

American Academy of Health Physics

Guidance for Health Physicists
Serving as Expert or Fact Witness

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CONTENTS

1. Introduction
2. Health Physicist's Preparation to Serve as a Witness
 - 2.1. Consideration as Expert Witness
 - 2.2. Consideration as Fact Witness
3. Litigation Process
 - 3.1. Retention as Potential Witness
 - 3.2. Witness Liability
 - 3.3. Preparation for Testimony
 - 3.4. Discovery
 - 3.5. Deposition
 - 3.6. Daubert Hearing
 - 3.7. Trial Testimony
4. Closing Remarks

References

Bibliography Resource References

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Preface

This guide has been developed to assist health physicists who may serve as Expert or Fact Witnesses. The purpose of this document is to provide guidance rather than mandatory practices and procedures. It is not intended to be comprehensive and is not intended to cover all duties and responsibilities of a health physicist who may serve as an Expert or Fact Witness. In addition, case law, statutes or rules cited in this document are subject to change at any time. *A health physicist preparing to provide testimony in a legal matter should seek advice from competent legal counsel.* In some instances, the health physicist may want to obtain counsel, independent of the party they are assisting, to ensure that they have unbiased and adequate representation.

1. INTRODUCTION

The actual or perceived exposure to ionizing radiation of workers and members of the public may result in situations where individuals or groups believe they are adversely impacted and therefore seek restitution. Therefore, exposure to ionizing radiation continues to be a subject of litigation in occupational and environmental settings. Health physicists need to be aware that they or their employer may be involved in radiation exposure litigation and that they may be asked to provide legal testimony. In addition, they may be retained to serve as Expert Witnesses in cases in which they have not been directly involved. Litigation issues may include such matters as whether an exposure to ionizing radiation occurred, the amount of radiation dose that was received, the associated work conditions, claims of radiation injury, and possible claims of unsafe or improper work practices or conditions.

Although every legal case will require preparation specific to that case, there are some common principles that health physicists should follow in routine work practices in order to be adequately protected in any legal matter. Since involvement in litigation may result in external review and evaluation of the history of professional activities, health physicists should always conduct their business with anticipation of a future evaluation.

This document provides an overview of some recommended work practices that should be employed by a health physicist involved in litigation. Most of the information applies to both activities as an Expert Witness and as a Fact Witness, but some of the discussion is only applicable to Expert Witnesses.

2. HEALTH PHYSICIST'S PREPARATION TO SERVE AS A WITNESS

The task of being an Expert or Fact Witness is demanding. In addition, experiences from the whole of the professional life of an Expert or Fact Witness can be brought forth to either bolster their credibility or to discredit them. Therefore health physicists prepare for the possibility of testifying throughout their professional life. Much of the activity described in Section 3.3 "Preparation for Testimony" should apply also to the routine work practices of a health physicist.

In general, health physicists should:

- Perform work diligently
- Recognize their areas of expertise
- Limit their professional work to their areas of expertise, and
- Stay current with relevant scientific and technical literature, laws and regulations and professional standards in their areas of responsibility.

Additionally, professionalism in any scientific occupation, including health physics, requires clear, concise and accurate documentation of decisions, incidents or evaluations. Rees and Prando (2001) provide a useful discussion of documentation.

Health physicists should also maintain professionalism and objectivity in all correspondence, including electronic correspondence. All such correspondence may be subject to future scrutiny as part of the legal process of discovery.

Finally, it is useful for an Expert or a Fact Witness to maintain a current, unembellished, resume including a current list of publications and presentations. The resume should include information that shows areas of expertise, but it should not exaggerate credentials or accomplishments.

The following guidance is focused on Federal Court cases. Although, the rules and judicial decisions on qualifying Expert Witnesses can vary in State courts, the information provided here is a reasonable summary.

“Federal Rules of Evidence” (ARTICLE VII Opinions and Expert Testimony, Federal Rules of Evidence LTT 2007 edition) are followed by the Federal Courts in every state, but not all State Courts embrace the Federal Rules, and the question of “who can testify as an expert or fact witness” varies. Additional information on ARTICLE VII is available on the Cornell Law School Web Site: <http://www.law.cornell.edu/rules/fre/>.

