
Francis B. Palumbo, PhD, JD,1 Rod Barnes, MBA,2 Patricia Deverka, MD, MS,3 William McGhan, PharmD, PhD,4 Lawrence Mullany, MD, MBA,5 Albert Wertheimer, MBA, PhD6

1University of Maryland Center on Drugs & Public Policy, Baltimore, MD, USA; 2Health Economics, Alcon Laboratories, Fort Worth, TX, USA; 3Scientific Affairs, MEDCO Health Solutions, Inc., Franklin Lakes, NJ, USA; 4University of the Sciences in Philadelphia, Philadelphia PA, USA; 5AvMed Health Plan, Gainesville, FL, USA; 6Temple University School of Pharmacy, Philadelphia, PA, USA

ABSTRACT

In 2001, ISPOR convened a Task Force on Code of Ethics for Researchers (The Task Force). This Task Force was to build on the previous work of ISPOR Health Science Policy Task Forces and develop a code of ethics that would be applicable to all ISPOR members and to ISPOR itself. The Task Force developed a code of ethics that was subsequently adopted by the ISPOR Board of Directors. The Code of Ethics is appended to this article and can be found on ISPOR’s Web page at http://www.ispor.org/workpaper/code_ethic.htm. This article provides supportive information and justification for the ISPOR Code of Ethics for Researchers and includes a discussion of the stakeholders as well as ethical considerations for the researcher on research practices, research sponsorship, research publication and dissemination, and relationships with others. It also includes a discussion of the ethical considerations for the Society.

Keywords: ethics, publication, research, researchers, sponsorship.

Introduction

As an overriding precept, it would be prudent to say that an ISPOR researcher’s first relationship is to assist patients, physicians, and payers to attain the greatest value, both therapeutic and economic, from medical therapies. ISPOR is an organization that represents research professionals from a variety of disciplines. These include but are certainly not limited to economists, epidemiologists, social and behavioral scientists, health services researchers, researchers in managed care organizations, physicians, pharmacists, and many others. As an organization, ISPOR expects itself and its members to adhere to the highest ethical standards. In attempting to meet these expectations, ISPOR recognizes that its activities and those of its members affect a number of constituencies and these are included in the following paragraphs.

Address correspondence to: Francis B. Palumbo, Executive Director and Professor, University of Maryland Center on Drugs & Public Policy, 515 W. Lombard Street, 2nd Floor, Baltimore, MD 21201-1563, USA. E-mail: fpalumbo@rx.umaryland.edu

Patients

It should be generally agreed that patients are ultimately going to experience the greatest impact of the research conducted by ISPOR members. As the results of the research are digested by others and incorporated into their programs of pharmacy and medicine, the decisions that are made are going to impact patients most. For example, will patients be denied coverage for certain drugs? Will they be forced into additional cost sharing for a particular drug? Will they be shifted from one drug to the next while they are attempting to control a chronic condition? And will they receive the most appropriate therapy for their conditions at the most reasonable price?

Payers, Decision Makers, and Administrators

Although the patients are certainly the ultimate focus of medical care, being able to provide comprehensive care to patients for an affordable cost is a challenge. Deciding what would be covered and the extent of that coverage while attempting to ensure that the health of the patient is not compromised requires credible information. The individuals...
who must make decisions about coverage and cost require results of studies that are both practical and useful, reflecting the fact that the information presented must be in such a form that individuals who may not be trained in research can understand and apply the information.

**Practitioners**

Physicians, pharmacists, and others will be treating patients with interventions made available because of particular research. The research presented to the various practitioners must meet the relevant standards of practice for research so that the practitioners have available to them the best tools to help their patients.

**Government Groups**

Governments still represent the largest payers of health care, and their need for reliable research based information is significant. The policies and practices adopted for government programs tend to establish standards that others follow. For example, although rebates are taken for granted as a normal aspect of doing business today, they did not emerge as a major cost containment tool until around 1990.

**The Profession of Outcomes Researchers**

This is a rather broad-based profession in that outcomes researchers represent a variety of research disciplines that include but are not limited to epidemiologists, economists, health services researchers, clinical scientists, and others. Each of these represents a research profession in and of itself, and each essentially has its own standards, practices and conventions. An economist and an epidemiologist may approach the same issue from two slightly different perspectives. For example, an economist may develop a behavioral model that requires parameter estimates from a variety of sources, whereas an epidemiologist may make greater use of statistical analyses of large databases.

**Colleagues, Research Employees, and Students Who Work for Researchers**

In dealing with colleagues one must be cognizant of the professional relationships and the rights and responsibilities of colleagues when conducting collaborative research. Colleagues are generally independent researchers with their own reputations. Research employees are also colleagues in the sense that they are often doctorally trained individuals with their own careers. They must be accorded respect and given appropriate credit for the work they perform on research projects.

