



C-5: Current Issues and Trends in Medical Malpractice Liability and Beyond

Advances in Healthcare Technology

Gregory Chrin, Deloitte Consulting LLP, June 4, 2019

Antitrust Notice

- The Casualty Actuarial Society is committed to adhering strictly to the letter and spirit of the antitrust laws. Seminars conducted under the auspices of the CAS are designed solely to provide a forum for the expression of various points of view on topics described in the programs or agendas for such meetings.
- Under no circumstances shall CAS seminars be used as a means for competing companies or firms to reach any understanding – expressed or implied – that restricts competition or in any way impairs the ability of members to exercise independent business judgment regarding matters affecting competition.
- It is the responsibility of all seminar participants to be aware of antitrust regulations, to prevent any written or verbal discussions that appear to violate these laws, and to adhere in every respect to the CAS antitrust compliance policy.



Agenda

Telemedicine	4
Electronic Health Records (EHRs)	8
Robotic Surgeries	11
VR Training	15
Technological Advances	18
Trends Impacting MPL Results	20

Telemedicine

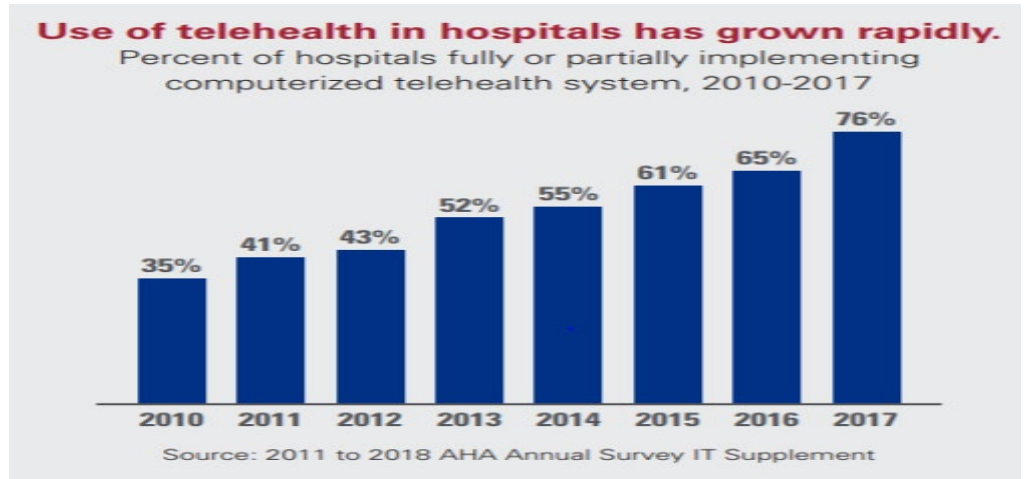
Telemedicine

What is Telemedicine?

Top uses of telemedicine:

- Concierge medicine
- Medication management
- Minor urgent care
- Home health care
- Behavioral health
- Post procedure/hospital stay follow up

<https://www.beckershospitalreview.com/healthcare-information-technology/10-top-uses-for-telemedicine-according-to-physicians.html>



<https://www.aha.org/system/files/2019-02/fact-sheet-telehealth-2-4-19.pdf>

Pros:

- More convenient and accessible patient care
- Increased patient engagement
- Better patient care quality

Cons:

- Technical training and equipment
- Reduced care continuity
- Fewer in-person consultations

<https://evisit.com/resources/10-pros-and-cons-of-telemedicine/>



Telemedicine

Video demonstration from MDLive



<https://www.youtube.com/watch?v=mDxgfFAca98>

Telemedicine

Best practices need to develop

50 State Telemedicine Gaps Analysis Physician Practice Standards & Licensure

"Providers often encounter a patchwork of conflicting and disparate requirements for insurance claims and practice standards that prohibit them from fully taking advantage of telemedicine."

<https://utn.org/resources/downloads/50-state-telemedicine-gaps-analysis-physician-practice-standards-licensure.pdf>

Fremont Kaiser Patient Told He's Dying Via Tele-Robot Doctor Visit

March 8, 2019 at 11:00 pm Filed Under: Kaiser Permanente, Kaiser Permanente Medical Center, Telepresence, Telerobot

"But the hospital also defended its use of telemedicine and said its policy is to have a nurse or doctor in the room at the time of remote consultations.

"The evening video tele-visit was a follow-up to earlier physician visits," Gaskill-Hames said in a written response. "It did not replace previous conversations with patient and family members and was not used in the delivery of the initial diagnosis."