2.1 Consideration as Expert Witness

An Expert Witness is a witness qualified by knowledge, skill, experience, training, or education providing a scientific, technical, or other specialized opinion about the evidence or a fact issue (Black’s Law Dictionary (2004)).

Rule 702 of the Federal Rules of Evidence governs Expert Witnesses and provides:

“If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise, if (1) the testimony is based upon sufficient facts or data, (2) the testimony is the product of reliable principles and methods, and (3) the witness has applied the principles and methods reliably to the facts of the case.”

For example, one frequent and primary role of a health physicist Expert Witness is to describe the risks of radiation exposure in a clear and understandable way to lay persons and non-experts. This requires good communication skills, both orally in the courtroom, as well as verbally in written documents. The presentation of testimony must use succinct and simple terminology. Visual aids can be used, but the focus should be on organized verbal communication.

The Notes to Rule 702 by the Advisory Committee on Rules provide further clarification that the Expert Witness may answer hypothetical questions and thus testify not only to the facts perceived by the expert but also to what is made known to him at or before the hearing or trial.

2.2 Consideration as Fact Witness

Rule 701, Opinion Testimony by Lay Witnesses, Federal Rules of Evidence, applies to Fact Witnesses. A Fact Witness is someone whose testimony is based on his perceptions -- "I saw..., I heard ..., I measured" If an opinion is offered by the Fact or "Lay" Witness, Rule 701 provides that the opinion must be "(a) rationally based on the perceptions of the witness, and (b) helpful to a clear understanding of the witness' testimony or the determination of a fact in issue, and (c) not based on scientific, technical or other specialized knowledge within the scope of Rule 702."

Health physicists may be called upon as Fact Witnesses even if they do not meet the expected qualifications or fall within the agenda of the litigation as an "Expert". Health physicists may be asked to provide testimony describing specifics of a radiation safety or training program, basic concepts of radiation safety, or to describe and interpret specific measurements they have made or results of samples they may have collected. Although they may not be asked to formulate an expert opinion, the work practices described in this guidance applies equally to health physicists serving as Fact Witness.

3. LITIGATION PROCESS

Health physicists should be aware of the basic elements of the law and the legal procedures with which they may become involved. At a minimum, they should be familiar with appropriate and inappropriate functions and roles of Expert and Fact Witnesses (see Rules 701 and 702, ARTICLE VII, Opinions and Expert Testimony (2007) (<http://www.law.cornell.edu/rules/fre/>)).

3.1 Retention as Potential Witness

If a health physicist's employer is involved in litigation related to radiation, the health physicist, as an employee, may not have much choice in whether they will

testify as a witness. However, when retained as a consultant, health physicists should determine whether the attorney retaining them is in good standing with their State Bar. Being retained by an attorney known for unethical legal practices may damage their credibility in future cases. The American Bar Association provides an online list of Lawyer Disciplinary Agencies at <http://www.abanet.org/cpr/regulation/scpd/disciplinary.html>, where persons can review the disciplinary history of individual attorneys.

Whether testifying on behalf of their employer or as a consultant, health physicists should:

- Make the legal counsel clarify exactly what will be requested from them or required of them.
- Have expert knowledge in the specific area they are being asked to testify.
- Exercise care not to be led beyond their areas of expertise or into providing testimony that they cannot fully support.
- Watch out for conflicts of interest, either actual or perceived.

Serving as a witness is a demanding job and may necessitate time-consuming preparation in reviewing records and literature. In addition, health physicists may need to check with their employer or may need to obtain special permission from their employer.

3.2 Witness Liability

There is a doctrine of “witness immunity” to ensure that a witness in a legal proceeding can testify without fear of legal retribution (*Briscoe v. LaHue* 1983). However, a witness is responsible for truthfulness, honesty, and professionalism and exacting quality assurance in preparation and presentation of testimony. The witness must recognize he or she is the one providing expert or fact testimony, and is responsible for its preparation and presentation. He or she is responsible even if others provide assistance in the preparation of testimony.

