Chapter 17
Legal Reasoning: Why the Law and Its Application Are Confusing to Medical Providers

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Scientific Facts Versus Legal Facts

Scientific facts are data elements that are characterized by objective repeatedly verifiable observation and therefore reproducibility. Since the validity scientific facts depend only on the method by which they are acquired, not on the person acquiring them, they are accepted as being true as to what they represent. Scientific facts may also be referred to as empirical evidence. Examples of scientific fact may include, for example, the speed of light or the molecular weight of oxygen. Clinical facts are similar; for example, the concentrations of sodium or potassium in a blood sample, the size, and the reactivity of a human pupil measured by a pupilometer at one point in time or a patient's oxygen level measured by a pulse oximeter at a point in time under one set of circumstances. Clinical facts are accepted as empirically accurate and valid by clinicians, who rely upon the data to draw conclusions (diagnoses) and implement pans of action (treatment plans) in real time. Clinicians view data points as facts, even though there is an uneasy understanding that data is not perfectly accurate and may be in flux at the time it was obtained. For example, a clinician understands that the limits of clinical laboratory technology may introduce an error of almost 10% to many clinical laboratory results. Nonetheless, imperfect, but largely reproducible, data points are nonetheless facts to clinicians. Clinicians may obtain both subjective and objective data; when the story and the data do not match, clinicians will generally discount subjective data and rely on objective data for their

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diagnosis and treatment. For example, a patient who presents as though they may be having a heart attack (ischemic epiphenomena) but who denies chest pain will still be diagnosed as having a myocardial infarction by electrocardiography and serum enzyme levels.

On the other hand, legal facts represent any and all of the individual elements of evidence introduced in the prosecution or defense of a case in controversy. Although legal facts will often include scientific facts and similar objective data such as photographs and recording, legal facts will also include the allegations of the parties, recollections and testimony of witnesses, and expert opinion. Legal facts may include data points that are highly subjective, such as matter of perception, judgment, interpretation, and understanding and recollection. Thus, the testimony of a witness, even though controverted by that of another witness, is nonetheless a legal fact. Moreover, questions of degree (e.g., more or less likely), questions of standard (e.g., reasonable versus unreasonable behavior), and even the meanings of an ordinary words may be admitted into evidence as legal facts [1]. For the clinician to whom a fact is an objectively verifiable and reproducible data point, the notion that purely subjective and unverifiable assertions could be represented as fact is confusing and almost objectionable.

Scientific Proof Versus Legal Proof

Legal proof may be construed to be similar to scientific proof in that it is based in rational logic and analysis. In science, as in law, facts are used to support or controvert a theory. Inductive reasoning is a form of logical thinking that uses related data points to develop a general conclusion. Life scientists such as biologists generate observations and record them, and, from many observations, the scientist can infer conclusions (inductions) based on the data. Inductive reasoning involves formulating conclusions inferred from careful observation and the analysis of a large amount of data.

In the clinical sciences, clinical facts are accumulated to support one or more potential theories, such as a differential diagnosis, and the weight of the facts supports one differential over another. Legal proof has little to do with whether the facts are accurate or inaccurate and everything to do with logic. Thus, legal proof is based in logic games, occurs in retrospect, and makes conclusions based on narrow interpretations of circumstances, stories, and opinions. Clinical proof occurs based on accumulating data, in real time, and, at least under optimal conditions, is not accumulated to support a foregone conclusion. Clinical scientists are trained in the process of scientific reasoning and develop their theories in real time objectively based on the available facts.

Both clinical and legal reasoning and logic will at times use inductive or deductive logic in reaching conclusions. However, there is a difference: in the clinical sciences, the data is not compiled to support the conclusion; clinicians, especially experienced and unbiased clinicians, will accumulate and analyze all available data

before reaching a conclusion. In clinical medicine, there are often multiple possible competing theories to explain the problem at hand. The data leads to a pattern and the pattern in turn leads to a conclusion; this is inductive logic. The measure of the strength of an inductive argument is known as an inductive probability, which is a measure of how probable the conclusion is if the premises are true [2].

