ABSTRACT. The interests of the public and the medical profession are best served when scientifically sound and unbiased expert witness testimony is readily available to plaintiffs and defendants in medical negligence suits. As members of the physician community, as patient advocates, and as private citizens, pediatricians have ethical and professional obligations to assist in the administration of justice, particularly in matters concerning potential medical malpractice. The American Academy of Pediatrics believes that the adoption of the recommendations outlined in this statement will improve the quality of medical expert witness testimony in such proceedings and thereby increase the probability of achieving equitable outcomes. Strategies to enforce ethical guidelines should be monitored for efficacy before offering policy recommendations on disciplining physicians for providing biased, false, or unscientific medical expert witness testimony.

ABBREVIATION. AAP, American Academy of Pediatrics.

BACKGROUND

The American Academy of Pediatrics (AAP) first articulated policy on appropriate medical expert witness testimony in 1989 and was among the first medical specialty societies to do so. The statement was revised in 1994 to incorporate additional provisions on expert witness testimony guidelines from the Council of Medical Specialty Societies. This latest iteration of AAP policy expands the qualifications for experts testifying in medical negligence cases involving pediatric-aged patients. It outlines responsible practices that physicians should follow to safeguard their objectivity in preparing and presenting expert witness testimony. Key legal concepts are explained, and the role of the expert witness in the litigation process (pretrial, trial, and posttrial) is described. The importance of expert witness testimony in the process of determining liability and its unique significance in pediatric cases are also stressed. Recent efforts to improve the quality of medical expert witness testimony are described. Because the effectiveness of these strategies may vary with the stated goals has yet to be demonstrated, no formal position is taken at this time. However, the strengths or weaknesses of these programs known at this time are noted.

WHAT IS EXPERT TESTIMONY?

The expert witness plays an essential role in determining medical negligence under the US system of jurisprudence. By and large, courts rely on expert witness testimony to establish the standards of care germane to a malpractice suit. Generally, the purpose of expert witness testimony in medical malpractice is to describe standards of care relevant to a given case, identify any breaches in those standards, and if so noted, render an opinion as to whether those breaches are the most likely cause of injury. In addition, an expert may be needed to testify about the current clinical state of a patient to assist the process of determining damages.

In civil litigation, expert witness testimony is much different from that of other witnesses. In legal proceedings involving allegations of medical negligence, “witnesses of fact” (those testifying because they have personal knowledge of the incident or people involved in the lawsuit) must restrict their testimony to the facts of the case at issue. The expert witness is given more latitude. The expert witness is allowed to compare the applicable standards of care with the facts of the case and interpret whether the evidence indicates a deviation from the standards of care. The medical expert also provides an opinion (within a reasonable degree of medical certainty) as to whether that breach in care is the most likely cause of the patient’s injury. Without the expert’s explanation of the range of acceptable treatment modalities within the standard of care and interpretation of medical facts, juries would not have the technical expertise needed to distinguish malpractice (an adverse event caused by negligent care or “bad care”) from maloccurrence (an adverse event or “bad outcome”).

Standards of admissibility of expert witness testimony vary with state and federal rules of procedures and evidence. Although most state laws conform with the federal rules of procedure and evidence, some do not. The same testimony from a given expert witness, therefore, might be admissible in some state courts but not in federal court and vice-versa.

WHAT IS MEDICAL MALPRACTICE?

Medical malpractice law is based on concepts drawn from tort and contract law. It is commonly
understood as liabilities arising from the delivery of medical care. Causes of action are typically based on negligence, intentional misconduct, breach of a contract (ie, guaranteeing a specific therapeutic result), defamation, divulgence of confidential information, insufficient informed consent, or failure to prevent foreseeable injuries to third parties. Negligence is the predominant theory of liability in medical malpractice actions.

According to Black’s Law Dictionary, medical negligence requires that the plaintiff establish the following elements: 1) the existence of the physician’s duty to the plaintiff, usually based on the existence of the physician-patient relationship; 2) the applicable standard of care and its violation; 3) damages (a compensable injury); and 4) a causal connection between the violation of the standard of care and the harm complained of.