There are generally two types of witness liability: (1) criminal liability for actions such as perjury (or other crimes admitted during testimony), and (2) civil liability for harm caused by the testimony. In the case of criminal issues, the prosecution is brought by government prosecutors and not by the parties of the lawsuit. In the case of civil issues, such as defamation of character by the witness or malpractice, legal action may be taken by the aggrieved party under tort law or under specific statutes that provide remedies for the underlying claim of harm. Richards and Walter (2005) provide a recent review of several cases, including a landmark case in Pennsylvania (*LLMD Michigan, Inc. v. Jackson-Cross Co.* (1999)), which held an Expert Witness liable for malpractice (for presenting

erroneous testimony prepared by an associate). Although this was a ruling of the Pennsylvania Supreme Court, it may impact future decisions throughout the U.S.

Professional liability insurance is commercially available for consultants to provide coverage for legal fees incurred defending a malpractice (or other) claim, arising from the health physicist's testimony or other services.

3.3 Preparation for Testimony

A health physicist who may become a witness should obtain all of the facts. Some attorneys may be reluctant to provide their other Expert Witness data or information that may be damaging to their case. Some attorneys may try to influence the course of data collection and information review so as to avoid potentially damaging information to their case. The health physicist serving as Expert Witness should make it clear to the attorney(s) that he or she must have all pertinent information. In the same context the health physicist must fully communicate and disclose all their information to their attorney(s).

In preparing for testimony, a health physicist should:

- Consult with his or her attorney(s) as to the specific technical and scientific issues for which their expert opinion is needed.
- Not be manipulated by attorneys into forming a biased opinion, and remember that they are the one developing and providing the Expert Witness testimony—not the attorneys.
- Not base their opinions and testimony on unsubstantiated information obtained from attorneys, plaintiffs, or defendants. If only a data summary is given by an attorney, potential Expert Witnesses should seek and review the original data and make their own summary. An attorney's method of summary may have been biased to support their case.
- Collect their own data, if possible, and properly document those data. If samples are collected, appropriate sampling collection and chain-of-custody procedures should be used and samples analyzed by reputable laboratories, applying appropriate quality assurance and quality control procedures and reporting reliable analytical data.
- Conduct a thorough review of pertinent scientific and technical literature.
- Seek peer review and consultation if possible.
- Keep orderly records and maintain a log for future reference. These records and log are subject to discovery.
- Make sure their resume and list of publications are accurate. It is reasonable to focus on qualifications pertinent to the litigation, but these qualifications should not be overstated.

3.4 Discovery

Discovery is the process by which the opposing party tries to determine what work the other party has performed to support its case and the qualifications and positions of witnesses. The opposing party can obtain access to pertinent records, meet proposed witnesses, and interrogate proposed witnesses on their supporting works and theories. The discovery process may require that witnesses provide records of their related work, their resume, and lists of publications and possibly copies of all published materials prior to the deposition. Some material can be sheltered as "attorney client confidential."

Preparation for discovery should entail:

- Anticipating in advance what is subject to discovery.
- Trying not to have spurious or exaggerated calculations; stick to rational ideas and assumptions.

Even though work products may be considered attorney-client work product and privileged information, every work product a witness produces may be subject to discovery, so care must be taken in the preparation of all documents, including technical documents, letters, emails, and notes of phone conversations.

As part of the initial disclosures, attorneys must provide information about the testifying expert's qualifications and opinions, including all information that the witness considered in forming those opinions. This includes "expert-reliance materials", facts, documents, and other sources that provide data or information to an Expert Witness. In preparing to testify as an Expert or Fact Witness, it may be helpful to catalogue all the resources used to formulate the expert opinion or facts to be presented. Credibility may be damaged if the health physicist is not prepared to support his or her opinion or facts presented with the technical (or other) resources that went into the preparation.

3.5 Deposition

The deposition part of discovery takes place with the lawyer present to support the witness. The opposing lawyer may have experts present to assist in questioning the witness. A recorder is also present to fully record the process. This process may take place by phone or in person. After the deposition, the witness will be asked to review the recorder's transcript and validate that it is correct.

Depositions should be treated as scholarly endeavors. Health physicists should review with their legal counsel what may be covered by deposition and work with their legal counsel to limit the deposition to their areas of expertise.

