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Accountable Care Organizations: Effect on Hospital Corporate Liability?

The growing prevalence of Accountable Care Organizations (ACOs), introduced under the Affordable Care Act, has created new area of potential litigation in the field of hospital corporate liability.

ACOs are groups of healthcare providers – both individuals and institutions –that bundle their services across the healthcare continuum, allowing for coordinated care and, in theory, simultaneously reducing duplication of services and lowering cost while improving quality of care. However, “when cost saving efforts play a role in medical decision making, there is an inevitable tension between cost containment and medical liability.”

There are numerous areas under which ACOs and their components face possible legal risk. First, there is the potential that some ACOs indeed prioritize cost containment over quality, resulting in a negative outcome. Second, it’s unclear who could be held accountable for a patient’s negative result – the physician/system that provided the alleged negligent care or parts of the ACO itself for directing care to a potentially unfit or unqualified physician.

This uncharted territory potentially exposes ACOs to increased liability. It has already been established under “agency theory,” that “a plaintiff in a malpractice suit is permitted to hold a health system liable for the negligent actions of its employee.”¹ It is possible that litigation involving ACOs might arise also under the theory of direct corporate negligence and that any and all actors in the ACO may be held to account in the instance of a negative medical outcome. ACO components need to weigh this potential effect when making health care decisions.

¹Harvey H, Cohen I., *JAMA*, The Looming Threat of Liability for Accountable Care Organizations and What to Do About It, 310(2): 141-142, July 2013

Barriers to the Adoption of Telemedicine Worldwide

Background

Telemedicine (used interchangeably with telehealth) covers a very wide number of modalities used to deliver medicine, but, generally, it is diagnosing and treating a patient by means of telecommunication technology, which eliminates proximity as a barrier to care. Some of the services delivered using telemedicine are primary care and specialty referral services, remote patient monitoring, consumer medical and health information, and patient education. Adoption of telemedicine has increased both access and quality of care with no deleterious effect on cost. However, adoption has not been worldwide. Barriers to the adoption of telemedicine are documented in some countries as reimbursement and licensing issues, concerns over privacy, resistance to change, and unavailability of high-speed Internet. To date, an examination involving multiple countries has not been undertaken.

In 2016, a group of graduate students under the direction of a faculty member conducted a systematic literature review to examine the various challenges to implementing telemedicine among several different countries to identify any new trends compared with similar studies completed several years ago. What are the principal barriers to the adoption of telemedicine? What countries are experiencing barriers? Which barriers are unique to some groups in the healthcare industry? Is there public policy that could help overcome these barriers? Our review intends to record the most frequently faced challenges, efforts to overcome those challenges.

We extracted data from CINAHL and PubMed (MEDLINE) research databases from June 6-10, 2016 using the following key words: barriers, adoption, implementation, telemedicine, tele care, telecare, Tele health, telehealth, mobile health, mHealth, m-Health, eHealth, and e-Health. A literature matrix was created to list the articles and compare the relevance of articles, and the review team used a series of three consensus meetings to move the process forward. Finally, 30 articles were selected for the systematic literature review. We grouped barriers by country, those common to organizations, for patients, for staff and programmers (the latter, staff and programmers, are not shown on this poster). Barriers were organized into several bar charts by frequency of occurrence in the literature.

The results show a complex mixture of barriers to adoption when examining the topic worldwide. Countries / areas reporting >70% of the barriers were the USA (40%) and countries of Europe (33%), which is highly likely due to publication bias. More than 70% of the barriers listed for organizations were cost (22%), reimbursement (14%), legal liability (11%), privacy / confidentiality. (11%), and both security of data and effectiveness (8%). More than 70% of the barriers cited for patients were age-related (17%), level of education (17%), eHealth or computer literacy (14%), insufficient bandwidth (14%), unawareness of service (14%). For the medical staff, the most frequent barriers listed were technically-challenged staff (33%), resistance to change (24%), and licensing (10%). For programmers, the most frequent barriers listed were interoperability (12%), poor design (10%), and language barriers (6%).

Telemedicine is widely used as a tool to increase access through the elimination of proximity from the equation of care. However, in the countries studied, technology barriers and lack of computer literacy serve as major barriers to successful implementation. Focus on the most prevalent barriers should serve as a lever to maximize improvement. This systematic review provides direction for public policy to intervene across international boundaries and to reduce the barriers currently experienced.

This systematic review was published in the International Journal of Telemedicine and Telecare on October 1, 2016.

A Brief History of Quarantine in the United States and An Overview of Quarantine Laws in the Individual States

Kaci Hickox, RN, who had returned from Sierra Leone after working with Doctors Without Borders battling the Ebola epidemic, was held in an isolation tent at a New Jersey hospital for a few days in late October 2014. She was subsequently released and returned to her native state of Maine. This case piqued my interest in quarantine laws within the United States. In light of the recent Ebola virus outbreak in West Africa and the Ebola cases in the United States, I wanted to provide a brief history of quarantine law in the United States and also give an overview of the individual states' quarantine laws, focusing on fines and degree of violating a quarantine order (i.e., felony or misdemeanor).

Initially research was conducted to find out which states had quarantine statutes using the Centers for Disease Control's website. Each state's legislative website was accessed to examine each state's quarantine laws and the punishment ranges for violating a quarantine order. I additionally researched the National Conference of State Legislatures' website where I found additional information on each state's quarantine laws.

When the United States was first established, there was little done to prevent the importation of infectious disease, and, in fact, it fell on the states and local jurisdictions to protect the population, which made sporadic attempts to impose quarantine laws. Congress finally acted in 1878 to pass federal quarantine legislation in light of continued yellow fever outbreaks. More authority was granted to the federal government in 1892 following cholera outbreaks due to immigration from Europe. The quarantine system was fully nationalized in 1921 when the last quarantine station was transferred to the U.S. government. Currently, the Division of Global Migration and Quarantine is part of the Centers for Disease Control's National Center for Emerging and Zoonotic Infectious Diseases with quarantine stations located throughout the United States. Under the authority delegated to the Division, it is empowered to "detain, medically examine, or conditionally release individuals and wildlife suspected of carrying a communicable disease." There is a list of specific quarantinable diseases spelled out in Executive Order 13295 signed April 4, 2003 and amended by E.O. 13375, signed April 1, 2005. Federal quarantines are rarely used today. The states have police power functions to protect the health, safety, and welfare of persons within their borders. To control the spread of disease within their borders, states have laws which vary from specific to broad to enforce the use of isolation and quarantine. In most states, violating a quarantine order is a criminal misdemeanor. However, four states – Mississippi, New Hampshire, South Carolina, and Texas – make it a felony to violate a quarantine order and provide for substantial monetary penalties and lengthy imprisonment.