**HOW ARE STANDARDS OF CARE DETERMINED?**

In the law of negligence, the standard of care is generally thought of as “that degree of care which a reasonably prudent person should exercise in same or similar circumstances.” If the defendant’s conduct falls outside the standards, then he or she may be found liable for any damages that resulted from his or her conduct. In medical negligence disputes, the defendant’s behavior is compared with the applicable standard of care. Generally, this is understood to be “that reasonable and ordinary care, skill, and diligence as physicians and surgeons in good standing in the same neighborhood, in the same general line of practice, ordinarily have and exercise in like cases.” Many courts have held that the increased specialization of medicine and establishment of national boards is more significant than geographic differences in establishing the standard of care. These courts contend that board-certified medical or surgical specialists should adhere to standards of their respective specialty boards. Even this recognition of specialty-based standards has critics. Some jurisdictions are returning to locality rule as a tort reform measure to address problems of access to care and health care facilities among rural and other underserved communities.

**WAS THE STANDARD OF CARE BREACHED?**

In medical liability cases, the role of the expert witness is often to establish standards of care applicable for the case at hand. The expert may also be asked to evaluate whether the factual testimony provided by other witnesses indicates any deviation from acceptable standards. When care has been deemed “substandard,” the expert witness may be asked to opine whether that deviation from the standard of care could have been the proximate cause of the patient’s alleged injury. Because courts and juries depend on medical experts to make medical standards understandable, the testimony should be clear, coherent, and consistent with the standards applicable at the time of the incident. Although experts may testify as to what they think is the most appropriate standard of care was at the time of occurrence, they should know and consider alternative acceptable standards. These alternatives may be raised during direct testimony or under cross-examination. Expert witnesses should not define the standard so narrowly that it only encompasses their opinion on the standard of care to the exclusion of other acceptable treatment options.

**MEDICAL ERRORS VERSUS NEGLIGENCE**

The Institute of Medicine’s sentinel report on medical errors, *To Err Is Human: Building a Safer Health System,* provides a helpful framework for understanding the many factors involved in medical interventions and how their permutations can affect patient outcome. Whenever a medical intervention is undertaken, several outcomes can occur—the patient’s condition can improve, stay the same, or deteriorate. A negative outcome alone is not sufficient to indicate professional negligence. Even when the appropriate treatment is performed properly, sometimes the patient will get better, sometimes the patient will stay the same, and sometimes the patient will get worse. These same outcomes are possible when the medical treatment is performed improperly. It is essential that the trier of the case understand that negligence cannot be inferred solely from any of the following: an unexpected result, a bad result, failure to cure, failure to recover, or any other circumstance showing merely a lack of success.

**BURDEN OF PROOF**

The plaintiff bears the burden of proof and must convince a jury by a preponderance of the evidence that its case is more plausible. A preponderance of the evidence is at least 51%. The plaintiff and defense attorneys will present their respective experts, each side hoping their witnesses will appear more knowledgeable, objective, and credible than their counterparts. Unlike criminal cases, in which the fact at issue must be proven beyond a reasonable doubt, the jurors or triers of a medical negligence case must base their decision on the preponderance of the evidence. That means that jurors in a medical negligence case must be persuaded that the evidence presented by the plaintiff is more plausible as the proximate cause of the injury than any counterguement offered by the defendant.

**PRETRIAL ROLE OF EXPERT TESTIMONY**

An expert witness is someone who has been qualified as an authority to assist others (eg, attorneys, judges, juries) in understanding complicated and technical subjects beyond the understanding of the average lay person. In medical malpractice, expert witness testimony may be used (and is required in some jurisdictions) to evaluate the merits of a malpractice claim before filing legal action. The expert responds to questions posed by an attorney during the course of a legal proceeding. Some states have enacted laws requiring that a competent medical professional in the same area of expertise as the defendant review the claim and be willing to testify that the standard of care was breached.