Legal reasoning is more of a deductive logic approach. Legal reasoning is a method of thought and argument used by lawyers and judges when applying legal rules to specific interactions among legal persons. Opposing counsel take positions a priori, based on the parties they represent. During their research, they develop a theory of the case, which they will then support with facts intended to prove their argument to the trier of fact. Legal counsel must take an undisciplined mass of information, the evidence, and reshape it into a persuasive tool, the argument. The argument must be presented in such a way so as to convert even the most skeptical decision-maker to support the counsel's point of view [3]. Effective and persuasive legal argument will take an indistinct subject and present it in such a way so as to make it seem mathematical through a process known as syllogistic argument which provides the requisite element of apparent certainty [3]. A classic syllogism is the derivation of the mortality of Socrates: (1) all men are mortal; (2) Socrates is a man; and therefore (3) Socrates is mortal. Here, the conclusion follows from the premises and the mind will reach a conclusion without prompting. In clinical medicine, clinicians are trained to be cautious of syllogisms since syllogisms represent a type of bias, confirmation bias, and can be harmful.

The trier of fact may be either the judge or the jury or both. Witnesses are chosen to testify so as to support each side's theory of the case, through evidence offered as proof of that theory. A deductive argument is valid if and only if it is logically impossible that its conclusion is false if the premises are accepted as true. In developing a legal argument, the logic pattern is more of a deductive style, since the line of legal reasoning begins with a theory and the point of view is supported by syllogisms intended to persuade.

The trier of fact, in a legal argument, will weigh the merits of the evidence offered by each side of opposing counsel. The role of the trier of fact is to weigh the evidence offered in proof and reach a conclusion based on a subjective probability. The weight of the evidence may be a result of impressions such as the credibility of the witnesses or the believability of the story, emotion such as the psychological impact of some of the evidence, or to subjective internal theories or biases [4].

Legal Terms of Art

A term of art is a word or phrase that has a particular meaning within a specific context. Terms of art are part of the vocabulary of many professions, since, as a type of shorthand, terms of art can convey complex concepts in simple terms or phrases. Legal terms of art are everyday words and phrases that take on special and specific meanings. The special meanings of terms of art may not be intuitively obvious to

otherwise well-educated non-attorneys. Terms of art are often embedded within legal documents without a corresponding warning or reference. Contracts are one such type of document which contains terms of art; however, similar terms of art may appear, for example, in a summons and complaint. Thus the language of law can produce traps for the unwary.

Examples of legal terms of art include, for example, the notion of employee, which is a legal concept defined differently by various state laws. In addition, word such as "should," "must," and "shall" have different meanings as defined by the context in which they appear.

The Burdens of Proof, Production, and Persuasion

The burden of proof is the affirmative duty imposed upon one party in a controversy to prove or disprove a disputed fact. In the USA, the accused defendant is presumed innocent until he or she is proven guilty. Thus, it is the burden of the plaintiff, or prosecution, to establish the guilt of the defendant. The defendant does not need to establish his or her innocence or non-culpability; rather the defendant needs to only successfully rebut the argument of the plaintiff. Thus, the burden of proof may be shifted at times during the course of a trial so that where the prosecution or plaintiff has made out a sound legal case, the prima facie case, then the burden will shift to the defense to disprove the facts by establishing doubt as to the facts, as evidence, that the plaintiff had introduced.

The burden of proof is associated with an at least de minimis threshold showing that the facts or circumstances show that the argument to be presented has merit and the threshold facts, supported by additional facts, can support a case in controversy. Thus, one of the first challenges to a civil lawsuit is the "motion to dismiss" which is raised by the defense soon after the case is filed, often as part of the answer.

The burden of proof is associated with a burden of production; the prosecution or the plaintiff must present evidence to substantiate his or her allegations. Data, or evidence, must be produced to substantiate the claim which is the basis of the lawsuit. When the burden of production is satisfied, then a prima facie case is considered to have been established. The modem Greek equivalent of "prima facie" literally translated means "on/at first viewing." Prima facie derives from the Latin term, meaning that which is sufficient to establish a fact or raise a presumption unless disproved or rebutted. Thus, if a case is considered to be prima facie, then the plaintiff or prosecution is, subject to a convincing counter-argument, entitled to prevail on his or her cause of action. In more common usage, however, prima facie simply refers to the fact that a party has met their burden of production [5].

