzo-piano</td>
<td>mp</td>
<td>medium soft</td>
<td>66 dB</td>
</tr>
<tr>
<td>mezzo-forte</td>
<td>mf</td>
<td>medium loud</td>
<td>76 dB</td>
</tr>
<tr>
<td>forte</td>
<td>f</td>
<td>loud</td>
<td>80 dB</td>
</tr>
<tr>
<td>fortissimo</td>
<td>ff</td>
<td>very loud</td>
<td>90 dB</td>
</tr>
<tr>
<td>fortississimo</td>
<td>fff</td>
<td>very, very loud</td>
<td>100 dB</td>
</tr>
</tbody>
</table>

Holy mackerel! Wow! really, really loud !!! >130 dB

N.B.: University of North Texas (Physics 1251, The Science and Technology of Musical Sound.)
The conductor gets it from all sides:

What if you sit in front of the brass section?

The violin is capable of producing sounds from 100-110 dB (A)!

OSHA limits exposure to 105 dB in 8 hours.
Marching Bands can produce sounds over 130 dB!!!

exposure to that level is risky for any period!

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Frequently Asked Questions:

1. What’s wrong with conventional music? Are there any risks associated with playing music?
2. How much practice is actually needed? What are the recommended practices for musicians to prevent hearing loss?
3. What makes music a form of therapy? How can music therapy be beneficial for individuals?
4. Why choose a music therapy program? What qualifications do music therapists typically have?
5. What are the long-term effects of noise exposure? How can musicians safeguard their hearing?
6. Why is musicians’ hearing important? What potential complications can arise from noise exposure?

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Why did Beethoven lose his hearing???

- Noise exposure??
- Tertiary lues (syphilis)??
- Paget’s disease??
- Other???
Beethoven’s hearing loss:

Another great reference:
Beethoven had cirrhosis of the liver

- He needed frequent abdominocentesis to withdraw fluid from his abdomen
- The fluid affected his respirations as it limited movement of the diaphragm
**Why the cirrhosis??**

- Ludwig liked wine and used to imbibe a lot - they sweetened wine with lead

**Dr. Alfredo Guevara**

- An Arizona urologist - funded the purchase of a small lock of Beethoven’s hair - tiny fraction sent for analysis in December, 1995.

**What did they find??**

- No opiates
- Significant amount of heavy metal (lead)
Why is Beethoven my hero?

- Abdominocentesis is very painful – he wanted to remain alert to continue to compose and avoided opiates (morphine) even though those compounds were readily available in the early 18th century and would have shown up in the hair analysis.

Beethoven was essentially deaf for the last 25 years of his life.

- His music and creative talent existed in his mind even though he could not hear his product.
- Imagine composing the Ninth Symphony and not being able to hear it!!

Breathing difficulties in wind instrument players

- Wind players may be seriously impaired by respiratory diseases that, comparatively, might appear trivial to the non-performer. Asthma is the most common chronic pulmonary disorder among wind players, and therapeutic programs that include breath training and physical exercise improve symptoms, endurance, and general well-being.

Wandering atrial pacemaker

- 50% of French Horn players developed a wandering atrial pacemaker.
  - Nizet et al. J. Electrocardiol, 1976

Increased intraocular pressure and visual field defects in high resistance wind instruments.

- High and low resistance wind musicians experience a transient rise in their intraocular pressure while playing their instruments as a result at least in part of uveal engorgement. High resistance wind players had a significantly greater incidence of visual field loss which was related to life hours of playing.

Dentofacial morphology in children playing wind instruments.

- Significant differences between the musicians and controls - the musicians had a decreased anterior facial height and wider dental arches.
Lesions of lips in brass-band musicians:

- Herpes labialis is more common in brass musicians - ?
- Etiology (trauma vs. increased exposure to virus if shared instruments).

Biomechanical Factors

Include:

- **Intra-oral pressures.** The amount of air pressure produced in the airway during performance.
- **Mouthpiece forces.** The amount of force the mouthpiece is pushed against the lips.

It is obvious from that this trumpet player is stressed and working hard!
Possible Musculoskeletal and Neurological Problem Areas of the Upper and Lower Extremity

Violin and viola players as well as wind players have a high incidence of TMJ problems with resulting descending problems into the whole body.

The severity of TMD depends on the way of holding the instrument, on the chinrest, the pressure against the chin, etc.

Oscillators: vocal folds for singers, embouchure for brass musicians

Resonance Vocal “Power Supply”

Supra- Glottic Vocal Tract

Larynx (Oscillator)

Thoracic and Abdominal Muscles
Arnold Jacobs: Song and Wind

Jacobs compares singers with brass players. “Instead of vocal cords in the larynx, we have vocal cords in the larynx of the tuba, which is the embouchure.”

Embouchure is oscillator in brass instrumentalists:
Close-up of oscillator:

5. Summary of injuries seen:
   a. Rupture of orbicularis oris
   b. Showing fat herniation
   c. Muscle thinning and stretching
1. Incision along the "red line"

2. Tear of the orbicularis oris with fat herniating through the muscle

3. Repair of torn muscle
Question: what causes laryngoceles in wind instrumentalists?

Hypotheses:
- Certain instruments require too much pressure and exceed the ability of fascial planes to prevent “blowouts”, esp. in children.
- The instrument may not exceed an acceptable pressure in the hypopharynx at all frequencies.
- Improper technique may raise hypopharyngeal pressure unduly.