State laws governing the timing and process for review panels also vary. Depending on the state, the
review can take place before or after the claim has been filed; it can be conducted by a review panel or by some other method. States also differ in their use of such reviews. Review panel findings can be binding or nonbinding. The opinion of the review panel may or may not be admissible should the matter proceed to litigation. Those seeking regulation of expert witness testimony note that the expert opinions provided during the review panel process are subject to even less scrutiny and accountability than testimony provided later. Critics believe that the lack of oversight of experts during the pretrial reviews allows too many nonmeritorious cases to proceed, thereby defeating the purpose of having pretrial reviews.\textsuperscript{14}

\textbf{DEPOSITION}

The purpose of discovery is to identify all the facts related to the case. Both sides of the dispute retain experts to provide opinions on the merits of the claim at issue. The deposition of key witnesses is arguably the most important facet of the discovery process in malpractice cases. A deposition is a witness’s recorded testimony, given under oath, on being questioned by attorneys for the parties in the case. Throughout the deposition process, attorneys gather information on what factual and expert witnesses will say and assess the relative effectiveness of their testimony. Crucial decisions in determining the next phase of the case (eg, seeking a settlement, going to trial, moving for summary judgment) are often based on the strength of the expert witness testimony.

\textbf{UNIQUE FACTORS IN PEDIATRIC CASES}

In theory, expert witness testimony from the plaintiff and the defense should give the jury enough of a technical understanding of the medical care provided and its appropriateness to determine if the preponderance of the evidence proves the defendant liable for the plaintiff’s injury. In reality, other aspects of the proceedings may unduly influence triers of the case. This is particularly true in cases involving children. It is not unusual in malpractice cases against pediatricians for the focus of the trial to become the plaintiff rather than the evidence. Jury members tend to have a natural sympathy for children. It may be difficult for juries to keep their decisions from being influenced by the needs of, for example, a family with a neurologically impaired infant or a ventilator-dependent teenager.

Patients experiencing long-term consequences of injuries attributable to medical negligence should be appropriately and promptly compensated. However, using malpractice awards to compensate patients for adverse outcomes not caused by medical negligence is unjust. Whether society at large should provide more assistance to families faced with such tragic circumstances is a policy decision. Wanting to assist the families of children with disabilities or injuries regardless of whether the physician committed any medical error may seem altruistic to the jury, but in fact, it is a miscarriage of justice. To prevent unjust compensation, scientific and objective expert witness testimony is needed.

\textbf{ETHICAL STANDARDS FOR EXPERT WITNESS TESTIMONY}

Ideally, expert witnesses should be unbiased conveyers of information. The pivotal factor in the medical tort process is the integrity of the expert witness testimony. It should be reliable, objective, and accurate and provide a truthful analysis of the standard of care. Regrettably, not all medical experts testify within these boundaries.\textsuperscript{15} The medical community has long been aware that not all experts testify within scientific standards and ethical guidelines.\textsuperscript{9,16} Recently, the public has become aware of dubious expert witness testimony and its effect on the outcome of widely publicized trials. The US Supreme Court formulated new guidelines on the proper standard for admissibility of scientific evidence in federal courts (adopted by many state courts) in its 1993 ruling on Daubert v Merrell Dow Pharmaceuticals.\textsuperscript{17} The Daubert guidelines assert that trial judges are to act as “gatekeepers” to ensure that expert witness testimony is relevant to the case at hand and rests on reliable science. In determining whether expert witness testimony should be admissible in court, trial judges can consider the following: 1) whether the expert’s opinion has been peer reviewed; 2) whether the theory can be and has been tested; 3) the known or potential error rate of the theory; and 4) the general acceptance of the theory in the relevant scientific community.\textsuperscript{18} Trial judges are to focus on the reasoning or scientific validity of the methodology, not the expert’s conclusion. Challenges to questionable testimony are to be contested via cross-examination and the presentation of contrary evidence. Trial judges may also instruct the jury on the relevance of expert witness testimony to the burden of proof in the case.

\textbf{IMPROVING THE QUALITY OF EXPERT TESTIMONY}

Various branches of organized medicine and some state medical licensure boards have implemented programs to help the courts curb unscientific expert witness testimony. Strategies to regulate expert witness testimony generally fall under the rubrics of prevention, peer review, and sanctioning.

