ASAE Foundation Research Series

Responsible Conduct of Research

The Roles Associations Play in Promoting Research Integrity

By Patrick Glaser, MA, MPA, Samantha Dina, and Sharon Moss, PhD, CRA, CAE

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Published by Association Management Press, an imprint of ASAE: The Center for Association Leadership

Electronic Edition:
ISBN-978-0-88034-381-7

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Acknowledgements

The ASAE Foundation would like to thank the association executives who participated in the research study, and in particular those participants who agreed to be cited in this report:

Mark G. Doherty, MBA, MS, CAE, Executive Director, EMDR International Association
Howard Fienberg, Director of Government Affairs, Marketing Research Association
Martin Frank, PhD, Executive Director, American Physiological Society
Sue Sedory Holzer, MA, CAE, Executive Director, Society of Interventional Radiology
Heather Hunt, Executive Director, Southern Association of Orthodontists
Susan King, PhD, Senior Vice President, Journals Publishing Group, American Chemical Society
Edward Leibow, PhD, Executive Director, American Anthropological Association
Patricia Paluzzi, CNM, DrPH, President and CEO, Heathy Teen Network
Sangeeta Panicker, Director of Research Ethics, American Psychological Association
Arlene Pietranton, PhD, FASAE, CAE, Chief Executive Officer, American Speech-Language-Hearing Association
Margaret Rogers, PhD, Chief Staff Officer, Science & Research, American Speech-Language-Hearing Association
Frederick P. Somers, Executive Director, American Occupational Therapy Association
Ann Turner, PhD, FASAE, CAE, Executive Director, American Association for Laboratory Animal Science

Introduction

ASAE Foundation conducted the research summarized in this report to gain a better understanding of the role that associations play in promoting research integrity and to describe the myriad ways associations complement other resources—research journals, research institutions, funding agencies, and others—to support the responsible conduct of research. Professional associations are viewed as influential stakeholders in the global pursuit of advancement of knowledge, whether it be through the research they conduct themselves (on behalf of their discipline) or by promoting and sponsoring research conducted by their members. This speaks to the need to continually make the responsible conduct of research and adherence to established practices of research integrity paramount in the research agenda of the association.

This report is primarily written for associations that conduct research internally, sponsor research conducted externally, or have members that conduct research within their discipline. It is our hope that it will encourage staff and volunteers to examine the way in which research integrity is fostered by their association, and consider the opportunities that may exist, given their unique position in this space, to further enhance those efforts. The report includes sections that highlight distinct topical areas of responsible conduct of research integrity. The report also includes case examples provided by association leaders that may serve as exemplars of the varied kinds of opportunities that exist for associations to promote research integrity throughout the work they produce, sponsor, and support on behalf of their members.

We trust this report will provide valuable insight into the unique position professional associations hold in contributing to the advancement of principles of research integrity as it relates to the research produced by and about the professions they represent.

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Background

The Value of Research

Research and science drive an enormous level of economic activity. It is expected that around $1.6 trillion dollars (USD) will have been spent globally on research and development by industry, governments, and nonprofits in 2014 (Global Funding Forecast, 2013). This investment produces new technologies, life-saving medicines, and new, efficient means of production. However, the benefits of investment in research extend beyond the creation and application of knowledge. Research also has a direct impact on the education and wealth of society.

In the United States, for instance, research forms the foundation for much of the country's higher education. It enables leading scientists to be educators and to transfer learned knowledge to students. Research also increases employment opportunities. For example, in 2014, it is estimated that research activities will have directly affected 2.7 million workers as well as supported the employment of 6 million others in the United States (Global Funding Forecast, 2013).

Conducting a systematic investigation—through research—is often the best way to answer questions that may arise in the course of one's professional work. This holds true for questions that are raised in the association management environment as well as in other professional settings, whether they be clinical, technical, medical, educational, or otherwise. Certainly, one benefit of research is that it serves as a critical foundation upon which practices, policies, and processes are advanced. Research can contribute to the fund of knowledge used as the basis for critical and strategic decision-making in any professional area. Research is also of value in that it serves as a vehicle for gathering knowledge about issues confronted in the course of service delivery and product development, thereby testing theories and validating practices and approaches.

The benefits of research extend beyond a profession's immediate environment; federal, state, and local regulatory bodies and legislators are often influenced by the results of the research process in their decisions about the development of policies, practice guidelines, and services. Not only is research important to sustaining the vitality of a discipline, but its value must be understood regardless of where one is engaged in the research process. Being a knowledgeable consumer of research allows one to make informed decisions about the implications of research outcomes and facilitates a greater knowledge base from which to create effective programs. Indeed, sound, rigorous research is essential to the sustenance and endurance of a discipline.