14 yom Trumpet Player – 8 days post right neck exploration by pedi surgeon for “bilat. left cysts”:
same patient relaxed and blowing:

Oral and hypopharyngeal pressures in brass musicians:

- We measured the oral (in mouthpiece) and the hypopharyngeal pressure in several different brass instruments ranging from high volume, low pressure instruments (tuba, trombone), to high pressure, low volume instruments (French horn, trumpet).

Various mouthpieces with vent
French horn mouthpiece

Tuba mouthpiece with pressure line attached

Tubist
Where we put hypopharyngeal probe

Trumpet, hypopharyngeal probe

Horn pressure studies
Hypopharyngeal pressure in trombone

Trumpet, Bad posture

Trumpet, good posture
Conclusions:

1. Perhaps, pre-pubertal children should not play frequencies above 500 Hz. on trumpet and above 256 Hz. on French horn.
2. The importance of good technique (posture, breath support, etc.) must be stressed for all musicians.
3. More scientific research is needed.
Performance TASK ANALYSIS: Clarinet - Thumb Forces
(Demands on Strength and Endurance Resources)


Physiology of Clarinet playing

Tongue positioning
TASK ANALYSIS:
Trumpet - Mouthpiece Forces
(Demands on Strength and Endurance Performance Resources)

INITIAL STUDY:
• 21 Subjects
• Representative Musical Tasks
• “Max Force”: 3 - 25 lbs!!

TASK ANALYSIS:
Brass and Wind - Intraoral Pressure

Integrating Into New Studies

Data Collection:
Basic Performance Resources

Upper Extremity Neuromotor Channel Capacity (Coordination)
• Visual Information Processing Speed

Human Performance Measurement, Inc. Model BIF 1
Repetitive Stress Injury

Evan D. Collins, M.D.
METHODIST DEPT OF ORTHOPEDICS
OFFICE 713-441-3535
www.drevancollins.com

ANATOMY and FUNCTION (Partial):
Upper Extremities

- Biceps: “Elbow Flexor”
- Triceps: “Elbow Extensor”
- Work About Joint as “Pair” (Agonist-Antagonist System)
- Movement - Control Joint “Stiffness” - “Impedance” (Resistance) - Co-Contraction
- Same Concepts Other Joints

Music and the Brain

Ron Tintner, MD
Methodist Neurology Institute
Focal Dystonias

Leon Fleisher

Diane Rehm

beta blockers

- a real conundrum - yoga vs. beta blockers vs. psychiatric counseling
- does one need adrenalin to operate at one's zenith???
Nutrition: Fueling the Performing Artist

Dan Benardot, PhD, DHC, RD, LD, FACSM
Laboratory for Elite Athlete Performance
Division of Nutrition, School of Health Professions
Georgia State University
Atlanta, Georgia
USA

Hormones & Performing Artists

Hormones for the Pre-Menopausal Vocal Artist/Actress/Dancer
Hormones for the Post-Menopausal Vocal Artist/Actress/Dancer

Avoidance of Menstrual Cycles

Possible to take pills designed to cause menses only once every 90 days.
Possible to take monophasic pills (those in which the dosage does not change) on an “active pill every day” basis and not menstruate at all.
The show must go on, but the period doesn’t have to!
OC’s and Anemia

- It’s hard to sing/act/dance if you’re tired!
- Fewer menstrual disorders, i.e., irregular or heavy menses, or spotting among pill users
- Average menstrual blood loss less in OC users, reducing likelihood of iron deficiency anemia

One reason women outlive men

OC’s and Voice Quality

Receptors are present for androgen, estrogen, and progesterone in the human vocal fold.
- Endocrine abnormalities in the thyroid, adrenal glands, and ovaries will result in voice change.
- In normal menstrual cycle, change in voice quality occurs premenstrual phase.
- OC’s block ovulation, maintain constant hormone levels, and prevent this vocal change.

“If I have seen farther, it is standing on the shoulders of giants”

Sir Isaac Newton, 1676

Manuel Garcia (1805-1906)

“In looking backward it is well to remember that the larynx was terra INVISA, if not completely INCOGNITA until Garcia invented the laryngoscope in 1855”

Thomson 1930
Tough Tessitura
Demands of the “Annie role”
“Forget it, Kid, Maybe Tomorrow”

Normal adducted & abducted
Comparison of Single-Chip Camera with Karl Storz 3-Chip Camera w/ Enhancement

Laryngeal Edema - 45 yom

Nodules - 18 yof
Right Pseudocyst, Left Nodule

Right Contact Granuloma
45 yof executive

Carcinoma-in-situ, 70 yom
70 pack-years tobacco
Lupus Laryngitis (note “bamboo-like” nodules)

Laryngitis sicca + Presbylaryngis

Laryngitis sicca
incompetent vocal folds

vocal folds after fat injection

fin
Driving rules in Texas (updated)
“Can I drive doc?”

Driving is important (especially in Texas)
- It affects the ability to maintain a job and get an education
- Driving is the #1 concern in PWE
- Driving is a privilege, not a ‘right’
Who regulates this for the state?

- DPS issues and de-issues driving licenses
- DPS contracts with the Texas Medical Advisory Board (MAB) for Driver Licensing to get advice about medical restrictions regarding driving
- The MAB is under the directorship of the Texas Department of State Health Services and EMS Certification and Licensing.
- DPS makes final decision

How the Medical Advisory Board works

- No individual may appear before the MAB
- The board only reviews the medical facts and reaches an opinion
- The board meets every 2 weeks and reviews about 150-200 cases each meeting
- The board is made up of 14 physicians who alternate their time. It is voluntary (but a small stipend is paid-think decent dinner bill)
- After an opinion is reached, a written recommendation is forwarded to the Driver License Division of DPS, and the decision is forwarded to the individual by mail (this takes about 2 weeks).