References

<http://www.ncsl.org/research/health/state-quarantine-and-isolation-statutes.aspx>

<http://www.cdc.gov/quarantine/specificlawsregulations.html>

<http://www.washingtonpost.com/news/post-nation/wp/2014/10/27/nurse-detained-under-new-jerseys-ebola-quarantine-to-be-released/>

Can Planning Ahead Save Health Care Costs at the End-of-Life?

Health care costs are rising at an unsustainable rate in the United States. A high proportion of these costs occur in the last year of a person's life, and about half of these costs are incurred from inpatient medical services. There is concern that such a high proportion of these costs occurring in the inpatient venue may not be consistent with the wishes of many American seniors, who overwhelmingly favor dying at home. Advance directives are the most common end-of-life intervention, allowing a person to give instructions on what family and medical personnel should do in the event he or she loses decision-making capacity. However, advance directives are often felt to be of low quality and have not been shown to reduce health care expenditures by themselves. Advance care planning is an end-of-life intervention that goes further than advance directives do, involving organized and continuous communication of wishes between the patient and clinical personnel. Advance care planning holds the potential to improve quality of care at the end-of-life while lessening health care expenditures. Health care managers and/or administrators should focus their advance care planning implementation efforts on setting quality standards, educating patients and clinicians, and developing health policy. Advance care planning programs should be transparent and must be very mindful of potential conflicts of interest that could create ethical problems. They should include hospice, an end-of-life intervention that focuses on making terminally ill patients more comfortable prior to death and not on additional procedures.

This poster was approved for publication by the Public Affairs Officer and the Operations Security Officer of the Army Medical Department Center and School, Ft. Sam Houston, Texas. The views expressed on it are those of the author only and do not reflect official policy of the Department of the Army, the Department of Defense, or the United States Government.

Computer ID, Ego, and Superego: The Identity of “Self” in Cyberspace

Background

Computers can enable a person to assume a different personality in a world with apparently different rules than that of traditional society. Online, a person can enter a chatroom anonymously in order to academically debate a topic that could have socially negative connotations if done as an identifiable person. Such topics could include homosexuality, transsexuality, HIV/AIDS, illegal immigration, despotic or dogmatic policies in a workplace or community, abortion, or the dangers of allowing any one leader to assume too much power. But anonymity can also enable money laundering, theft, and damage of electronic property. Why aren't boundaries of morality the same in cyberspace as they are in person?

Dr. Sigmund Freud developed the concept that “self,” or our personality, is composed of three parts: The id, or subconscious instinct; the superego, the conscious morality of what is considered right or just; and the ego, the internal negotiator that ultimately determines our actions. In cyberspace, morality seems to take a backseat to acceptable behavior. Online anonymity seems to enable alternate personalities absent morality, and often the result is cybercrime.

There is a duality of terms between the computer world and the writings of Dr. Freud. Each day, users of a computer log into that computer using a computer identification called an ID. This grants access to resources for which the user has paid. This ID can quite easily unlock Freud's concept of the id, but some-how the ego and superego are rarely invited to the party. Donn Parker observed in the 1960s that when people use computers they tend to “leave their ethics at the door” (Rules of Ethics in Information Processing. Communications of the ACM, 11:198-201). Does an anonymous account, the antithesis of an account that can identify the user and audit his/her actions, enable the suppression of the ego and superego?

The US Department of Justice provides a seemingly endless supply of examples of the actions of the morally bankrupt. In 2008 the Southern District of New York and four other Districts' indictments detailed a healthcare fraud scheme involving more than \$163 million. At least 118 clinics in 25 states defrauded Medicare beneficiaries and providers of their identities and fraudulent claims were submitted to CMS for reimbursement. In 2009, medical records were used as material for blackmail to disparage the reputation or credibility of patients, some of whom were celebrities. In 2012, the chief conspirator of a home health Medicare fraud in Miami defrauded CMS of \$42 million, and part of his scheme was paying kickbacks and bribes to patient recruiters in return for fraudulent documentation or medically unnecessary therapy.

Three ethical-decision-making models for technology programs at universities:

West Point's “Three Rules of Thumb”

1. Does this action attempt to deceive anyone or allow anyone to be deceived?
2. Does this action gain, or allow the gain of, privilege or advantage to which I, or someone else would not otherwise be entitled?
3. Would I be dissatisfied by the outcome if I were on the receiving end of this action?

Weber's Ethical Decision-Making Method, with Kruse's Adaptation

1. Individual's rights supersede all others
2. Community good / interests
3. Organizational good / interests
4. Individual good / interest

“Grandmother” Test (adapted from L.L. Nash (1986) “Ethics without the Sermon,” *Harvard Business Review*)
At the end of the day, can you sit down with your grandmother and tell her about your actions online, assuming she understands what it is that you do? Would grandmother approve and say, “That's a good boy/girl?” or would she frown and begin to shake her head? This assumes, of course, that you omit the label of “cyber-extortion, cyber-theft, ransomware, cyber-squatting,” or anything associated as “cybercrime.”

Conclusion

At some point, cyber-criminals must be held accountable for their actions, deeds, and intent of their deeds. To stop the infliction of damages, we must address the behavior. It may more efficient to first understand the mind of the cybercriminal. Does Dr. Freud's concept of the subconscious id take over once a user passes the computer user ID? Ethics are already introduced into educational programs that teach programming, but clearly something is not working. Additional research should examine the mind of the hackers and divine ways to help them embrace some social responsibility.

Cultural Considerations: "Heaven Help Us!"

We frequently hear of the necessity, or at least the benefit, of cultural aware-ness and the Joint Commission now mandates cultural consideration. With this poster, we examine one aspect of cultural awareness, the belief that many of our patients hold in the power of intercessory prayer, specifically in the intercession of saints. We believe it is not that unusual for a patient to invoke a particular saint or even to ask a provider to do so on his or her behalf. We will review some of the pertinent terminology (*saint, canonization, intercession, Communion of Saints, patron saint*) and will identify by name and pictorial representation a number of saints the Roman Catholic Church has designated as patrons of various categories of healthcare providers, extenders, administrators, and other workers.

It should be noted that many of the saints mentioned here are also recognized by individuals who are not Roman Catholics, particularly members of the Orthodox Churches and members of those churches that are part of the Anglican Communion.

This poster provides only a little of the information available on saints and, in particular, the patron saints of healthcare providers. If it has peaked your interest, there are numerous books available on saints, patron saints, and the process of canonization. We will be glad to provide references in addition to those on the poster.

This poster was presented in 2014. It is shown again this year at the request of the ACLM President.