\textbf{Prevention}

Despite the critical importance of the expert witness, no uniform standards on credentialing currently exist, which is yet another weakness cited by critics of the expert witness testimony system.\textsuperscript{19} Imposing eligibility restrictions on those providing expert witness testimony is one way to prevent irresponsible testimony. Some states have tightened the qualifications for medical experts to more closely match those of the defendant physician (eg, geographic factors, specialty training and certification, percentage of time spent on direct patient care). For instance, medical experts testifying in Massachusetts are required to hold a medical license in that state. Often, such requirements are intended to disqualify or discourage itinerant professional experts and hold
physicians responsible for the quality of their testimony.

Other preventive measures decrease financial incentives for serving as an expert witness. Examples include setting caps on the percentage of annual revenue a medical expert can derive from testimony fees or establishing fee schedules for expert witness testimony based on a set hourly rate (determined to be reasonable or comparable to other medical consulting services), which is applied to time spent in rendering expert services (eg, reviewing evidence, being deposed, providing testimony, travel, etc).20,21 The medical profession has deemed it unethical for expert witnesses to base their fees for testifying contingent on the outcome of the case.22 Other suggested solutions are that medical specialty societies offer expert panels to testify or that the courts appoint medical experts.

Peer Review

Regional or specialty medical organizations have established programs in which a panel of peers review and critique the content of expert witness testimony. Sometimes, the testimony and the peer analysis along with commentary are published in scientific journals.23 Another strategy is to use false or unscientific testimony from closed cases in continuing medical education venues. This is particularly effective when biased or false testimony played an important role in the outcome of the case. It illustrates the power of expert witness testimony in malpractice litigation and can be an excellent teaching technique to present acceptable and optimal treatment modalities that should have been introduced by the expert.

Sanctioning

The most aggressive method of curbing irresponsible testimony is to discipline physicians whose expert opinions are deemed to be biased, inaccurate, incomplete, or unscientific. Disciplinary actions can result in the physician being expelled from membership in medical organizations. A few medical societies have proposed that, for physicians to serve as experts in malpractice cases, they are required to join the medical society (even those from out-of-state). Thus, all experts testifying in that state would be potentially subject to disciplinary action of the local medical organization. Some state medical organizations and specialty societies maintain databanks of expert witness testimony to track physicians whose expert opinions seem contradictory from case to case or seem to be based on questionable science.

Many physicians believe expert witness testimony should be subject to peer review and, when appropriate, the basis for physician discipline by medical licensing boards.24 The American Medical Association House of Delegates has discussed a series of resolutions aimed at curtailing improper testimony by physicians and in 1998 adopted the position that "the provision of expert witness testimony be considered the practice of medicine; therefore, it should be subject to peer review."25 This approach not only makes medical licensure a requirement for providing expert witness testimony but also tells physicians that they may lose their medical license for giving false, biased, or unscientific testimony. Not having a medical license would hinder their earning potential in medical and legal arenas. Because licensing boards already function as disciplinary bodies, they may be an appropriate setting for judging the appropriateness of physician conduct. However, it must be noted that other rulings have stated that providing false trial testimony was not fraudulent conduct, because the court did not consider providing medical expert witness testimony to be engaging in the practice of medicine.26 Well-intentioned programs to curtail improper medical testimony are highly risk-laden and have unproven effectiveness. Early studies have shown that there is considerable variability in the objectivity among review panels evaluating the quality of expert witness testimony.27 Until the process can be made less subjective, it seems questionable for medical associations to base disciplinary actions against physicians for faulty expert witness testimony solely on peer-review processes.

A new trend has been seen with the increased number of lawsuits against expert witnesses. Historically, the principle of witness immunity has shielded experts from legal reprisal based on the nature of their testimony.28 To bring greater accountability to expert witness testimony in malpractice cases, some legal authorities have sought to have a distinction drawn between expert witnesses and witnesses of fact. These critics postulate that because experts testify voluntarily and receive significant compensation for their services, general witness immunity should not apply to them. Various courts have responded differently to this concept.