**Employers**

Under the current system of medical care, employers are responsible for providing a substantial amount of health-care coverage to employees and their dependents as well as retirees. Employers are pressured to provide reasonable health-care coverage at an affordable cost. Given that the cost of medical care increases substantially every year this becomes more and more of a challenge. Notwithstanding other medical care items, expenditures for prescription drugs are increasing at approximately 15% per year and so employers are challenged to provide a comprehensive drug benefit while attempting to minimize employee out-of-pocket costs. Therefore, the research that is conducted by ISPOR members and their colleagues can directly affect price and coverage negotiations and the employers’ decision as to which benefits to provide.

**Clients**

Researchers develop relationships with clients over time and the researcher–client relationship is vital to the continuation of the researchers’ business whether private or nonprofit. In pursuing research and maintaining this relationship, it is important that both parties understand and accept ethical principles surrounding that relationship.

**Design and Research Practices**

ISPOR members must maintain a current knowledge of research practices. In dealing with relationships among any of the constituencies, especially clients, payers, and decision makers, members have an ethical obligation to remain current in the field. In addition, members should adhere to standards of outcomes research practice for their respective fields as well as identify any official guidelines or standards that they may have used. For examples of research standards that could be considered by members, *Value in Health* has been publishing the ISPOR Scientific Task Force reports in 2003.

Members’ research designs should be defined a priori, reported transparently, defended relative to alternatives, and planned to minimize all types of bias [1–4]. Transparency is absolutely critical. At no time should a reader or user of the research be expected to act on findings where there may be questions as to how the research was conducted or the data interpreted. Journals must be encouraged to allow sufficient space to publish detailed information on the research designs [5,6]. For randomized controlled trials (RCTs), the Consolidated Standards of Reporting Trials (CONSORT) state-
ment provides an excellent example of detailing the quality of reporting [7]. It is specific to RCTs but offers some excellent models for reporting in general.

In accordance with the Belmont Report’s “respect for persons,” members should respect the rights of human subjects at all times [8]. Human subjects issues arise in a variety of ways. Human subjects may represent ID numbers in a paid claims database, may be survey respondents, may be clinical trial subjects, or may be patients whose medical records are being reviewed. Regardless of the setting in which the research is conducted or the nature of the human subject definition, respect for the rights of the human subjects must be paramount. In recent times, stringent restrictions have been placed on research involving human subjects and institutional research review boards (IRBs) oversee much of the research conducted. But even so, occasionally problems occur. For example, recently a major university in the United States was involved in an incident where a young woman died as a result of ingesting a substance during a trial. That substance was thought by the researchers to have been harmless, yet it was found to have been a substance with a history of toxicity.

Privacy and confidentiality must be respected and guarded, and federal and state laws governing protection of medical information, such as HIPAA, must be strictly observed. The information in databases, medical records, and survey files must be protected and individual patients or other human subjects, such as prescribers, must not be identified.

Members should respect the reputations and rights of colleagues when engaged in collaborative projects. From a design and research practices perspective, it is important to recognize that each individual’s actions can positively or negatively affect the reputation of his or her colleagues. It is thus important to work closely with colleagues, obtain agreement on the approach to the research design, and obtain agreement on the data analysis and interpretation of the results.

Members should maintain and protect the integrity of the data used in their studies. Often data are in the form of claims, either pharmacy or medical, and these data are by definition not designed for research. The researchers must assure that the database is clean and that there is no patient duplication, that identifiers are unique, and that medical and pharmacy claims are merged appropriately. In other types of research, such as survey research or medical records review, coding is very important. And with regard to medical records review, the records are rarely copied in their entirety so a priori decisions need to be made as to exactly which data to abstract from a chart.

Members should not draw conclusions beyond those that their data would support. The data should be used to test the hypotheses that were generated a priori and to support any subsequent analyses. Nevertheless, the researchers in their design and research practices must continue to adhere to standards of practice and ethical precepts for their disciplines and be certain to form only those conclusions that their data will support. For example, if there is insufficient power to conclude that there is a significant difference between two groups, this should be reported as such.

**Sponsorship**

Sponsorship relates to initial decisions on whether to conduct the research and the relationships between the researchers and the sponsors. At all times, the source of sponsorship for research should be fully disclosed [1,6,9]. It allows the receiver of the research, whether it is a reader or an entity that is going to implement the research into their daily practices or policies, to judge the level of confidence they might place in that research based on that source. Members of ISPOR should strive to avoid bias and the appearance of bias in conducting research. The disclosure of the identity of the sponsor should serve to place sufficient pressure on researchers to be sure that their research and subsequent publication is well balanced and as unbiased as is possible. As a routine matter, most journals require that authors disclose the source of support for the research and they publish this information as a footnote in most cases.