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Patron Saints of Various Healthcare Providers and Workers

AIDS caregivers	St. Aloysius Gonzaga
anestheologists and anesthesiologists	St. Rene Gompil
dental hygienists	St. Apollonia
dentists	St. Apollonia and St. Antipas
EMTs	St. Michael the Archangel
healers in general	St. Luke
hospital administrators	St. Frances Xavier Cabrini
hospital workers	St. Vincent de Paul
medical technicians	St. Albert the Great
midwives	St. Raymond Nunnatus
nurses	St. Agatha, St. Camillus, and St. Alexius
obstetricians	St. Raymond Nunnatus
paramedics	St. Michael the Archangel
pharmacists	Sts. Cosmas and Damien
psychiatrists	St. Christina
psychologists	St. Dymphna
physicians	St. Luke
radiologists	Sts. Michael, Gabriel, and Raphael
social workers	St. Louise de Marillac and St. John Regis
surgeons	St. Luke and Sts. Cosmas and Damian
urologists	St. Liborius

The Department of Defense and the Department of Veterans Affairs Need a Policy on Surrogacy

No clear policy on surrogacy exists for the Department of Defense or the Department of Veterans Affairs. TRICARE, the military's managed care health benefit program, has a limited policy on gestational surrogacy, currently restricting coverage to pregnant military spouses. With the policy change permitting gays and lesbians to serve openly in the military (2011) and the Supreme Court rulings recognizing same-sex marriage as a constitutional right (*United States v. Windsor*, 133 S.Ct. 2675 (2013) and *Obergefell v. Hodges*, 135 S.Ct. 2584 (2015)), it is clear that same sex couples will be turning to surrogacy as a way of having children, in addition to those heterosexual couples who already do so. There is an increasing need for a policy to cover all concerned cohorts. Potential beneficiaries need to know what the rules are. Is this something best left to each hospital commander to be based upon his/her personal beliefs? Should policy be set by a facility's ethics committee? Military members and their spouses need an answer.

There are additional issues: Is the question of whose life is more important, that of the fetus or that of the woman, a different question when surrogacy enters the picture. Even if this is addressed in a contract between the parties, military providers, be they uniformed, GS, or contractor) providers would not be parties to such an agreement. Should military facilities require a contract exist to address issues between the parent, prospective parent or parents, and the surrogate.

These questions will not go away. They will be asked more and more often.

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The Ethics of Using Secret Shoppers / Patients in Healthcare: Applying the Army-Baylor 7-Step Model for Organizational, Ethical Decision-Making

Background

Healthcare has become a competitive marketplace in which organizations try to demonstrate their attentiveness to quality and the patient experience. In recent years, greater effort has been put toward understanding patient satisfaction and how it relates to revenue generation. The use of secret shoppers is a practice in which an organization hires an outside individual to pose as a normal customer to evaluate and report on the customer experience. Historically, these secret shoppers have been used in retail markets but now are being used by some healthcare organizations to gather similar information regarding patients' experiences.

Purpose

The issue under consideration is whether the use of secret shoppers / patients by healthcare organizations is an ethical practice.

Method

A literature review was conducted including articles published by the American Medical Association Journal of Ethics. The Army-Baylor 7-Step Model for Organizational Decision-Making was used as a framework for assessing the ethical questions surrounding this issue. The Army-Baylor Model uses the following 7 steps: 1) Frame the Question; 2) Set out the Organizational (internal) Factors; 3) Note the Contextual (external) Factors; 4) Revisit/ Reframe the Question; 5) Ask and Answer the Relevant Questions (adapted from L.L. Nash's "12 Questions for Organizational Decision Making," Ethics without the Sermon, *Harvard Business Review*, 1982); 6) Identify and Weigh Alternatives; and 7) Decide.

Findings/Results

There are conflicting viewpoints regarding the use of secret shoppers in healthcare. Critics feel that the use of secret shoppers wastes finite medical resources on "sham" patients and erodes the patient-provider relationship, which is built on trust. Advocates for secret shoppers stress the importance of improving the patient experience which would not only benefit the patient but would also benefit healthcare as a business. Secret shoppers also evaluate the interaction with non-clinician support staff that impact the patient experience. From this view point, there is a cost to the time spent with secret shoppers, but it is value added. As for eroding the trust of actual patients, we see this as a red-herring. Most will not even be aware of the process; if some are and are concerned by it, the process and its benefits can easily be explained to them.

Conclusion

Our conclusion is that it is ethical to use secret patients / shoppers in healthcare as long as parameters are in place to ensure that they do not disrupt the delivery of services nor waste valuable resources.

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False Expert Witness Testimony in a Medical Negligence Case

In order to successfully litigate a claim for medical negligence, both plaintiffs and defendants rely heavily on medical expert testimony to support their respective positions. Here, we present a case in which a defendant's expert witness, a highly qualified internist and pulmonologist affiliated with an academic medical center, allegedly authored a demonstrably false expert witness report which was filed in Nevada State District Court.

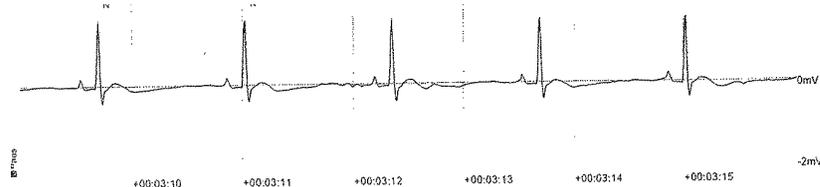
KM was a 24-year-old woman who experienced a severe asthma attack in the early morning hours of December 2014. Her boyfriend called 911 and County emergency medical personnel responded to their apartment. First responders noted KM was unconscious, that KM had a pulse of 60 bpm, and that she was breathing two to three times per minute. Despite intubation of the trachea by paramedics, KM's condition deteriorated to full respiratory and cardiac arrest. Upon arrival to the hospital, an emergency room physician determined the endotracheal tube had been placed in the esophagus. The endotracheal tube was replaced and although KM had a brief return of spontaneous circulation, she died shortly thereafter. The Decedent's Estate and infant son filed a lawsuit against the County in Nevada State District Court, alleging that the esophageal intubation was the direct cause of KM's death.

The defendant's strategy in the case relied heavily on the premise that while it was true that paramedics incorrectly placed the endotracheal tube into the esophagus in the field, it made no difference because KM was *already dead* when paramedics arrived at the apartment. To support this premise, defendant proffered the expert witness testimony of an academic pulmonologist who reviewed the pre-hospital medical records and offered the following opinion in his expert report:

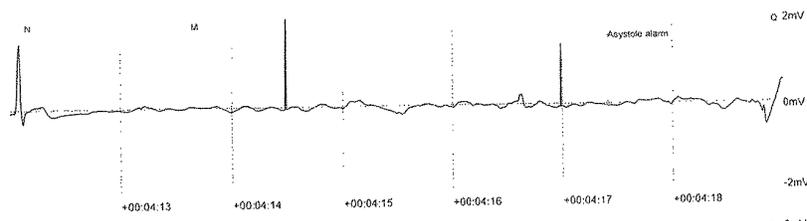
[KM] was in asystole, without pulse or respirations, when the respondents arrived. Asystole is commonly seen after patients suffer a respiratory arrest, for example from asthma exacerbations, and then suffer a cardiac arrest. Asystole is commonly seen after patients suffer a cardiac arrest. [KM] suffered a respiratory and then cardiac arrest between 0134 and 0152, the time of evaluation of [paramedics]. The cardiac arrest probably occurred well before this evaluation; if it occurred half-way between 0134 and 0152, [KM] would have been in asystole for nine minutes before the CCFD personnel could provide CPR to her.