Other proposals to curb improper testimony include certifying experts28; standardizing and regulating expert medical case review, analysis, and testimony;29 adopting “data-based standard of care in allegations of medical negligence”;30; and holding academic institutions accountable for the testimony of their faculty members.31

The medical community must proceed cautiously. Aggressive expert witness disciplinary programs may be seen as organized medicine preventing physicians from testifying to the truth. Should a medical society wrongly sanction a medical expert, that organization could be held liable for punitive damages and may be found guilty of intimidating witnesses.32 The physician community will need to be equally committed to reviewing and sanctioning false statements by medical experts for the defense as for the plaintiff. It has been suggested that fear of sanctions could dissuade physicians from fulfilling their civic and professional duty to participate as experts in legal processes. It is believed that a decrease in the number of physicians willing to provide expert witness testimony is associated with greater reliance on professional witnesses. Beyond the considerable legal risks, disciplinary programs are labor intensive and expensive to implement and maintain. Because such programs can be more than a state or local organization can shoulder, specialty societies are often urged to provide this service for their members.
on a nationwide basis. The legal risks and financial burden of disciplining physicians for false expert witness testimony should make health care associations proceed cautiously.

Ideally, the medical liability system is intended to be a credible deterrent to malpractice, to fairly compensate those who were negligently harmed, and to shed light on ways to improve the practice of medicine. Rather than implement review panels to sanction physicians for providing irresponsible testimony or other processes that can be as flawed and biased as the current use of expert witness testimony, it may be more prudent for medical organizations to address the problem through advocacy and education. These methods have served medicine well.

RECOMMENDATIONS

The AAP recognizes that physicians have the professional, ethical, and legal duty to testify as called on in a court of law in accordance with their expertise. Physicians serving as expert witnesses have an obligation to present complete and unbiased information with which the trier of fact can ascertain whether the defendant was medically negligent and whether, as a result, the plaintiff suffered compensable injury and/or damages. At this time, the best strategies for improving the quality of medical expert witness testimony are strengthening the qualifications for serving as a medical expert and providing more specific guidelines for physician conduct throughout the legal process. To that end, the following guidelines are offered.

Advocacy and Education

The AAP believes that the establishment of certain minimal qualifications for physicians serving as expert witnesses will improve the quality of testimony and promote just and equitable verdicts. Therefore, the AAP supports efforts to:

1. Implement the recommendations of this statement through legislative or regulatory reform of expert witness testimony (eg, establish minimal qualifications for expert witnesses in medical negligence); and

2. Educate pediatricians (during residency training and through continuing medical education) to provide them with the skills and knowledge base needed to provide objective, scientific, and ethical expert witness testimony in legal proceedings involving alleged medical negligence.

Relevant Qualifications

Physicians should limit their participation as medical experts to cases in which they have genuine expertise. The following qualifications must be met (and verified) to demonstrate relevant education, certification, and experience.

1. Physician expert witnesses must hold a current, valid, and unrestricted medical license in the state in which they practice medicine.
2. Physician expert witnesses must be certified by the relevant the board recognized by the American Board of Medical Specialties or a board recognized by the American Osteopathic Association.

3. Physician expert witnesses must be actively engaged in clinical practice in the medical specialty or area of medicine about which they testify including knowledge of or experience in performing the skills and practices at issue to the lawsuit.
4. It may be appropriate for an expert in the area of research that is complicated to be asked to explain the nature of the research to the jury (ie, development of vaccines, cloning, DNA testing, etc) that may be purely educational and not relate to the clinical care provided by the defendant.

Unbiased and Complete Testimony

Physicians serving as experts in medical negligence actions should take all necessary steps to provide thorough, fair, objective, and impartial review of medical facts. To meet that obligation, physicians agreeing to testify as experts in medical negligence cases should conduct themselves as follows:

1. Regardless of the source of the request for testimony (plaintiff or defendant physician), expert witnesses should lend their knowledge, experience, and best judgment to all relevant facts of the case.
2. Expert witnesses should take necessary steps to ensure that they have access to all documents used to establish the facts of the case and the circumstances surrounding the occurrence.
3. Relevant information should not be excluded for any reason and certainly not to create a perspective favoring the plaintiff or the defendant.
4. The expert witness’s opinion should be fair and objective. The expert witness should be comfortable with his or her testimony regardless of whether it is to be used by the plaintiff or defendant.