MAB at work

All state buildings look alike. Working thru charts.
DPS

- DPS is the licensing agency for Texas
- DPS is solely responsible for all actions taken or initiated with licensing.
- "Neither the MAB nor the attending physician are legally liable for the decisions or actions taken by DPS in the licensing or un-licensing of drivers."
- If a license is denied or revoked for medical reasons, the decision may be appealed to the courts for final determination.

'Losing a license'

'Losing a license' does not mean that the car, or the license, is physically removed, it is a computer suspension only.

There are criminal penalties for causing a crash because of a medical condition when your license has been suspended.

Liability

- In general, a physician’s liability for advising that a patient may drive is minimal, as long as your recommendations are reasonable and fall within the prevailing standards of care (but we all know that still means you can get sued)
- You can’t be sued for reporting to MAB and you are never responsible for actions taken by the MAB.
Guide for determining driver limitation

- The last update was done in 1991
- TIA – 6 months driving restriction
- Sleep apnea – no driving for 6 months after control was obtained
- Dementia – not mentioned
- Syncope (any cause, anywhere) – no driving for 6 months after control was obtained
- Hypoglycemia – no driving for 1 year
- Syncope (any cause, anywhere) – no driving for 6 months
- Vertigo – Meniere’s - no driving again...ever

Goal of update

- Better reflect advances in medical care in the past 23 years
- Better align driving rules with common sense advice given by doctors to patients
- Address specific problems that were not addressed previously: (dementia, implantable defibrillators)
- Should be based on science, practical, practicable, and in general alignment with most other states when possible.
- Recognize that Texas is a diverse state, and that primary care doctors do the majority of these reports

Reporting
Texas does not have mandatory reporting but you do have an ethical and legal obligation to discuss driving with your patients.

You may report a patient who you suspect is not following the rules.

The person will be notified by the MAB and will go through the process.

This can be anonymous (sort of).

Physician’s form to fill out

This is the form your patient will bring to you if they come up in front of the MAB.

Only fill out the information that you know to be true.

You do not need to know the rules about driving, you just need to state the medical facts.

The MAB appreciates your comments.
License types

- **Class A** – Commercial drivers (bigger trucks, career driving, >16 passenger buses)
- **Class B** – dump trucks, school buses, >23 passengers
- **Class C** – cars, small trucks, <24 passengers
- **Class C can have P, C, D, and E restrictions**
- ‘**Class C with P**’ refers to what most of us do, drive to work, don’t haul a bunch of people, don’t drive a taxi, and don’t drive emergency vehicles
- ‘**Emergency C**’ – Class C without P restriction - ambulance, police, etc.

Examples of Vehicles for Road Test

- Class A: Test in
- Class B: Test in
- Class C: Test in
- Class M: or endorsement to existing license
License restrictions (for Class C)

- 'P' restriction – Class C license but restricted from driving taxis, buses or emergency vehicles (police or fire, EMS)
- 'C' – daytime only
- 'D' – not to exceed 45 mph
- 'E' – no expressway driving
- C, D, and E restrictions are often used together
- 'Emergency C' – Class C without restriction

3 months
Waiting time for a Class C license with a P restriction for a person who has had a seizure

5 years
Waiting time for a person with a commercial license, Class A or B, or a class C license without a P restriction who has just had a seizure.
Seizures (updated rules)

- All seizure types are included (except pure simple sensory seizures at the discretion of the physician).
- Class C license with 'P' restriction (regular automobile driving) - seizure free period on or off medications for 3 months as long as certain requirements are met:
- Class A, B, and unrestricted C license - no license until 5 years off medication and seizure free (federal trucking rules (intrastate driving) are still 10 years...).
Seizures – requirements that must be met

- Currently under a physician’s care
- No evidence for clinical seizures for 3 months
- Specific recommendation from applicant’s physician regarding
  - reliability taking medications
  - avoiding sleep deprivation
  - avoiding alcohol use
- The physician can recommend a longer period of driving restriction

Seizures - requirements

- You can (and should) recommend a longer period of driving restriction for people with:
  - multiple seizures in the past year,
  - recent psychiatric condition
  - Structural brain damage with high risk of seizure recurrence
  - Uncorrected metabolic problem
  - History of prior crashes or bad driving record
Medication taper

- If person at low risk – no driving restriction
  - Long history seizure free
  - Normal EEG
- If person at high risk – 3-6 month restriction
  - Abnormal EEG
  - Recent seizures
- If the person non-compliant – no driving
- If low risk but has a seizure when meds lowered, no restriction after dose increased to previous range

Seizure related MV crashes in AZ

- AZ changed driving restriction from 12 months to 3 months for PWE in 1993.
- Overall MVA’s related to seizures make up 0.042% of all crashes (EtOH contributes to 8% of all crashes, 40% fatal)
- Most seizure related crashes are single vehicle and most are ‘injury’
- The rate of seizure related crashes did not significantly increase in AZ after the interval was decreased from 12 to 3 months

And....

Women with epilepsy still have a lower risk of crash than men in general…. (thanks to those 16 year old boys)
Dementia

- **Dementia** is manifested by the onset of impairment in memory, requires the presence of impairment in at least 1 additional cognitive domain, and those deficit(s) cause significant impairment in social and/or occupational functioning.

- **Mild cognitive impairment** - cognitive impairment in one domain that is greater than that expected with normal aging, but not sufficient to diagnose dementia.