Paramedics place electronic cardiac monitors on patients in the field. Such monitors record the cardiac rhythm and retain the same in memory. There were 99 pages of pre-hospital ECG tracings in this case. Defendant's expert witness noted in his Report that *he had reviewed the ECG tracings* before authoring his opinion that KM was in cardiac arrest when paramedics first arrived on scene.

Contrary to the defendant's expert report, the ECG tracings demonstrate that upon arrival to KM's apartment, paramedics found KM in sinus rhythm at a rate of 60 bpm. Reproduced below is an actual initial rhythm strip in this case:



The times in the strip above show the minutes elapsed since the monitor was turned on. This strip shows KM in a sinus rhythm three minutes after the monitor is turned on. The ECG strip below records the exact moment KM suffered cardiac arrest, after paramedics arrived:



Here, the monitor strip demonstrates that cardiac arrest occurred four minutes and 13 seconds after the monitor was turned on and well after first responders arrived on scene. Despite the defendant expert's report, deposition testimony also confirmed that KM had a palpable pulse, had a sinus cardiac rhythm, and was breathing at the time paramedics first arrived. The defendant expert's claim that KM was in asystolic cardiac arrest when paramedics arrived on-scene is demonstrably false. Blatantly false expert opinions raise numerous ethical and legal issues about how medical negligence claims are litigated.

History of End-Stage Renal Disease and Medicare Benefits for Dialysis

End-stage renal disease (ESRD) is the final stage of chronic kidney disease, an irreversible and progressive illness with a high mortality rate if not treated. The kidneys function to filter waste products out of the blood and excrete them into the urine. They also maintain the fluid and electrolyte balance in the body, regulate blood pressure and mineral metabolism, and regulate production of the hormone erythropoietin, which prevents anemia by stimulating the production of red blood cells. When kidney failure occurs, patients require renal replacement therapy, such as hemodialysis, peritoneal dialysis or kidney transplantation to survive.

The purpose of this poster is to educate the reader on the history of the social policy and lawmaking for Social Security Disability and Medicare benefits for citizens with end-stage renal disease. The need for assistance for this population was born out of the “God Committee” in 1960, in Seattle, Washington. At that time, there was only one dialysis machine, and it could only accommodate three patients, even if it was running 24 hours a day. Dr. Scribner, who invented it, did not wish to be the one to decide who would benefit from this lifesaving machine, and he sought to appoint a committee that could take on the task. It was made up of seven lay-persons, a retired pastor and a housewife among them. They are said to have been the very first Ethics Committee, for, indeed, they tried to use the ethical principle of justice to make these decisions.

The statute, eventually passed to end this situation, was originally advocated for by Senator Hartke (D-IN) and was partially based on his prediction that the majority of patients covered by the end-stage renal disease program would seek vocational training and return to work. (ESRD Program under Medicare Section 2991 of Public Law 92-603 (1972). This did not occur. It remains to be seen if the outpatient dialysis facilities in the United States, 85% of which are for-profit providers that treat almost 90% of dialysis patients, will rise to the requirement to meet quality performance standards to avoid the risk of reimbursement reduction under the Accountable Care Act (42 CFR 425 [2015]).

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Immunization Mandates: Abolishing the Religious Exemption in Nevada

Immunizations protect the individual and society from diseases, such as diphtheria, pertussis, tetanus, measles, mumps, poliomyelitis, rubella, varicella, hepatitis B, *Haemophilus influenzae type b*, and *Streptococcus pneumoniae* (Goodman, 2003). Although many of these diseases are no longer prevalent in the United States, the threat of transmission still exists due to travel and immigration. Despite the need for protection, some parents opt out of vaccinating their children based on philosophical and/or religious exemptions. The current Nevada state law, Nevada Revised Statutes § 392.437, states that a child may not be refused enrollment in a public school for failure to immunize pursuant to Nevada Revised Statutes § 392.435 if the parents or guardian have submitted indication that their religious belief prohibits immunization.

While providing medical exemptions is justifiable, providing religious exemptions is neither ethically justifiable nor constitutionally required. Ethically, immunization protects the individual and ensures the safety of the community through herd immunity. A retrospective cohort study using data from 1987 to 1998 in Colorado, shows that children ages 3 to 18 with personal exemptions were, on average, 22 times more likely to acquire measles. This study also revealed that during 1996 to 1998, unvaccinated children were found to be 5.9 times more likely to acquire pertussis than those who were vaccinated. In addition to an increase in personal risk, exemptors provide an avenue for transmission of vaccine-preventable diseases. In Colorado, a cluster of exemptors, early on in a measles outbreak in 1994, led to subsequent cases in 1995. In the state of New York, from 2000 to 2011, a greater increase in incidences of pertussis occurred in counties with higher religious exemptions rates. The personal autonomy to refuse immunization should not entail an increased risk for the individual and the community. Due to herd immunity, collective responsibility should prevail in the decision to abolish the religious exemption.

Although the State of Nevada provides for religious exemption, it is, as stated, not constitutionally required. The level of scrutiny the United States Supreme Court would apply to an immunization law excluding a religious exemption is unclear. Strict *scrutiny*, the highest level of scrutiny, would require the state to establish that the lack of a religious exemption is due to a compelling state interest and is narrowly tailored to such an interest. This is the most difficult level of scrutiny to withstand. Intermediate *scrutiny*, the median level, would require the state to establish that the regulation furthers an important governmental interest by a means substantially related to the interest. *Rational basis scrutiny* would require the state to demonstrate only that the statute is related to a legitimate or permissible state purpose.