When evidence is submitted, that evidence must be of a type which is legally admissible under the Rules of Evidence [6]. The Federal Rules of Evidence (FRE)

govern the admissibility of evidence in federal courts; state rules of evidence are largely similar to and frequently modeled after the federal rules. In general, there are four main types of evidence: (1) real evidence (usually a tangible thing), (2) demonstrative (a reconstruction, model, or schematic), (3) documentary (a document), and (4) testimonial (testimony provided by witnesses). Furthermore, circumstantial evidence refers to circumstances that support a reasonable inference, and corroborating evidence refers to separate and different evidence, which supports or strengthens other evidence. Hearsay is a type of evidence that is offered as a truth but which has been independently verified. The FRE, in conjunction with the Federal Rules of Civil Procedure [7], represent a substantial component of the body of procedural (as opposed to substantive) law.

The "burden of persuasion" refers to a specific level of proof, or weight of evidence, that is necessary to meet the legally applicable evidentiary standard in support of a legal conclusion. In general there are three levels of persuasion required by law. In criminal trials, the requisite burden of persuasion is the "beyond a reasonable doubt" standard. "Beyond a reasonable doubt" means that there is no other reasonable explanation or conclusion that can be reached from the evidence presented that there is a virtual certainty.

The burden of persuasion in civil trials, the level of persuasion, is the "preponderance of the evidence" standard; this means that it's more likely than not that a claim is true. The "preponderance of the evidence" refers to a balancing of scales, with one side being of even very slightly greater weight; statistically this may be a 50.01% probability.

In administrative law courts, the third level of persuasion is the "clear and convincing" standard, which is an intermediate standard that represents a higher level of persuasion than "preponderance of the evidence" but is less stringent than the "beyond reasonable doubt." In *Colorado v New Mexico* [8], the US Supreme Court defined clear and convincing to mean that the evidence is *highly and substantially more likely* to be true than untrue. In general, the types of cases in which a clear and convincing evidence standard is likely to apply may include cases of testamentary challenges and issues such as Wills and cases of fraud. Healthcare providers will also realize that the "clear and convincing standard is the standard that applies to the determination of a patient's preferences for life-sustaining treatment." Furthermore, New York courts will use the clear and convincing evidence standard when determining whether to involuntarily hospitalize a mentally ill patient.

The Adversarial System of Justice

The adversarial system of justice consists of advocates who represent the parties each side of a controversy and who advocate, or argue their cases, on behalf of their clients to an impartial judge or jury (the triers of fact). In an adversarial system, counsel present the facts in such a way as to portray their clients in the best possible

light, in an effort to convince the trier of fact of the merits of their cases, and thus prevail in the verdict or judgment. Since the adversarial system is by definition confrontational, plaintiff and defendant will witness or provide testimony that is often emotional which would seem to attack their integrity, character, and veracity. It is important that defendants maintain their objectivity and do their best to retain their professional demeanor since loss of control can result in poorly chosen words, maybe interpreted by the jury as hostility, and provoke undue stress. In addition, it is important for parties to understand the role of their counsel and to the greatest extent possible trust in the training, experience, and knowledge of counsel – a position similar to that of a patient and physician.

Precedent: Case Law

Legal process is premised on procedural law, which defines the operating rules by which the law operates. Legal process determines every aspect of a lawsuit from the service of process, the elements of pleadings (summons and complaint), the deadlines for and the requisite elements of the answer, the motions, and the presentation of evidence, for example. Procedural law is the body of legal rules that govern the process.

Substantive law is the "black letter" law that is found, for example, in legislation, statutes, ordinances, regulations, and also precedent. Thus, substantive law includes not only the rules and regulations which define normal rules of behavior but also establish causes of action and precedent. Precedent is established by prior court decisions which addressed similar or identical facts and similar or the same legal issues. Precedent refers to "a court decision that is considered as authority for deciding subsequent cases involving identical or similar facts, or similar legal issues. Precedent is incorporated into the doctrine of stare decisis and requires courts to apply the law in the same manner to cases with the same facts" [9]. The strength of a precedent case depends on (1) the similarity of the issues and facts in the prior case to the case being litigated, (2) the level of court issuing the ruling that is cited as precedent, and (3) the jurisdiction. Rarely will cases be identical; this in itself does not disallow a precedent. However, if the facts or issues in a previous case are substantially different, the previous case cannot be used precedent without distinguishing the differences to maximize transparency. Thus, precedent can be either binding or persuasive based on its characteristics.