Dementia and driving

**this is new**

- The diagnosis of DEMENTIA PRECLUDES DRIVING unless the person is judged to be safe by:
  - A neuropsychological evaluation of cognitive abilities involved in driving
  - A driver evaluation by a center or person trained to evaluate driving ability in the setting of cognitive impairment
  - Medical assessment by a physician with expertise in evaluating attention, memory, language, visuospatial function in a standardized way
  - If none of the above options are available, then the individual must make a passing score on the DPS written and driving evaluation.

So how are you going to make the diagnosis?

- Because once you do, there is a good chance that you will have to tell your patient not to drive.
- And they will be very upset...
Dementia: Clinical Dementia Rating (CDR) score

- Recommendation by the AAN Practice Parameter published in 2000
- Persons with a Clinical Dementia Rating (CDR) score of 1.0 or greater are precluded from driving (unless they qualify based on the criteria previously stated)

- Score is based on the MEMORY score only, unless 3 of the secondary categories score above or below the Memory score, in which case the CDR is the majority of the secondary categories.

- The relative risk of crashes for drivers with a CDR score of greater than or equal to 1.0 is greater than our society tolerates for any group of drivers.
- Even an CDR of .5 carries a greater risk of crashes – we recommend but do not require that persons with MCI have a driving test.
Tests that correlate with ability to drive

Trail making test B

Clock drawing test

Dementia

- Persons who are qualified to drive with dementia (consider also for persons with MCI) must be re-qualified to drive every year, or sooner if there is an accident, driving violation, or a family member raises concerns.

- You versus DPS? Who should break the bad news that they can no longer drive? (DPS has just a hard of a time with it as you do….). Family members really don’t want to either.

Dementia (and age) data

- 85 year old driver is 1.77x more likely to get in a severe crash compared to age 35-54. If they are front seat passengers, they are 5x more likely to get injured.

- Fatality rate for senior drivers increased 3% in 2012 (while the overall rate decreased)

- Age 40-45: 3.7 MVA/million miles

- Age 60-65: 15.1 MVA/million miles

- Age >85: 38.8 MVA/million miles

- Roughly 50% of AD patients drive for >3 years after diagnosis

- 41-63% of AD patients fail road testing
AMA recommendations for assessment of older drivers

- The American Medical Association (AMA) recommends that physicians adopt the Assessment of Driving-Related Skills (ADReS) battery to risk stratify
- Visual fields by confrontation
- Visual acuity by the Snellen eye chart
- Adopting the Clock Drawing Task
- Trails B (a test of visuospatial and psychomotor speed)
- Muscle strength, and neck and extremity range of motion
- Counseling regarding driving is a Dementia Management Quality measure

Excessive Drowsiness

- Multiple causes: sleep apnea (OSA), narcolepsy, chronic pain, drug use (legal and illegal), shift work sleep disorder, psychiatric disorders
- It is the personal responsibility of all drivers to avoid driving if they are unable to maintain alertness when driving
- Inadequate sleep causes up to 20% of all accidents – most likely related to lifestyle issues

Obstructive Sleep Apnea – Evidence pertaining to driving

- Evidence shows that OSA increases crash risk at least 2-3x controls
- Counselling effects of obesity, OSA, alcohol ingestion
- The AHI is used as a marker of severity but there is not 1:1 correlation between severity of OSA and crash risk
- Treatment with CPAP has been shown to decrease crash risk
- Truckers may be at higher risk for OSA in general
- We decided to follow the NHTSA (National Highway Traffic Safety Administration) recommendations about OSA
Obstructive Sleep Apnea (new rules)

- **Severe** (apnea/hypopnea index, AHI>20) precludes driving until treated and person shows compliance (for all classes)
- **Mild** - may drive (all classes) if AHI <10 and ESS <10
- **Moderate** (AHI 10-20) may drive if OSA is being treated and ESS <10. No recertification.
- **Class A or B license or 'emergency C' with severe OSA** - must be treated and pass maintenance of wakefulness test (MWT) to prove that treatment is effective.
- Must be recertified annually—
  - compliant with treatment.
  - low ESS score.

Excessive Drowsiness – rules (con’t)

- Drivers with OSA or Excessive Daytime Sleepiness should be recertified for driving if:
  - They have a crash associated with falling asleep
  - They are non-compliant with treatment
  - After they have had surgery for OSA if they want the restriction removed

**EPWORTH SLEEPINESS SCALE FORM**

<table>
<thead>
<tr>
<th>Situation</th>
<th>Responses</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sitting and resting</td>
<td>* Most desire of being awake when you are sitting or lying down</td>
<td></td>
</tr>
<tr>
<td>Watching Television</td>
<td>* Most desire of being awake when you are watching television</td>
<td></td>
</tr>
<tr>
<td>Sitting inactive in a public place, for example a theatre or a meeting</td>
<td>* Most desire of being awake when you are sitting in a theatre</td>
<td></td>
</tr>
<tr>
<td>As a passenger in a car for an hour without a break</td>
<td>* Most desire of being awake when you are sitting in a car for an hour without a break</td>
<td></td>
</tr>
<tr>
<td>Lying down to rest in the afternoon</td>
<td>* Most desire of being awake when you are lying down to rest in the afternoon</td>
<td></td>
</tr>
<tr>
<td>Sitting and talking to someone</td>
<td>* Most desire of being awake when you are sitting and talking to someone</td>
<td></td>
</tr>
<tr>
<td>Sitting quietly after lunch when you’ve had no sleep</td>
<td>* Most desire of being awake when you are sitting quietly after lunch when you’ve had no sleep</td>
<td></td>
</tr>
<tr>
<td>Do a car while stopped to offer</td>
<td>* Most desire of being awake when you are doing a car while stopped to offer</td>
<td></td>
</tr>
</tbody>
</table>

**TOTAL SCORE**

A score of 10 or greater indicates a possible sleep disorder. Take the completed form to your doctor.
Narcolepsy

- 60-80% of narcoleptics report having fallen asleep at the wheel at some point.
- Cataplexy is also a problem.
- 3 month driving restriction is required to assure that treatment is successful.
- There must be an affirmative recommendation from the treating physician (preferably a board certified sleep physician) in order to resume driving.