The level of scrutiny required turns on whether the Religious Freedom Restoration Act (RFRA) applies to Nevada law. RFRA is a federal act which requires neutral laws of general application be strictly scrutinized if they substantially burden the free exercise of religion (42 U.S.C. § 2000bb-2000bb-4). RFRA has no equivalent in Nevada State law because currently, Nevada state law has not introduced language that is like the RFRA into the Nevada Constitution. As such, strict scrutiny would not be required. However, even if strict scrutiny were required, cases such as *Burwell v. Hobby Lobby Stores, Inc.*, 134 S.Ct. 2751, 2760-62 (2014), and *Wisconsin v. Yoder*, 406 U.S. 205 (1972), indicate that an individual's religious belief would not excuse him/her from compliance with an otherwise valid law prohibiting certain conduct. Furthermore, cases such as *Workman v. Mingo Country Board of Education*, 419 Fed. Appx. 348, 353 (2009), and *Brown v. Stone*, 378 So. 2d 218, 223 (1979), indicate some legal consensus that compulsory vaccination would withstand a strict scrutiny review and that the religious exemption violates the Equal Protection Clause of the Fourteenth Amendment.

As such, mandatory immunizations with an exception for medical exemption, should be upheld in the State of Nevada.

Infectious Disease Testing in Transfusion Medicine – From Anti-HBV to Zika Virus: A Brief History

With the recently released Food and Drug Administration (FDA) guidelines regarding Zika virus screening in blood collection centers, a review of the history of infectious disease testing in the United States can shed some light on how emerging diseases are addressed.

Zika testing is the latest addition to the battery of infectious disease tests for blood donor centers. Websites used to research the history of infectious disease testing included that of the Centers for Disease Control and Prevention and AABB, (now, just the acronym; formerly American Association of Blood Banks), as well as the FDA site.

The first recorded blood transfusion occurred in the 1600s and occurred without the benefit of infectious disease screening. For nearly 150 years no new developments occurred in the field of transfusion medicine until British obstetrician James Blundell performed the first successful transfusion of human blood to a patient with post-partum hemorrhage. By 1940, the U.S. establishes a national blood collection program. The first infectious disease testing was for syphilis in 1947. The first documented case of transfusion-transmitted syphilis was recorded 30 years earlier by Dr. Bertram Bernheim. A patient contracted a virulent form of syphilis post transfusion from his son's blood and the son threatened to sue the hospital for giving his father syphilis, even after admitting that he had syphilis at the time he donated blood for his father. The next disease to be tested for was Hepatitis B in 1971. Syphilis and Hepatitis B were the only two tested up until 1985. In the dozen years following this, testing for six more diseases was added, which are now listed in 21 Code of Federal Regulation § 610.40. The AABB's Transfusion Transmitted Diseases Committee (TTDC) was established to review emerging infectious disease (EID) agents and currently has 68 diseases on their list with following three listed as highest priority: Human variant Creutzfeldt-Jacob disease, Dengue virus, and Babesia species.

The cost of blood products increases with each additional screening test and currently other methods are being researched to provide safe blood in the United States, to include pathogen reduction in plasma and platelets and artificial red blood cells.

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Is it Ethical to Exclude Obesity as a Disability?

Background

During a 2012 meeting of the American Medical Association, the House of Delegates overwhelmingly voted to consider obesity a disease. This affirmation, which was in direct conflict with the American Medical Association's own Council on Science and Public Health, was made in part to foster change within the medical community as to how obesity should be treated (Conover, 2013). However, the lateness of this decision (for example, the Internal Revenue Service has recognized obesity as a disease that qualifies as a medical reason to deduct related expenses since the 1990s) has done very little to help in treatment but it has increased the intensity of the *discussion* around obesity. For example, the American with Disabilities Act, as Amended of 2008 (ADAAA) is written so broadly that it could essentially cover any diagnosed medical condition as a disability (Conover, 2013). If obesity is a disease that can arguably cause "a physical or mental impairment that substantially limits one or more major life activities" (ADAAA, 2008) then it could also qualify as a disability. The Army-Baylor 7-Step Method Modified for Organizational Decision - Making, was used to determine if it is ethical to exclude obesity as a disability.

Using the Army-Baylor 7-Step Method Modified for Organizational Decision - Making

This method was designed to provide a standardized framework for addressing ethical questions that have a healthcare focus, but which are non-clinical. The steps are: 1) Frame the question, 2) Set out the organizational situation, 3) Note the contextual factors, 4) Revisit or re-frame the question, 5) Ask and answer the appropriate questions, from L.L. Nash's *Ethics Without the Sermon* (1981), 6) Identify and weigh the alternatives, and 7) Decide. Applying this model offers a systematic foundation for making ethical decisions that collectively impact a medical organizations or, perhaps, even society.

"Should obesity be considered a disability?"

The primary purpose of the Americans with Disabilities Act and Amendments of 2008 (ADAAA, 2008) was to prohibit discrimination and to ensure equal opportunity in employment and certain services for persons who are disabled. Today, considering the social, and medical factors, a full one-third of the adult population of the United States may be classified as obese. This is a huge percentage of the population: It may be discriminated against; it may require services. What injury or harm is involved in the decision, and what circumstances would warrant exceptions? Dealing with the issue will not be revenue neutral.

The intention of the ADAAA as outlined in Section 2 of the Act is clear in that "Congress intended that the Act provide a clear and comprehensive national mandate for the elimination of discrimination against individuals with disabilities." One can easily see that Supreme Court cases such as *Sutton v. United Airlines* (1999) and *Toyota Motor v. Williams* (2002) have limited the scope of the disability protection from what Congress intended in the original American with Disabilities Act of 1990. The newer Act (ADAAA) explicitly covers conditions such as HIV status and alcoholism with the intention of preventing the exclusion of people with these conditions from the work force.

Now, there are three options: (1) make no changes, which means up to one-third of the population may be discriminated upon based on appearance; (2) better define obesity, to establish which members of society are considered *healthy* versus *unhealthy*, thus providing protection from discrimination for those unable to be productive members of society; or (3) better define *disability* to identify those who require protection from discrimination based upon those who require financial assistance under a different law.

After applying the Army-Baylor 7-Step Method Modified for Organizational Decision Making, it becomes clear that, from an ethical perspective, it is unjust to exclude obesity as a disability when weighed against other conditions covered by the ADAAA. Excluding obesity also violates the principle of nonmaleficence with regard to those who, because of obesity, cannot be functional members of society. As difficult as it may be, it is recommended that a better definition for obesity be developed to differentiate between those who are obese and disabled versus those who are larger than the medical ideal but are considered functional and, perhaps even, healthy.

This poster was approved for publication by the Public Affairs Officer and the Operations Security Officer of the Army Medical Department Center and School, Ft. Sam Houston, Texas. The views expressed on it are those of the authors only and do not reflect official policy of the Department of the Army, the Department of Defense, or the United States Government.

Is It Medically Appropriate to Involuntarily Treat Mentally Incompetent Defendants in a Correctional Facility?