Health physicists should not base their opinions on speculation or hypothesis. They should employ appropriate quality control procedures in their calculations and use reasonable care in preparing their testimony.

3.6 Daubert Hearing

A “Daubert Hearing” is conducted by courts before trial to determine whether proposed expert testimony meets the Federal requirements for relevance and reliability, as clarified by the Supreme Court in *Daubert v. Merrell Dow* (1993) (see *Black’s Law Dictionary* (2004)) and Merwin et al. (2001). The Daubert test may be used by the court before a trial begins to determine whether expert testimony is admissible under Federal Rules of Evidence Rule 702.

The Daubert test essentially requires that scientific information be both relevant and reliable. Relevancy simply means that the testimony should be related to the facts of the case. Reliability generally requires that the information have grounding in the scientific method, and should have:

- Been tested (pursuant to standard scientific methodology)
- Been subjected to peer review and publication
- A related assessment of the known or potential error rate associated with that knowledge
- Standards controlling how the information is generated, measured, or assessed (i.e., some quality assurance or control procedures)
- Been generally accepted in the relevant scientific community

The Daubert test is used in Federal courts, and many (but not all) State courts. In particular, the States of California, Illinois and New York still rely on the “Frye” test, based on *Frye v. United States* (1923), which essentially is entirely based on whether or not the opinion or facts put forth are generally accepted in the scientific community.

A health physicist intending to testify in a legal proceeding should always consult with the attorney retaining them (or their own independent counsel) about the standard used to determine the acceptability of scientific evidence in the court in which they will be testifying. Although any legitimate scientific testimony should be able to withstand any legal test, it is helpful to know what the court may be expecting, so as to ensure the minimum requirements will be met in any case.

3.7 Trial Testimony

The basic principles for preparing for depositions apply to preparing for trial; however, the requirements are even more exacting. It is reasonable and

recommended to work with legal counsel in preparing for trial, but health physicists should not become advocates under any circumstances or be influenced to bias their opinion or bias presentation of their findings to “win” the case. Important preparation steps include:

- Reviewing their resume and list of publications; one should not be surprised by comments and questions concerning work previously performed, publications, or claims made in the resume.
- Being prepared to answer questions rather quickly; however, being correct is more important than the response time.
- Reviewing their deposition; one should not be surprised by questions from opposing counsel about statements made during a deposition.
- Reviewing with their legal counsel what may be covered by cross examination.
- Limiting their testimony to subjects within their personal expertise.
- Avoiding spurious or exaggerated calculations to try and make a point or support the case; sticking to rational ideas and assumptions.
- Using reasonable care in preparing testimony.
- Keeping the testimony understandable, but not making mistakes in simplifying it.
- Not misrepresenting data; keeping data in the proper context.
- If pertinent, disclosing all relevant information, even if it isn't favorable to their client's advocated position. If the witness doesn't reveal divergent opinions, the defense will. If testimony isn't defensible and correct, it probably will be challenged and invalidated. Even if it is correct and defensible, it will be challenged. Be a “devil's advocate,” or at least anticipate the challenges.
- Identifying and collecting all necessary data.
- Reconciling, accounting for, or disclosing conflicting information.
- Knowing the Rules of Testimony:
 - Providing basis for expertise, providing credible basis for testimony.
 - Making sure testimony is supported by required reports.
- Not becoming a “zealous witness” – a witness who shows partiality toward the litigant that called him or her to testify and who seems eager to help that side in the lawsuit. (Definition from Black's Law Dictionary 2004).
- Bringing scholarship and professionalism to the courtroom and not functioning as a partisan but as an objective scholar.

4. CLOSING REMARKS

Ultimately a verdict may not be based on the technical or scientific merits of the case. It is the attorney's responsibility and objective to win the case for his client

by any legal means. It is not the Expert/Fact Witness' responsibility to "win" the case. Therefore, the Expert Witness should avoid becoming consumed by the adversarial atmosphere of the litigation process. Health physicists should reflect and demonstrate the highest level of scholarship and objectivity when functioning as an Expert or Fact Witness. Their professional and scholarly conduct will reflect on them and the profession of health physics as a whole.

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