Driving test is recommended

- Moderate to severe Parkinson’s disease (and repeat every year).
- Severe untreated torticollis.
- Choreaathetosis.
- Post stroke if there is moderate to severe motor, sensory, visual or language impairment.
- Post head injury if moderate to severe deficits.

Driving test is required if recommended by MD

- Multiple Sclerosis.
- Peripheral neuropathy.
- Traumatic brain injury.
- Mild cognitive impairment.
- Malignancies.

- Need to consider vision, cognitive function, ability to feel the pedals, turn the wheel, transfer to and from the car, push the pedals hard enough to stop, and ability to learn and safely use new equipment.
Vertigo and dizziness

- No driving if having intermittent or constant uncontrolled vertigo
- No driving if taking sedative medications for the treatment of vertigo
- Driving restriction for commercial vehicles if taking benzo’s or phenothiazines for the treatment of vertigo

Transient Ischemic Attacks

- No driving restriction if:
  - The TIA was known to be caused by circumstances not likely to recur
  - The person is compliant with appropriate anticoagulant medication
- 1 month driving restriction if:
  - Appropriate anticoagulation cannot be used
  - The underlying cause of the TIA cannot be corrected and the TIA is likely to recur

Blackouts

- Vague term that most often means drug or alcohol induced amnesia
- These are self reported fairly often to police and to the MAB
- 6 month driving restriction for someone reported to have had a blackout
Syncope

- Episode of unexplained syncope – no driving for 6 months
- 6 month driving restriction for vasovagal syncope that
  - occurs while driving or
  - uncontrollable or very frequent –
    - (In general, vasovagal syncope does not restrict driving)
- Recurrent uncontrolled unexplained syncope (2 or more episodes in 6 months, uncontrollable – no driving for 1 year
- Syncope that is explained and treated – per physician’s recommendation (typically restrict driving until treatment is effective)

Angina (Canadian Cardiovascular Association)

- Class 0 – Asymptomatic
- Class 1 – Angina with strenuous exercise
- Class 2 – Angina with moderate exertion
- Class 3 – Angina with mild exertion (walking 1-2 level blocks at a normal pace or climbing a flight of stairs at a normal pace
- Class 4 – Angina at any level of physical exertion

Angina guidelines

- CCA Class 4 – no driving for any license type
- CCA Class 3 – no commercial driving. OK for C license with C, D and E restriction
- CCA Class 1 and 2 – no driving restriction for commercial or passenger
MI and CABG

- Class C license – OK to drive when released by physician
- Class A and B license – (the truckers)
  - MI – no driving for 2 months
    - Free of angina
    - Tolerating medications
    - Cleared by cardiology
  - CABG – no driving for 3 months
    - Must be asymptomatic and tolerating medication
    - Must be cleared by cardiologist or cardiovascular surgeon

Miscellaneous Cardiac

- Stents – no restriction
- Malignant hypertension – when cleared by physician
- A- fib – when rate is under control and on anti-coagulants
Cardiac Dysrhythmias

- PAC's and PVC's – no restriction
- WPW if asymptomatic – no driving
- VT with syncope or sudden cardiac death –
  - No commercial driving again
  - 6 month restriction for Class C with P restriction if treated
  - With medications and cleared by an electrophysiologist
  - With AICD cleared by electrophysiologist
- VT, exercise induced, without syncope, non-sustained with normal ventricular function
  - OK for Class C
  - Class A and B license restricted for 1 month
- With medications and cleared by cardiac electrophysiologist
- With AICD if cleared by electrophysiologist

Automatic Implantable Cardio-Defibrillator (AICD)

- Precludes a Class A, B and ‘Emergency’ C license forever
- Class C with P restriction OK after 6 months, if event free
- If the AICD is placed prophylactically only (no events have occurred), then a Class C license with a P restriction is OK when the person is cleared by their electrophysiologist

Psychiatric diseases

- Don’t fill out the form for psychiatric disease until you have sufficient knowledge to make a valid judgment
- No driving if actively psychotic
- No driving if abnormally aggressive or hostile until treated and condition is in remission
- Psychotropic drugs – specific recommendations from treating MD are helpful
- No driving for someone actively homicidal or suicidal
Alcohol and Drug Abuse

- 1 year driving restriction for persons with known alcohol or drug abuse for Class C license (typically this means they’ve gotten a DWI)
- 2 year restriction for Class A, B and emergency C license
- If the applicant has volunteered for a detox program, and no DWI, then license is OK but periodic reviews are required
- Don’t sign off on the EtOH questions unless you really know
- OK to drive on prescribed narcotics in general but physician always has the duty to restrict driving when appropriate

Metabolic disease

- Dialysis patients can drive (C with P restriction)
- Insulin dependent DWI – in general precluded from A or B license unless they get a waiver from their TxDOT physician
- If episode of hypo- or hyperglycemia severe enough to cause
  - Neurologically: loss of LOC, confusion
  - Any type or degree of vehicle accident
  - Active assistance in treatment
  - There is a 6 month driving restriction
- Exception for extenuating circumstances such as medication change and severe illness