Purpose of Review

Each year, approximately 50,000 to 60,000 evaluations for competency to stand trial are ordered and nearly 25% of defendants are found incompetent to stand trial. While the vast majority of defendants comply with restorative treatment, there have been a notable few cases in which defendants were forcibly medicated. Since 1990, there have been three landmark U.S. Supreme Court cases related to involuntary medication for the purposes of restoring competency to stand trial (*Washington v. Harper*, 494 U.S. 310 (1990); *Riggins v. Nevada*, 504 U.S. 127 (1992); and *Sell v. U.S.*, 539 U.S.166 (2003)). With these cases the Supreme Court has established the legality of involuntary medication if certain conditions are met, but other legal and ethical questions on the topic remain unclear and unanswered. The recent trial of Jared Lee Loughner, charged with the January 2011 murder of six individuals and the attempted murder of 13 others in Tucson, Arizona, brought attention to the issue of whether forcibly medicating defendants in a correctional facility, as opposed to a hospital setting, can meet the “medically appropriate” standard set forth by the U.S. Supreme Court in *Sell v. U.S.*

Discussion

Correctional facilities can be argued to be medically appropriate settings for the involuntary treatment of defendants. U.S. jails and prisons are the largest providers of mental health care in the U.S. Jails that meet health service accreditation standards set forth by the National Institute of Corrections would seem to be suitable settings for the forced medication of pretrial inmates. Additionally, treating defendants in jail may have ethical and practical advantages over hospital treatment. Treatment in a hospital setting is more expensive than providing comparable medical treatment within the jail. Patients are more likely to improve psychologically when they remain close to their community with access to familiar services and people. This may not occur if defendants must be transported to a state hospital. Defendants treated in a correctional setting as opposed to a hospital may also be less likely to malingering to evade or delay legal consequences. Given that treatment in jail is available, immediate treatment in jail may be more ethical than delayed treatment in a hospital setting.

Summary

Loughner was involuntarily medicated in a correctional facility and the Ninth Circuit did not directly address this treatment setting, suggesting that forced medication of defendants in custody does meet the medically appropriate criterion stated by the Supreme Court in the three relevant landmark cases (*U.S. v. Loughner*, No. 11-10504, 9th Circuit (2011)). Forced administration of medication to restore competency in a jail setting as opposed to a state hospital, can be both legal and ethical assuming the medical wards of jails meet all national standards of care.

Medical Malpractice Suits Proliferate in the Philippines

The Philippine Archipelago is composed of three basic islands-- Luzon (where the National Capital Region or Metro Manila is located), Visayas, and Mindanao. The population of the Philippines is around 100 million, making it one of the most populous countries in the world. In this small country, there are approximately 1,840 hospitals, 721 (40%) of which are public hospitals.

In a third-world country such as this, it is surprising that there is an alarming increase in the incidence of malpractice suits. Taking into consideration the cultural background of Filipinos as being hospitable, happy, and having closely-knit families, one would be surprised at the propensity of the people to file cases against their physicians.

A review of this author's personally-handled cases for the period of January 2013 to June 2014 (just an 18-month period) would reveal a disturbing incidence of medical malpractice cases in the country that involve a wide range of specialties.

Thirty years ago, physicians were revered citizens in the Philippines, only now are they treated as villains in malpractice suits. Surprisingly and very unfortunately, the basic law that regulates our practice of medicine is the 56-year-old Medical Act of 1959. This regulates the medical education, licensing, and practice of physicians in the country. It is hardly keeping up with medical technology, a factor in the increased incidence of lawsuits. Furthermore, despite the existence of the Medical Act of 1959, there are no specific laws for medical malpractice per se in the Philippines.

However, the Philippine Revised Penal Code in Article 365 covers medical negligence, which is classed as *Imprudence and Negligence*. The maximum penalty if the patient dies is imprisonment for 4 years, 2 months, and one day. This is on top of *damages*, which are deemed instituted and filed in any criminal/quasi-criminal case. Accordingly, this is classified as a quasi-crime - *intent to kill* or to injure is not an element. As in most jurisdictions, the quantum of evidence required is proof beyond reasonable doubt, which makes it hard to convict a physician without the testimony of an expert medical witness. And, in the Philippines, most physicians shun away from testifying, even if only to enlighten the Court.

An accused physician can also be held civilly liable under the Civil Code. Damages would range from 25,000.00-500,000.00 USD. The highest award for damages granted by the Philippine Supreme Court has been approximately 340,000.00 USD. Contrary to the situation in quasi-criminal cases, the quantum of evidence required is much less, only a preponderance of evidence. This, unfortunately, makes it easier for physicians, and hospitals, to be held civilly liable. Medical malpractice insurance is not mandatory in the Philippines and most physicians have none. For the record, malpractice insurance has no place in the Philippines in so far as criminal and administrative liability is concerned, as these are considered personal liabilities not covered by insurance.

In addition to both quasi-criminal and civil liability, the physician may also face administrative liability before the Board of Medicine of the Philippine Professional Regulations Commission (PRC) for his actions. The penalty there can be a reprimand or a suspension, or at worst, a revocation of his license to practice medicine. The quantum of evidence required for this is only substantial evidence.

Immorality or dishonorable conduct is an all-encompassing ground for the administrative liability of physicians. The acts may not even be related to the practice of medicine but nonetheless, are valid grounds for reprimand, suspension, or revocation of a license. Acts of immorality, such as, lasciviousness (during physical examination), sexual harassment, an adulterous or illicit relationship, rape, graft, corruption, and abuse against women and children are some grounds for administrative liability.

This poster will show through statistics gathered by the author, how medical malpractice lawsuits have increased, what specialties are primarily involved, and which types of lawsuits are brought –quasi-criminal, civil, and administrative. One hundred and twenty lawsuits involving 137 physicians will be analyzed. One-half of these cases have been settled and one-third are on-going.

The statistics will show that at least 7-8 physicians per month will be sued. Accordingly, from these 7-8 physicians per month, 3-4 will proceed to trial. Extrapolating from these data from January 2013 to June 2014, an average of 90 physicians were involved in cases, more than the total number of physicians with pending cases before the PRC in 2006 and almost 70% already of the total cases filed before the PRC in 2012. It is possible that the number of cases will continue to proliferate in the coming years.

Medication Abortion, Under Revised FDA Label, Should Be the Preferred Option for Early Abortion

While the subject of abortions remains a controversial topic, the revised FDA label for the medication abortion pill, Mifepristone, and the recent Supreme Court decision in *Whole Woman's Health v. Hellerstedt*, 579 U.S. 2, 3 (2016), which overturned some of the abortion restrictions in Texas, help pave the way for medication abortion to become a more practical choice for women seeking early abortions. The new FDA label for Mifepristone allows it to be used later in pregnancy, from 49 days after the last menstrual period to up to 70 days now. The new FDA indications reduce the standard dosage without compromising the efficacy of the medication and decrease the number of required office visits by allowing Misoprostol to be dispensed on the same visit as Mifepristone. While it is still a relatively new option compared to surgical abortion, medication abortion offers women more privacy and reduced stigma; it foregoes surgical invasion and anesthesia; and it has greater accessibility. We believe the FDA label changes, which reduce the office visits, and possibly cost as well, combined with the inherent benefits associated with medication abortions should make medication abortion the standard of care for early abortions up to 70 days.