Hospital officials say the **technology doesn't replace in-person conversations** with the patient and loved ones."



<https://sanfrancisco.cbslocal.com/2019/03/08/kaiser-patient-told-dying-robot-doctor-video-call/>

Electronic Health Records (EHRs)

Electronic Health Records What can go wrong?

ANALYSIS

DEATH BY A THOUSAND CLICKS: WHERE ELECTRONIC HEALTH RECORDS WENT WRONG

BY KAISER HEALTH NEWS | MARCH 18, 2019

Issues Identified:

- Harm to patients due to software glitches and user errors
- Signs of fraud through upcoding
- Gaps in sharing information
- Doctor burnout
- Issues hidden from public

<https://khn.org/news/death-by-a-thousand-clicks/>

Lawsuit Claims EHR Dangerous to Patients, Could Affect Hospitals

EHR Problems in Medical Malpractice Lawsuits

Electronic Health Records Could Affect
Your Medical Malpractice Lawsuit

EHRs Increasingly Included in Medical Malpractice Lawsuits

The lawsuits allege a broad range of mistakes and information gaps — typos that lead to medication errors; voice-recognition software that drops key words; doctors' reliance on old or incorrect records; and nurses' misinterpretation of drop-down menus, with errors inserted as a result in reports on patient status.

In addition, discrepancies between what doctors and nurses see on their computer screens and the printouts of electronic records that plaintiffs bring to court are leading some judges and juries to discredit provider testimony and hand out big awards. ***In one case, a patient in septic shock had suffered gangrene and a severe skin rash, but computer records read "skin normal."*** They also showed repeated physician interviews with the patient — when she was comatose.

<https://www.politico.com/story/2015/05/electronic-record-errors-growing-issue-in-lawsuits-117591>

Electronic Health Records

Emergency room's issues with EHRs being investigated

Rhode Island docs alarmed by subpoenas they link to EHRs

By [ARTHUR ALLEN](#) | 01/30/2019 09:29 AM EST | Updated 02/01/2019 01:54 PM EST

The subpoenas, sent to at least four emergency room doctors at Rhode Island Hospital in Providence, deal with X-rays and other scans mistakenly ordered by the doctors. Such errors are common because EHR screens are complex, and ***it's easy to click on the wrong icon or patient name***, say experts on EHRs.

"We have frequent reports of wrong-side errors," said Lorraine Possanza, director of the Partnership for Health IT Patient Safety at the ECRI Institute, which is dedicated to improving patient safety.

There has also been disagreement with the consent decree's stipulation that clinicians in the emergency department ***keep no more than one patient's record open*** at a time on a computer screen, doctors at the hospital said. Medical authorities often view the one-screen policy as the safest practice, Possanza said, but some [recent research](#) indicates that may not be true in an emergency room, where physicians have to handle and monitor many patients at a time.

The Rhode Island Hospital's emergency department has been under particular pressure recently because of the [closure of a nearby hospital](#) and its emergency room. Doctors say it is easy to make certain computer errors in a stressful ED — ***and the typical emergency physician's shift involves 4,000 mouse clicks***.

<https://www.politico.com/story/2019/01/30/medical-misconduct-subpoenas-ehr-1107689>

Robotic Surgeries

Robotic Surgeries

Da Vinci Systems

INTUITIVE

"Our da Vinci Surgical Systems consist of a surgeon's console or consoles , a patient-side cart, a high performance vision system and proprietary "wristed" instruments and accessories. da Vinci Surgical Systems seamlessly translate the surgeon's natural hand movements on instrument controls at a console into corresponding micro-movements of instruments positioned inside the patient through small puncture incisions, or ports. ***Our da Vinci Surgical Systems provide the surgeon with the intuitive control, range of motion, fine tissue manipulation capability and 3-D visualization characteristic of open surgery, while simultaneously allowing the surgeon to work through the small ports of minimally invasive surgery, or MIS.***"

Now over 5,000 units installed; growth of over 25% since beginning of 2017.

Over 1 million procedures in 2018 worldwide

Nearly all urology and gynecology residency programs in the U.S. have a da Vinci System.