Vision

- At least 20/40 in one eye (up to 20/70 in one eye but driving restrictions apply)
- OK with diplopia as long as corrected with an eye patch (but I would restrict driving to <45 mph if it is a new problem)
- Visual field must be >140 degrees
Physicians who helped with the guide

- Sara Austin, MD
- Robert Fayle, MD
- Jeremy Slater, MD
- Paul Schulz, MD
- John Lincoln, MD
- Jacqueline Phillips-Sabol, PhD
- David Tschopp, MD
- Matthew Phillips, MD
- Ronald DeVere, MD
- James Kemper, MD
- Glen Journeay, MD
- Current MAB members

Texas Department of State Health Services, EMS Certification and Licensing

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- Austin, Texas 78714
- 512-834-6739
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- patricia.bryars@dshs.state.tx.us

This is the voice on the other end of the phone
Where do I find more information?

- The guide is on the DPS website
- The easiest way to find all information is to go to the TEXAS NEUROLOGICAL SOCIETY WEBSITE
texaneurologist.org

Scroll to the bottom of the page on the far right and the link will take you to the DPS website for the manual, this slide deck, and a summary table for quick reference.

Resources

- NHTSA.dot.gov (National Highway Traffic Safety Administration)
- How to Understand and Influence Older Drivers
- Adapting Motor Vehicles for Older Drivers
- Driving Safely While Aging Gracefully
- USDOT – FMCSA – about commercial driving regulations

Thank you!

the end
The Choosing Wisely® Campaign

www.choosingwisely.org

Choosing Wisely: Physician Leadership moving us forward

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Disclosures for Dr. Wesson

• Foundations:  
  – ABIM Foundation immediate Past President

• Scientific Advisory Boards: None

• Phase 1 NIH-NIDDK SBIR grant  
  – Co-investigator
Major Points to Remember

• Physician leadership is key to improving the quality of health outcomes
• Greater physician/patient awareness of CW improves engagement of each
• Shared decision making between physicians and patients is a strategy for enhanced quality of care

Goals of Choosing Wisely

• Choosing “the right care”
  – Promote conversations between physicians and patients about utilizing the most appropriate tests and treatments (i.e., “the right care”)
• Avoiding “the most care”
  – Conversations about care that is unnecessary
• Improved care quality
  – Not specifically designed as a strategy to reduce health care costs

Origin of Choosing Wisely

• Physician charter
  – by ACP, European Federation of Internal Medicine, and ABIMF, published in Annals of Int Med in 2002
• Howard Brody, medical ethicist
  – proposed physicians identify “5 things” for which evidence showed little value but might cause harm
• National Physicians Alliance
  – using an ABIMF grant, developed 3 specific steps that physicians could take in their practices to promote more effective use of health care resources
The “5 things” list

• Specialty societies asked to develop list of 5 procedures/tests that were:
  o Within the society’s domain
  o Used reasonably frequently in practice
  o Generally accepted evidence supports the recommendation
  o Processes used to create list should be thoroughly documented and made available upon request

• Was an overwhelming success!

Some lessons learned from the “5 things” experience

• Listed items should not be absolutes but worthy of questioning
• Important to frame unnecessary care as waste
• Physician professionalism is a key motivator

Physician reasons for ordering unnecessary tests

• Malpractice concerns
  – Texas tort reform has helped assuage somewhat

• Physician uncertainty
  – More evidenced-based tools in EMRs?
  – Decision-making tools in EMRs?

• Patient demand
  – Patient education?
  – Tools to guide physician-patient conversations?
ABIM Foundation Survey of Physicians

- 66% of physicians feel a great deal of responsibility to make sure their patients avoid unnecessary tests and procedures.

- 58% of physicians say they are in the best position to address the problem of unnecessary tests and procedures.

- 81% of physicians are very comfortable talking to their patients about why a test or procedure should be avoided.

- Physicians exposed to Choosing Wisely are more likely (62% vs. 45%) to have reduced the # of times they recommended a test or procedure because they learned it was unnecessary.

Patient perspective regarding “unnecessary” tests

- Many think the “most” care is the “best” care—Texas tort reform has helped assuage somewhat

- Most patients have little understanding that tests/procedures pose a risk for harm—Explaining risk/benefit ratio is hard

- Patients have access to much health-related information other than their physicians—Internet, social media, etc.
Lessons regarding unnecessary tests

- **Physician leadership is critical**
  - All members of the health care team follow their lead
- **Physicians require guidance to communicate effectively about unnecessary care**
  - This is a new skill for most physicians
- **Focus should be on changing physician and patient attitudes, not changing behavior**
  - Experience shows that the attitude change leads to the desired behavior change

Choosing Wisely has been prominently featured in academic medicine literature

![JAMA](http://www.choosingwisely.org/doctor-patient-lists/)

Choosing Wisely: To Date

- 60 Specialty Society Partners
- 230 recommendations
  - >300 by mid-2014
- 160+ CW journal articles
- 23 Choosing Wisely grantees
  - Funded by Robert Wood Johnson Foundation
- CW Health System Leaders Network
  - >30 leaders from Cleveland Clinic, Kaiser Permanente, University of California, Intermountain Healthcare, etc.