In reporting and conducting research, members must be able to maintain their professional autonomy at all times [6]. In the long run, the information reported might be better received with a higher level of confidence than if the researcher’s professional autonomy were in question. Ultimately, the professional is responsible for the conduct of the research and his or her reputation will certainly be affected by perceptions that the research is biased or that professional autonomy has been compromised.

Members should also avoid conflicts of interest and the mere appearance of conflicts of interest [6]. In this area, members need to be most vigilant. It is beyond the scope of this article to attempt to detail every possible situation where a conflict of interest might exist. Nevertheless, there are a few areas where members would need to be concerned. These include but are not limited to working for compet-
ing clients in a product line that both clients produce without full knowledge on the part of both clients that one is working for both, having substantial ownership in a client’s company without divulging that information, or using confidential data from one client to perform work for another.

Publication and Dissemination

Research is often undertaken for a client where the resulting product is a report to that client, which then becomes the property of that client. This is often the case in the private consulting arena. Often, however, universities will refuse to sign a contract where publication rights are restricted [10]. A more common practice is to include a provision in the contract that publication may be withheld for a period of 3 to 6 months after which the investigators are free to publish. Usually this is designed to address intellectual property issues but can be used for virtually any reason at all.

ISPOR members should endeavor to publicly disseminate all of their work and to publish it in peer-reviewed journals when possible [11]. It has been suggested that withholding publication is unethical. For example, patients may enroll in clinical trials for altruistic reasons and there may be a corresponding obligation to them to see that the results are brought to light [12]. ISPOR members should have a philosophy of advancing knowledge in a particular area and should therefore publicly disseminate their work, holding it up to peer review. Nevertheless, publication rights may be defined in advance, and members should respect contractual rights, which limit their use of the data after the primary study is completed [10]. They should also refrain from disseminating information, which was agreed in advance and at the time the contract was signed would remain proprietary.

Methods sections of articles should give thorough, transparent attention to all measures taken to minimize bias and should identify and defend all departures from the a priori analysis plan. This basically implies that the methods section of the article should be thorough and detailed enough so that the reader has a good understanding of exactly how the research was conducted. For example, sampling measures should be presented in sufficient detail to enable the reader to determine whether the sampling plan presents a particular bias. Analyses should be those that are best suited to examining the data generated from the study and testing the hypotheses that were proposed in the study. Research often leads an investigator down roads that he or she may not have contemplated when drawing up the original research plan. When this occurs it should be reported truthfully, thus allowing the reader to draw his/her own conclusions.

Members should not allow listing of an author on any publication where that individual has not performed substantial work, and members should not exclude from listing as an author any individual who has performed substantial work [10]. Authorship is often a difficult problem within an organization. The question often arises as to whether a particular individual has performed work that is substantial enough to merit listing as a coauthor. One alternative, which can be considered by researchers, is to acknowledge the contribution of an individual in a footnote, when that individual has not performed enough work to qualify as a coauthor but has greatly assisted in the effort. Members should utilize checklists, such as those found in some major peer-reviewed journals, to determine whether an individual should be included as an author [13]. Although this does not address all author-related issues, it is very helpful.

Finally, as a general rule, members should work with editors of journals and other publications to encourage an appropriate peer review process that examines the quality of the methodologic rigor rather than the institution for which the individual works [1]. Nonetheless, any contributor should disclose relationships with a company or competitor of any product discussed in the work so that the reader can draw his or her own conclusions.

Role of Professional Societies and Organizations

ISPOR is an organization representing members from a variety of disciplines. As an organization, ISPOR is not particularly interested in serving as arbiter of complaints or as a licensure board but is merely interested in putting forth a code of ethics that its various members can subscribe to as part of belonging to this organization. There are certain roles and responsibilities that ISPOR, as a professional society, should undertake.

First, ISPOR should publicize this code of ethics to both members and nonmembers. This could be done through dissemination of information on the ISPOR Web site as well as publication in hard copy as a stand-alone document or a publication in a peer-reviewed journal. Second, ISPOR should strive for a balance in sponsorship of its conferences and other activities thereby avoiding even the appearance of bias or conflict of interest. Although, as with other organizations, much of the funding for activities may come from one particular sector of the
health-care industry, the organization should seek to obtain support from other quarters. Because as a practical matter, there is funding from commercial interests, ISPOR should issue its own statement of objectivity and autonomy from sponsors. Third, ISPOR should continue to assure that its journal publishes only articles that have gone through a rigorous peer review process. Fourth, ISPOR should maintain a board of directors that is representative of the various constituencies that the society serves. Finally, ISPOR program planning and selection committees should have membership representative of the major constituencies.