Procedures Offered:

- Cardiac (Mitral valve repair and bypass)
- Colorectal procedures
- Bariatric, gallbladder and hernia surgeries
- Hysterectomy
- Head and Neck
- Lung surgery
- Kidney and Prostate surgery



Surgeon Console



Patient Cart



Vision Cart

<https://www.davincisurgery.com/da-vinci-systems/about-da-vinci-systems/>

Robotic Surgeries

Video demonstration



https://www.youtube.com/watch?v=H-sOLL9cz_g

Robotic Surgeries

Benefits and Concerns

Benefits Offered:

- Visualization
- Reduced tremors from doctors
- Better mobility than traditional minimally invasive procedures
- AI offers monitoring of potential issues
- Reduced recovery times

Concerns:

- Cost
- Risk of more serious post op issues
- Mechanical failure
- Electric arcing burns
- Requires additional training

<https://psnet.ahrq.gov/webmm/case/368/Robotic-Surgery-Risks-vs-Rewards->

TransEnterix's pledge to reduce operating-room costs

By BusinessNC Posted December 3, 2018 In December 2018

*"Bring on the robots. Fewer than 10% of surgeries involve robotic equipment, a number that appears certain to jump. Revenue from abdominal robotics surgery alone **could quintuple to nearly \$16 billion by 2023**, Lexington, Mass.-based WinterGreen Research Inc. projects."*

*"While the upfront cost of its Surgical Senhance System is about \$1.5 million to \$2 million, the robotic device can **reduce costs of medical operations by about two-thirds**, says Chief Executive Officer Todd Pope"*

<https://businessnc.com/transenterixs-pledge-to-reduce-operating-room-costs/>

Ai in Healthcare: revolutionizing surgery



Kshitij Kaushik [Follow](#)

Oct 2, 2018 · 4 min read

*"The project lead on the Smart-Tissue Autonomous Robot (STAR) states that the benefit of completely automated robots is well worth the investment. He notes that the availability of the right surgeons during emergencies will not hamper the quality of a surgery if automated robots become the norm for surgeries. Given that medical mistakes are known to be the third highest cause of death in the USA, automation seems to **reduce the burden on human surgeons to be perfect all the time.**"*

<https://blog.prototypr.io/ai-in-healthcare-revolutionizing-surgery-50e49bfcd2f2>

VR Training

VR Training Uses in Surgery



Uses:

- Planning of complex surgeries
- Engaging patients about the surgery
- Use during surgery for step by step plan execution
- Dynamic case review
- Education of medical students



<https://www.surgicaltheater.net/>

How VR Improves Physician Training and Patient Outcomes

Virtual reality offers to boost teaching, patient recovery and more.

"Imagine, as a medical student, being able to peek over the shoulder of a doctor performing open-heart surgery, getting up close and personal with the intricacies of the complex organ and what is required to repair it. This would be invaluable experience for any student studying to become a surgeon. Now, imagine that same student being able to ***don a surgical gown and try his or her hand at performing the surgery with no risk to the patient.***"



VR Training

Video demonstration from Children's Hospital of Los Angeles



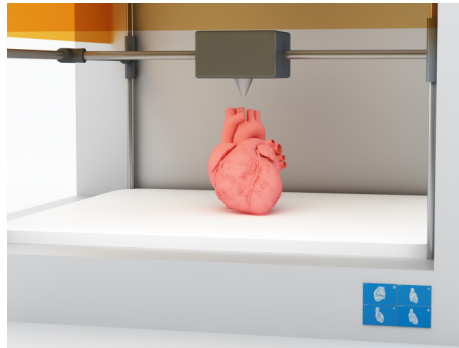
https://www.youtube.com/watch?v=LGzzdIAP_S0

Technological Advances

Technological Advances

The possibilities are endless

3-D Printing



Formularies



VR Therapy



Tricorder



Nanotech



Trends Impacting MPL Results

Trends Impacting MPL Results

Where is the industry heading?

- Frequency remains low; expected to stay low
- Severity expected to continue to increase across all jurisdictions
- Availability of alternative funding for plaintiffs attorneys
- Pressure on healthcare facilities/insurers to defend claims more often
 - Plaintiffs aware defendants are willing to settle
- Claims becoming more complex
 - Products liability vs professional liability
- Prices stabilizing, but still companies looking to increase market share through competitive pricing
- Consolidation of insurance providers
 - Traditional physician insurers now taking on other exposures



Official Professional Services Sponsor

Professional Services means audit, tax, consulting, and advisory.

About Deloitte

Deloitte refers to one or more of Deloitte Touche Tohmatsu Limited, a UK private company limited by guarantee ("DTTL"), its network of member firms, and their related entities. DTTL and each of its member firms are legally separate and independent entities. DTTL (also referred to as "Deloitte Global") does not provide services to clients. Please see www.deloitte.com/about for a detailed description of DTTL and its member firms. Please see www.deloitte.com/us/about for a detailed description of the legal structure of Deloitte LLP and its subsidiaries. Certain services may not be available to attest clients under the rules and regulations of public accounting.