State Medical Associations

CW & Consumer Reports

Importance of the Consumer Reports Collaboration

- Consumer Reports (CR) has documented skill in effectively speaking to consumers, including explaining scientific bases for recommendations
- CR already had a robust history of collaboration with specialty societies
- The not-for-profit culture of CR aligned well with ABIMF and specialty societies
How widespread is knowledge of the Choosing Wisely campaign?

• 25 to 50% of physicians have heard of the campaign in various surveys
• <10% of the general public has heard of the campaign

Key considerations going forward

• Physician awareness of CW is important
  – Data show that awareness promotes needed action
• Patient/public awareness of CW and its contextual issues is important
  – The “right care”, not the “most care”
  – Unnecessary care as waste resonates with public
• Physician/patient engagement toward shared decision making must become the norm

Lack of health literacy will likely challenge quality of shared decision-making

• Only 39% of patients having an implantable cardio-defibrillator (ICD) had marginal or low health literacy
• Only 21% could correctly state the reason for their ICD

Importance of Shared Decision-Making

Data show that optimal, quality patient care is achieved by combining evidence-based medicine and patient-centered communication skills into shared decision-making.


Important Research Insights

• Need for “de-implementation” strategies
  – stop processes/procedures that are of little value
• Need system structures/policies to promote CW
  – more research needed
• Translation of marginal risk/benefit analyses
  – concept does not resonate with patients
• Translation of unit and total cost concepts
  – resonate with payers/health systems but not physicians

Some Challenges Lie Ahead

• Physicians now face increasing burdens and might find CW “just another thing I have to do”
• Must find the time for patients and physicians to engage in the necessary conversations for shared decision making
• The low level of health literacy in the public will challenge shared decision making
What is needed

- “Tool kits” for provider groups/health systems implement tenets of CW
  - Strategies must be implementable at physician level
- Greater patient/public awareness of CW
  - Patients with CW knowledge more receptive to discussions regarding unnecessary care
- Tools to help physicians and patients better engage in shared decision making

Example of successful intervention


- Goal: reduce excess cardiac biomarker testing for ruling out acute coronary syndrome (ACS)
- Intervention:
  - Information session for providers
  - Pocket-sized reference card
  - Change computerized ordering system
- Outcomes:
  - Guideline-concordant ordering increased 57 to 96%
  - Number of ordered tests decreased 66%
  - Incidence of ACS primary diagnosis increased 0.3%

Why Texas should be a vanguard state for CW

- Has largest and most active state physicians association
- The American Academy of Nursing has chosen Texas as the pilot for state roll out of CW
- Texas tort reform will help reduce physician anxiety about reducing unnecessary tests
Major Points to Remember

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Questions?
Interdisciplinary and Multidisciplinary Team Care

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Objectives

• Describe the concepts of an interdisciplinary team approach and differentiate it from other care models.
• Identify the different training attitudes and philosophies that distinguish professional subcultures.
• Identify the unique capabilities of the different disciplines required for solving particular challenges.
• Understand the roles of patient, family, and community in the team.
• Understand the need to change roles depending on team dynamics and/or patient care demands.

HGITT Training Manual Nancy Wilson

Teams

• Institute of Medicine (IOM) underscored the importance of teamwork for (primary) care of all populations. ...“asserted its belief that the quality, efficiency, and responsiveness of (primary) care are enhanced by the use of interdisciplinary teams and recommended the adoption of the team concept of primary care wherever feasible”

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MULTIDISCIPLINARY TEAM

Nursing
Audiology/Speech Pathology
Case Management and Social Work
Physical and Occupational Therapy
Pharmacy
Clinical Dietitian
Pastoral Care
Patient Liaison
Physician

What “Teams” Is He Talking About?

I don’t need all that

Mr. Green is a 64-year-old man with CHF, CAD, COPD, HTN, and DM. Mr. Green has a history of presenting to the emergency room short of breath with fluid retention. He is sometimes admitted and sometimes treated as an outpatient by his primary physician. Little has been done to break the cycle of treatment failure. The PPO wants to try another approach. It will authorize outpatient treatment and bundle together payment for the primary care physician, home care, and any other community-based care.

His current medications include:
- Diltiazem hydrochloride (Cardizem) 240 mg four times per day
- Furosemide (Lasix) 40 mg four times per day
- Potassium chloride (K-Dur 20) 20 mEq every day
- Glipizide (Glucotrol) 5 mg twice per day
- Nitroglycerin as needed for chest pain and a variety of inhalers

Mr. Green is on a low-sodium diet with a 1500-ml fluid restriction, but he has not followed it in the past. Mr. Green lives with his daughter, son-in-law, and their three children, ages 17, 19, and 23. He also has a son who lives with his wife and family in the neighborhood within easy walking distance. The daughter-in-law likes Mr. Green, but doesn’t like his daughter and, as a result, refuses to visit him.

The family is described by emergency room staff as dysfunctional, unaware of the seriousness of Mr. Green’s condition, and “unwilling to be a part of his treatment plan.” They believe that it is too much trouble to prepare a special meal for Mr. Green and that the emergency room is an appropriate place to bring him for treatment after he has eaten high-sodium and high-carbohydrate meals.

There are also several smokers in the family, and they refuse to limit their smoking or smoke outside. They say, “It’s our house; he is a guest. If he shouldn’t be around smoke, then he should go outside.”

WHAT ARE YOU GOING TO DO? ARE YOU GOING TO DO IT ALONE?

HGITT Training Manual Nancy Wilson
• Remember the Patient and Their Family Must be Part of the Team
• Without them, you are not going to get very far

Is there evidence that Team Care Leads to Better Outcome?