References available upon request.

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Medicolegal Aspects of Future Cataract Management

Three million cataract surgeries are performed each year in the United States. Despite the high success rate of surgery, there are ample opportunities for medicolegal issues to arise (Lee, 2015). Medicolegal issues will continue to rise given the estimated rise in patients with cataract-related vision impairment will double to 50 million within 40 years (Brown et al., 2012). The dramatic projection of cataract cases will require efficient healthcare delivery management in order to ensure timely access to surgery. In order to guide the future delivery of cataract services, the medicolegal aspects to include Stark laws, vicarious liability, fraud and abuse, *res ipsa loquitur*, anti-kickback statues, thorough documentation and billing, and informed consent will be discussed with the efficient delivery of surgery strategies: complete transition to ambulatory surgery centers (Ianchulev, Litoff, Ellinger, Stiverson, & Packer, 2016) or same day office-based surgery (Gaskell, McLaughline, Young, & McCristal, 2001), immediate bilateral same day cataract surgery (Donaldson, 2016), surgery without ancillary anesthesia personnel (Koolwijk et al., 2016), and co-management (Erie, Hodge, & Mahr, 2016).

Complete references available upon request.

This poster was approved for publication by the Public Affairs Officer and the Operations Security Officer of the Army Medical Department Center and School, Ft. Sam Houston, Texas. The views expressed on it are those of the author only and do not reflect official policy of the Department of the Army, the Department of Defense, or the United States Government.

Moments in Medical-Legal History: Presidents Lincoln and Taft on Medical Malpractice

Abraham Lincoln, the 16th President of the United States of America (1861 – 1865) and William Howard Taft, the 27th President, (1909-1913) were both attorneys. That is not unusual; more than half of the Presidents of the United States have been lawyers. It is worth noting, however, that both Lincoln and Taft had personal, professional encounters with medical malpractice cases.



Lincoln was counsel in at least two such cases, *Fleming v. Rogers and Crothers*,¹ McLean County Circuit Court (Illinois), 1857, and *Ritchey v. West*,² Supreme Court of Illinois, 1860. Each presented the question of whether the medical standard of care had been met. Fleming concerned the malunion of a femur and Ritchey the malunion of a forearm or wrist, the decision is not clear on this point. Taft's involvement was as a federal circuit court judge in *Ewing v. Goode*,³ a matter that factually involved complications following cataract surgery and legally concerned the doctrine of *res ipsa loquitur*⁴.

The lawyer, Lincoln, and the judge, Taft, espoused positions that still resonate with physicians of today. Who has not encountered the ingrate? When plaintiff Fleming, who had broken both femurs, complained that after healing that one leg was shorter than the other causing him to limp, Lincoln replied: "... I would advise you to get down on your knees and thank your Heavenly Father, and also these two doctors, that you have any legs to stand on at all." Who has not distinguished a less than perfect result from an act of negligence? In 1897, Taft wrote in the Ewing case, "A physician is not a warrantor of cures" and if "a failure to cure were held to be evidence, however slight, of negligence . . . few would be courageous enough to practice the healing art."



¹Chicken Bone Case, Charles M. Hubbard, American History, August, 1998; and Abraham Lincoln: Malpractice Defense Attorney, Gwillynn B. Lewis, Colorado Medicine, August, 1992.

²23 Ill. 329 (1860).

³78 F. 442 (1897).

⁴*Res ipsa loquitur* means *the thing speaks for itself*. It is not required, as is usually the case, to have expert testimony as to breach of the standard of care, that degree of judgment and skill required of physicians similarly situated.

This poster was presented in 2010. It is shown again this year at the request of the ACLM President. It was approved for publication by the Public Affairs Officer and the Operations Security Officer of the Army Medical Department Center and School, Ft. Sam Houston, Texas. The views expressed on it are those of the authors only and do not reflect official policy of the Department of the Army, the Department of Defense, or the United States Government.

Outcomes and Impact of Playing Music in Operating Rooms: Is it Time for Clear Standards?

Playing music in operating suites is becoming increasingly common. Recent studies suggest that playing music during surgery may both positively and negatively affect the performance of the surgical team. The authors aim to highlight and limit the potential negative effects of music through proposed regulations and by formally addressing the use of music as part of the pre-operative checklist.

Methods:

The authors performed a review of publications focusing on the effects of music on members of surgical teams and surgical outcomes. A text search of English language articles and abstracts in the PubMed database was conducted using the words "Music" and "Surgery." Ten articles were included in the review along with supporting literature from Army-Baylor's Methods of Ethical Decision-Making, L.L. Nash's *Ethics Without the Sermon*, and the World Health Organization's surgical checklist.

Results:

While the outcomes regarding the inclusion of music or the style of music were mixed, music played beyond a particular decibel level was unanimously detrimental. Music also affects members of the surgical team differently, and surgical team members were commonly in disagreement about the appropriate use of music. Common sense workplace etiquette and legal considerations suggest that music should have volume restrictions and be considered during the pre-op consent as part of the surgical safety checklist.

Conclusions:

Until the use of music in the operating room is addressed in a formal manner, safety and liability concerns will remain. As such, more medical centers should adopt regulations to facilitate the proper use of music during surgery.

References are available upon request.

Patient and Physician Susceptibility in Medical Malpractice Litigation Concerning Internationally Based Telehealth Practices

The advent of telehealth and its increased utilization demands a corresponding increase in regulation for the protection of Nevada patients. Telehealth can provide specialized care to many who would normally go without, but precautions need to be taken. Patient safety should always be an important consideration when implementing new medical programs. Most states, including Nevada, have laws in place regarding telehealth; however, they are not uniform.

Current Nevada telehealth laws may compromise patient safety and may result in malpractice claims directed against internationally practicing healthcare professionals. In accordance with NRS 630.261, physicians licensed in other states and countries may be provided a special purpose license to practice telehealth in Nevada. Although the medical practitioner at the distant site is subject to Nevada law under NRS 629.515(3), there is no specific verbiage addressing the situation in which the physician does not respond to a civil medical malpractice filing. This is particularly problematic when the treating physician practices in another country. The Nevada statutes do not protect patients' access to redress from damages caused by such international physicians who may not be subject to Nevada jurisdiction.

We propose amending current NRS to require health care providers located outside the United States, but providing health related services by telemedicine to Nevadans, 1) to carry professional liability insurance at the 1 million/ 3 million annual limits, 2) to provide the address of an agent in Nevada to the Nevada Secretary of State for service of process, and 3) to declare that telemedicine services provided to Nevada residents from international physicians establish sufficient "minimum contacts" to satisfy personal jurisdiction requirements in Nevada.