Standards of Care

The physician expert witness should be familiar with the medical standards at issue before accepting a case. Becoming schooled on a medical standard after accepting a case may lead to biased understanding of the issue. A physician unfamiliar with the medical standards would not meet the recommended qualifications of an expert.

1. Before testifying, the physician expert witness should review and understand the current concepts and practices related to that standard as well as the concepts and practices related to that standard at the time of the occurrence that led to the lawsuit.
2. The testimony presented should reflect generally accepted standards within the specialty or area of practice about which the expert witness is testifying, including those held by a significant minority.
3. When a variety of acceptable treatment modalities exist, this should be stated candidly and clearly.
4. Expert witness testimony should not condemn performance that clearly falls within generally ac-
Physician expert witnesses must exercise care in assessing the relationship between the breach in the standard of care and the patient’s condition, because deviation from a practice standard may not cause the patient outcome at issue. Thus, medical expert witnesses should:

1. Base distinctions made between medical malpractice and medical malocurrence on science, not on unique theories of causation;
2. Know that transcripts of depositions and courtroom testimony are public records and may be reviewed by audiences outside of the courtroom; and
3. Be willing to submit transcripts of depositions and courtroom testimony for peer review.

Ethical Business Practices

The business practices (eg, marketing, contractual agreements, and payment for services) associated with the provision of expert witness testimony must be conducive to remaining nonpartisan and objective throughout the legal proceedings.

1. Contractual agreements between physician expert witnesses and attorneys should be structured in a way that promotes fairness, accuracy, completeness, and objectivity.
2. Compensation for expert witness testimony should be reasonable and commensurate with the time and effort involved.
3. Physicians should not enter into contracts in which the fees for expert witness testimony are disproportionately high relative to the time and effort involved.
4. Physicians should not enter into contracts in which the compensation for expert witness testimony is contingent on the outcome of the case.
ERRATA

In the article “Postpartum Discharge Preferences of Pediatricians: Results From a National Survey” by John R. Britton et al (Pediatrics. 2002;110:53–60) that appeared in the July 2002 issue, the incorrect graph was published as Figure 1. The correct Figure 1 appears below. The publisher regrets this error.

![Graph](image)

Fig 1. Physician perceptions of optimal versus minimal LOS.

An error occurred in the article “The ‘Ospedale degli Innocenti’ and the ‘Bambino’ of the American Academy of Pediatrics” by Lawrence Kahn (Pediatrics. 2002;110:175–180). The following text was omitted:

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I wish to acknowledge the helpful suggestions of Walton Schalick III, MD, PhD, who reviewed the manuscript. Also, I am indebted to Luisa Gabbiani Flynn for her helpful translations from the Italian and Ingrid Bromberg for the adaptation of the floor plan shown in Figure 2.

An error occurred in the policy statement “Guidelines for Expert Witness Testimony in Medical Malpractice Litigation” by the AAP Committee on Medical Liability (Pediatrics. 2002;109:974–979). The statement’s reference to Fadjo and Bucciarelli (1995)* incorrectly characterized that article as addressing “pretrial screening panels,” which it did not. More significantly, the authors of that article did not express an opinion about whether medical experts during pretrial depositions are more likely to offer unreliable testimony. Rather, Fadjo and Bucciarelli advocate the voluntary use of review panels to evaluate expert testimony in medical liability actions. While the author of the AAP policy statement does not support the use of pretrial screening panels, he remains concerned that expert testimony provided in the pretrial phase of malpractice actions is subject to even less scrutiny and accountability than expert testimony provided later. The author and the Committee on Medical Liability regret the error.

Guidelines for Expert Witness Testimony in Medical Malpractice Litigation
Committee on Medical Liability
Pediatrics 2002;109;974

The online version of this article, along with updated information and services, is located on the World Wide Web at:
http://pediatrics.aappublications.org/content/109/5/974

An erratum has been published regarding this article. Please see the attached page for:
http://pediatrics.aappublications.org/content/110/3/651.3.full.pdf