A CONTROLLED TRIAL OF INPATIENT AND OUTPATIENT GERIATRIC EVALUATION AND MANAGEMENT
Harvey Jay Cook, M.D., John P. Feinerman, M.D., Morrie Weinberg, Ph.D., Molly Carney, M.D., Ronald C. Harris, M.D., Frank H. H. Ph.D., Caron Pomer, Ph.D., and Philip Lazor, Ph.D.
NEJM 2002, 346:905-12
• 2 by 2 randomized trial at multiple VA’s
• Randomized to team in hospital vs. usual care
• Re-randomized at discharge to outpatient team vs. usual care
• Teams: physician, nurse, social worker
• Collaborated to develop care plan; coordinate preventive management services
• Goal to maintain the patient’s functional status.
Geriatric Focused Team Care Works

- 1400 veterans randomized 98% male mean age 74.2
- No effect on survival at one year

Cohen, HJ NEJM 2002, 346:905-12

Geriatric Focused Team Care Works

- 1400 veterans randomized 98% male mean age 74.2
- No effect on survival
- Marked reduction in functional decline during hospitalization
- Better Health Related Quality of Life
- The number of days in the hospital was greater for the in-hospital experimental group ...(35.3±1.4 vs. 28.3±1.4 days, P<0.001), primarily because of a longer initial hospitalization (23.2±1 vs. 15.0±0.9 days, P<0.001).

Cohen, HJ NEJM 2002, 346:905-12

MULTIDISCIPLINARY TEAM on Our ACE Unit

Patient and Family
Nursing
Audiology/Speech Pathology
Case Management and Social Work
Physical and Occupational Therapy
Pharmacy
Clinical Dietitian
Pastoral Care*
Patient Liaison*
Physician

*prn basis
Park Plaza Hospital Acute Care
Elederly Unit
Summary of ACE Unit Trials

- Functional decline not an inevitable consequence of hospitalization
- Evidence for decreased LOS and costs
- Without significant increased costs, we can return more patients to home at a higher level of function

Park Plaza Hospital ACE Unit

- Daily Interdisciplinary Rounding
  - A Great, Consistent Team
  - Leadership role on team is dynamic and changes with the patient and their problems
- Focus on Discharge Day One
- Mobility is a Priority!
  - Patient ambulation and/or out of bed 2-3 times per day
- ACE Unit Order Protocol

Park Plaza Hospital ACE Unit
Key Elements of IDT Meetings

- Focused Assigned Team
- Continuity of Care
  - Follow-up on previous concerns
  - Active involvement of all members
- Focused Geriatric Concerns
  - Medications, delirium, mobility/function
  - Nutrition, bowel, bladder
  - Social situation, discharge planning
  - Get patient back to you
- Dear Physician Suggestion Form
Park Plaza Hospital ACE Unit

Environment
- Cohorting Similar patients
- All patients visible from the nursing station
- Consistent nursing & care team
- Improved lighting (well lit)
- Large clocks & Information Boards
- Bed alarms
- Smaller, patient-friendly hospital

Length of Stay
- Comparator (Historical) Group LOS 7.22
- ACE Unit
  - 6.10
- Hospital Overall
  - 5.23
- Press Ganey Scores Very Good

So What are the Obstacles to This?
- One is clearly money, will your organization “pay a team to sit and talk about the patients rather than take care of them?”
- But another is the concept of the Interdisciplinary Team itself?
Physician Attitudes towards IDTeam Goes Wrong Early

- Survey medical residents, nursing students and social work students about interdisciplinary team care
- Each group of students agreed that the team approach benefits patients and is a productive use of time.
- Medical residents more inclined than nursing and social work students to agree that physicians are natural team leaders
- More medical trainees also agreed that a team’s primary purpose is to assist physicians in achieving treatment goals for patients.


Education For Teams

- Effectiveness is Uncertain in many sets of hands.
- Houston Geriatrics Interdisciplinary Team Training (HGITT) Program had some success but we are not actively doing it any more
- Success seemed to be better in model patients in the classroom than in reality

House Calls Experience

- Baylor College of Medicine and University of Houston School of Pharmacy have had learners train together for many years
- In the hospital the medical learners are more comfortable and seemed to “dominate” and in the pharmacy, the reverse happened.
- We took faculty member, a medical student (or 2) and a pharmacy student (or 2) on house calls
- In the home, both felt totally uncomfortable which allowed working teams to develop, each contributing their expertise.
- This “new found appreciation” was confirmed in post-visit surveys. Unclear if it will translate to other settings or persist

AB Major and A Gill 2013, personal communication
Non-Specific Presentations of Disease
Make the Team Critical

- Confusion/Delirium
- **Falls**
- Failure to Thrive
- Incontinence
- Weakness/Fatigue
- Apathy/Self-neglect
- Anorexia
- Dyspnea
- Depression

- Often the only marker of illness is an abrupt change in functional status
- This type of non-specific presentation is perfect for a team approach

Assistive Technology is the Future

- Body of knowledge of available technology is immense, rapidly changing and has the potential to be game changers
- Apps for fallers, great example
- Need for new team member whose expertise is the available technology to help each complex patient

Newest MULTIDISCIPLINARY TEAM

Patient and Family
Nursing
Audiology/Speech Pathology
Case Management and Social Work
Physical and Occupational Therapy
Pharmacy
Clinical Dietitian
Pastoral Care
Patient Liaison
Physician
Geek- Tech Assist
I don’t need all that

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WHAT ARE YOU GOING TO DO? ARE YOU GOING TO DO IT ALONE?

• Answer: Involve the team.

• Thank You
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