The Practical Distinction Between Living Wills and Physician (Pennsylvania) Orders for Life-Sustaining Treatment (POLST)

Introduction

If a person has a legal living will, which is supposed to provide evidence of his/her personal wishes regarding end-of-life care, then what is the purpose of generating a Physician's/Pennsylvania Order for Life-Sustaining Treatment (POLST)? The answer lies simply in the practical application of the individual's wishes when the time actually comes to act on them. Though the living will is a legal document that becomes binding on the attending physician when the signatory loses decision-making capacity, the document in itself is not considered a medical order. This fact places certain healthcare providers (specifically paramedics) in a difficult position when it comes to compliance with the individual's end-of-life wishes since other laws and policies mandate certain actions in the absence of applicable medical orders, especially in an out-of-hospital situation. The POLST is intended either for patients with a terminal illness who have a life expectancy of a year or less or those of advanced age who wish to have a say in defining their end-of-life care and do not want specific treatments, especially in an emergency situation. The POLST is designed to address these situations. After an in-depth consultation with a physician, the individual's wishes are transcribed into concise and practical medical orders for the first responders and other out-of-hospital healthcare providers.

Living Will

In Pennsylvania, a living will can be created by anyone of sound mind who is 18 years old or older to "govern the initiation, continuation, withholding or withdrawal of life-sustaining treatment." It becomes operative when a copy is provided to the attending physician and the principal is incompetent and has "an end-stage medical condition" (Living Will Act, Title 20 §5441-5447). The physician and other healthcare providers are to act in accordance with the provisions of the living will. A medical decision-maker can also be identified. If that happens, the document is both a living will and a durable power-of-attorney for medical care. To capture all of this information, and appropriate signatures, a Pennsylvania living will may be 12 or more pages long (Sudor, 2015). The length of the document alone could be a barrier to fully complying with, or even fully understanding, a person's wishes. Evidence indicates that despite a patient completing a living will, his/her preferences for care at the end-of-life are not consistently followed (Boma, Kemp, & Black, 2012).

POLST

The document we call a POLST (Physician's Orders for Life-Sustaining Treatment) was created about 20 years ago by healthcare providers at the University of Oregon who wanted to translate a person's preferences and values into medical orders (Boma et al., 2012). The form is intended to offer a way to communicate the wishes of the seriously ill about their medical care across various care settings (Boma et al., 2012). It is intended either for patients with serious, life-limiting (i.e., terminal) illnesses who have a life expectancy of a year or less or those of advanced age who wish to have a say in defining their end-of-life care, i.e., how they die (Boma et al., 2012). In Pennsylvania, the acceptance of this idea has led to a very mature program, when compared to the country as a whole, and has led to the "P" being changed from "physician" to "Pennsylvania" (Title 20 § 5481 – 5488).

Practical Difference

The primary practical difference between a POLST and a living will is in the structure of the POLST form which helps guide the end-of-life care discussions between the patients and the healthcare professionals who ultimately provide care. Once the POLST form is completed, it becomes a transferable and actionable set of medical orders that reflect the informed decisions of the patients themselves. The importance of this distinction cannot be underestimated because even when a living will becomes operative and health-care providers are to "act in accordance with its provisions," (Living Will Act), the evidence suggests that those patients with POLSTs are more likely to have their wishes honored and less likely to receive unwanted, life-sustaining medical interventions (Hickman et al., 2010). Additionally, the concise structure of the POLST focuses on the potential medical interventions for end-of-life care. The living will may state those wishes but may obscure them by adding the functions of a durable power-of-attorney. In Pennsylvania, use of a POLST will lead to the patient having a higher chance of his/her intentions actually being followed in the various parts of the healthcare continuum.

Complete references are available on request.

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A Proposal for the Standardization of Drug Screening Using Blood Samples for the Detection of Δ 9-Tetrahydrocannabinol (THC) and 11-Hydroxy- Δ 9-Tetrahydrocannabinol (11-OH-THC)

In recent years, medical marijuana has become more widely used in the United States and is currently approved in more than 25 states. As of January 1, 2017, Nevadans are permitted to use recreational marijuana in addition to using it for medical purposes, which was approved in 2003. This change in legal status compels consideration of changes to testing protocols for the presumption of cognitive impairment from marijuana and marijuana compounds in the operation of motor vehicles on public roads. Currently, Nevada Revised Statutes (NRS) 484C.110 presumes impairment from marijuana if an individual operates a motor vehicle while having marijuana or marijuana metabolite in his/her urine with levels of 10 and 15ng/mL, respectively. The THC-COOH (11-Nor-9-carboxy- Δ 9-THC) tested in urine is inert, not psychoactive, and is unrelated to cognitive impairment; its presence only indicates that marijuana product use has occurred. This inert, non-psychoactive marijuana metabolite, THC-COOH, has been shown to remain in body fluids, and is excreted in urine, for up to 76 days after the cessation of marijuana use. Delta-9-THC (marijuana) is not tested in urine, making the statutorily presumed cognitive impairment levels irrelevant.

In contrast, blood testing provides for detection of Δ 9-THC (marijuana) and for measurement of 11-OH-THC (marijuana metabolite) levels, which are the primary psychoactive components of ingested or inhaled marijuana products. Blood testing can also determine levels for the inert, non-psychoactive THC-COOH. Current statutorily presumed impairment levels are 2ng/ml of marijuana (Δ 9-THC) and 5 ng/ml of marijuana metabolites. Blood testing for Δ 9-THC and 11-OH-THC provides an accurate measurement of cognitively active compounds.

Forensic lab managers in Washoe's Sheriff's Office and at the Las Vegas Metropolitan Police Department state they test blood samples only for Δ 9-THC and THC-COOH; they do not test for 11-OH-THC (the psychoactive metabolite). The Henderson, Nevada forensic lab measures blood level of Δ 9-THC and then combines the levels of 11-OH-THC and THC-COOH to determine the amount of marijuana metabolite. This metabolite test, as it is currently performed by the Henderson forensic lab, should not be used because the combined total does not distinguish between the psychoactive metabolite and the inert metabolite.

For accurate determination of presumed cognitive impairment for motor vehicle operation, Nevada statutes should be amended to provide only blood testing for marijuana (Δ 9-THC) and for marijuana metabolite 11-OH-THC. Blood testing for the determination of cognitive impairment in motor vehicle operation using levels of the inert THC-COOH should be eliminated.

Urine testing for THC-COOH has its place in certain situations, such as testing for any prohibited marijuana use in parolees. However, for determinations of presumed cognitive impairment while operating a motor vehicle following marijuana use, blood testing for Δ 9-THC and for 11-OH-THC provides the appropriate indicators of such impairment.