Binding precedents are rulings on the same or very similar fact pattern, which are delivered by courts of higher authority applicable to that jurisdiction. For example, rulings from the US Supreme Court on similar facts are binding on all courts in the USA. Therefore a ruling by the US Supreme Court is binding on all courts in the US federal and state. Within the federal courts, circuit courts

will be bound by from decisions previously issued within that circuit, and district courts that are under the jurisdiction of a circuit court will be bound by rulings of the circuit court. Within a jurisdiction a ruling by an appellate court, on similar facts, must be followed by lower courts within that jurisdiction. Decisions of federal courts are binding on state courts when the case involves an issue of federal law.

In cases such a medical malpractice, state laws will be similar but may also differ slightly based on both state statutes and local precedent. Nonetheless, similar cases from other jurisdictions may be introduced to illustrate situations in which there is no prior ruling on point within a state or jurisdiction. In such cases, the precedent is not controlling, or binding, but may be reasonably introduced to the court, or cited, as non-binding precedent or a relevant persuasive authority. The court rules and procedure for introducing non-binding but persuasive precedent must be carefully followed and accompanied by relevant explanations as to why the court should recognize such precedent.

Successfully Coping with a Medical Malpractice Lawsuit

The second victim syndrome (see Chap. 32) in the course of a medical malpractice lawsuit refers to the healthcare providers "who commit an error and are traumatized by the event manifesting psychological (shame, guilt, anxiety, grief, and depression), cognitive (compassion dissatisfaction, burnout, secondary traumatic stress), and/or physical reactions that have a personal negative impact" [10]. The psychological impact of a professional negligence lawsuit on a medical provider has been characterized as a type of post-traumatic stress disorder which may impact not only the professional identity but also the personal and spiritual well-being of affected providers [11]. Providers tend to be self-critical, especially in retrospect, and therefore have a tendency to reconstruct and re-evaluate the events of a bad outcome. Providers will forget that decisions were made in real time and often without all the information that subsequently is uncovered at trial. Therefore, providers will retrospectively judge themselves as guilty, develop self-doubt, and lose self-confidence. Providers have a tendency to see an accusation of malpractice, a deviation from the standard of care, as an accusation that they are incompetent. The emotional turmoil associated with an accusation is subsequently compounded by the sense of loss of control and further sense of incompetence brought on by the legal process and proceedings, which are foreign to most providers. Each provider that must defend an allegation of medical malpractice will have challenges that are unique, based on the circumstances, their support system, and their own sense of preparedness. General strategies for survival are outlined in Tables 17.1 and 17.2.

Table 17.1 Strategies for prevailing in your medical malpractice lawsuit

Notify your carrier, department, or hospital risk managers immediately when you are served
Do not discuss the case with anyone (except as in Table 17.2) outside the boundaries of privilege
Do not alter, hide, or destroy anything that might be evidence
Find an expert and experienced attorney you are comfortable with: choose your own if needed
Do not talk with the plaintiff, their family, friends, or plaintiff's counsel about the case without your attorney
Work with your attorney to *actively prepare your case*
Know the standards of care
Participate in selection of experts on your behalf
Review everyone's depositions (objectively)
Learn about the legal process and learn about the law: go watch a trial
Consider training in communication or media skills
Prepare for depositions and trial: materially and psychologically
Do not educate plaintiff's counsel
Answer honestly but completely
Refresh your memory if needed
Do not argue with plaintiff's counsel
Do not lose your emotional balance
Talk to (not down to) the jury
Project humanity, trustworthiness, likeability, and professionalism

Table 17.2 Strategies for psychological survival during a medical malpractice lawsuit

Do not take the accusation personally: bad outcomes are not necessarily malpractice
Resist thinking that you are being judged (by your peers, friends, family, patients) or that your competence as a provider is on trial
Maintain social support and relationships: resist isolation
Maintain life balance: be kind to yourself
Seek counseling if needed
Return to work when you are ready

Conclusions

A principal intention of this text is to educate providers about how the legal system works and its language, its logic, and its process. Louis Pasteur noted that "chance favors the prepared mind," and in the context of litigation, nothing could be truer. For attorneys, litigation is natural; conflict, strategy, and argumentation are basic aspects of the profession. There are motivations other than justice for which persons may argue. The goal of the legal system is less about truth than it is about justice. Thus, the understanding of the legal system and its rules can make one's involvement in a lawsuit a little less emotionally taxing.

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