The authors acknowledge the assistance of Ms. Ashley Slagle, doctoral student in Pharmaceutical Health Services Research at the University of Maryland.

References

13 JAMA instructions to authors. Authorship responsibility, criteria, and contributions. JAMA 2002;287:128.

Appendix: ISPOR Code of Ethics for Researchers

Preamble

ISPOR, as an organization, expects itself and its members to adhere to the highest ethical standards. In doing so, ISPOR recognizes that its activities and that of its members affect a number of constituencies and these include but are not limited to:

- Patients who are ultimately going to experience the greatest impact of the research.
- Decision makers and administrators who need results that are both practical and useful.
- Practitioners who will be treating or not treating patients with therapies, medications, and procedures made available or not made available because of the research.
- Government groups who require the results of research to set policy.
- The profession of outcomes researchers.
- Payers who must decide what is covered without compromising the health of the patient.
- Colleagues, where relationships in conducting research and its related activities are particularly critical.
- Research employees and how they are regarded, compensated, and treated by the researchers for whom they work.
- Students who work for researchers, where respect and lack of exploitation are important. They are the future of the profession.
- Employers where the research affects their decisions on providing health benefits.
- Clients for whom the research is conducted and the researchers’ relationships with them.

The following code of ethics for members of the International Society for Pharmacoeconomics and Outcomes Research includes ethical considerations for ISPOR members on research practices, research
sponsorship, research publication and dissemination, and relationships with others. This code of ethics also includes ethical considerations for the Society.

The code is something to which we believe all ISPOR members should aspire. Nevertheless, we recognize that members’ own organizations may also have ethical codes that should be followed. We also recognize that legal considerations may sometimes be important, for example, in relation to employment law. Therefore, the code is advisory rather than mandatory and ISPOR welcomes an ongoing debate about ethical standards in the field of pharmacoconomics and outcomes research.

Design and Research Practices
Members should maintain a current knowledge of research practices.
- Members should adhere to the standards of practice for their respective fields of research and identify any official guidelines/standards used.
- Members’ research designs should be defined a priori, reported transparently, defended relative to alternatives, and planned to minimize all types of bias.
- Members should respect the rights of research subjects in designing and conducting studies.
- Members should respect the reputations and rights of colleagues when engaged in collaborative projects.
- Members should maintain and protect the integrity of the data used in their studies.
- Members should not draw conclusions beyond those, which their data would support.

Sponsorship
- Members should fully disclose the identity of sponsors of their research.
- Members should strive to avoid bias and the appearance of bias in conducting research.
- Members should avoid conflicts of interest and the appearance of conflicts of interest. As a point of reference, members should look to the rules on disclosure of interest laid down by major peer-reviewed journals.
- Members should maintain their professional autonomy and objectivity in conducting and reporting research.

Publication and Dissemination
- Members should endeavor to publicly disseminate all their work and to publish it in peer-reviewed journals when possible.
- Members should discourage, where possible, listing of an author on any publication where the individual has not performed substantial work. As a point of reference, members should look to the checklists provided by major peer-reviewed journals to assist them in deciding inclusion of authors.
- Members should respect contractual rights when they agree to perform work for hire and should refrain from disseminating information, which it was agreed, in advance and at the time the contract was signed, would remain proprietary.
- Methods sections of articles should give thorough, transparent attention to all measures taken to minimize bias.
- Methods sections of articles should identify and defend all departures from the a priori analysis plan.
- Members should discourage the exclusion of an author from any publication where the individual has performed substantial work.
- Members should work with editors of journals and other publications to encourage an appropriate peer review process that examines the quality of the methodologic rigor independently of the institution for which the individual works. Nonetheless, any contributor should disclose relationships with a company or competitor of any product discussed in the work.

Relationships with Others
- Members should treat their research employees with respect and should compensate them fairly for their work.
- Members should protect and promote the interests of their employers, provide competent work, adhering to these broader guidelines, and protect proprietary information.
- Members should treat students with respect and refrain from exploiting them under any circumstances.
- Members should provide competent, honest, and objective work for clients, adhering at all
times to relevant standards of conduct for conducting and reporting research.

Role of Professional Societies and Organizations

- ISPOR should publicize this code of ethics to members and nonmembers.
- ISPOR should strive for a balance in sponsorship of its conferences and other activities, thereby avoiding the appearance of bias or conflict of interest.
- Because, as a practical matter, most funding will come from commercial interests, ISPOR should issue its own statement of objectivity and autonomy from sponsors.
- ISPOR should strive to assure that its journal, *Value in Health*, publishes only articles that have gone through a rigorous peer review process.
- ISPOR should have a Board of Directors that is representative of the various constituencies the society serves.
- ISPOR program, planning, and selection committees should have membership representative of all of its major constituencies.