Whether actively conducting and directing a research activity, participating on a research team, or engaging in research as a knowledgeable consumer, it is essential that research be conducted in an ethical environment that promotes research integrity.

Research Integrity

Conducting research involves many complexities, including balancing limited resources with research quality, ethical concerns with data integrity, and transparency with intellectual property. This has given rise to the concept of "research integrity," which Nicholas H. Steneck (United States Department of Health and Human Services, Office of Research Integrity) defines as *the quality of possessing and steadfastly adhering to high moral principles* and *professional standards, as outlined by professional organizations, research institutions and, when relevant, the government and public* (2006)[1].

Understanding how to apply the definition of research integrity can be difficult, leading to cases of poor-quality research, questionable research practices, and even research misconduct. As representative bodies, associations have the opportunity, or perhaps an obligation, to assist researchers and the fields they represent by providing learning, resources, and tools that enhance their understanding of sound ethical practices and increase the likelihood of direct application of that knowledge when engaged in all aspects of research.

Associations are in a unique position to engage in this arena—promoting responsible conduct of research—through multiple avenues: on behalf of their members who conduct research, through the external research an association sponsors, and in the internal research associations conduct themselves. Some of the reasons associations are well-suited are outlined in Table 4.2 on page 12.

This report examines the role of associations in promoting research integrity and provides a number of association-specific solutions for disseminating learning, resources, and policy guidelines on the topic of research integrity. It is intended that this report will offer association executives and senior staff with information to assess the opportunities their association may have to further expand their role in promoting research integrity, as well as clear models for addressing questions about research integrity in their organization and in the industry they represent.

Framework for Research Integrity

This report is organized around a framework described in detail in *Introduction to the Responsible Conduct of Research* (Steneck, 2007) and frequently referenced throughout the literature. The Office of Research Integrity (ORI)[2] published Steneck's framework as a practical guide to understanding common areas of concern related to research integrity. The domains include:

- Protection of human subjects
- Welfare of laboratory animals
- Conflicts of interest
- Data acquisition, management, sharing and ownership
- Mentor-trainee responsibilities
- Collaborative science
- Authorship and publication practices
- Peer review
- Research misconduct

[1] Steneck's publication is available online through the Department of Health and Human Services, Office of Research Integrity at http://ori.hhs.gov/

[2] The United States Department of Health and Human Services (DHHS) established ORI in 1992. The office helps to promote research integrity by providing policies, conducting research monitoring and review, and performing other related activities.

Steneck's framework is used to more easily highlight measures associations take to address issues in relevant areas of responsible conduct of research. For each domain (e.g., human subjects, peer review), a primer is provided on the ways research integrity is promoted by the government and other entities to provide context to association leaders on how these issues are currently being (and not being) addressed. Each section also includes examples employed by participants in this research study to support research integrity, key takeaways for executives from the section, and questions for executives to consider in relation to research integrity issues in that area. A list of general questions to consider relating to developing a research integrity strategy is included in the Solutions and Recommendations section (see page 24).

Methodology

ASAE Foundation commissioned consulting firm McKinley Advisors (McKinley) to conduct the research project. The first phase of data collection launched at the 2014 ASAE Annual Meeting and Exposition (ASAE Annual Meeting) in Nashville, Tennessee. At that time, 10 association executives participated in one-on-one interviews to describe their perspectives on the roles and responsibilities associations may assume in promoting research integrity. What emerged early in the process were a diverse range of perspectives and specific ideas about how associations might support research integrity efforts. These initial interviews informed the direction of the project, and they provided insight into how to best structure the remainder of the data collection efforts to maximize opportunities to capture rich, contextual data.

The remaining 35 interviews were conducted by telephone between September and November 2014. Only minor modifications were made to the discussion guide to allow for more targeted inquiry into specific areas.

For the purposes of this pilot study, the research participants included associations in the healthcare, science, and engineering sectors. These associations were selected because of the large number of members identified as researchers, and the level of research the associations have in sponsoring and/or conducting research themselves. Although the sample represented a narrowly defined population, associations of other types are likely to find valuable applications of the findings. In total, representatives of 45 associations were interviewed, including 33 healthcare and 12 science/engineering organizations. Participants were recruited from the ASAE member database and through the Council of Engineering and Scientific Society Executives (CESSE) electronic mailing list.

Results from the interviews were "coded," or quantified, in order to provide statistics throughout the report (e.g., "35 out of 45 associations..."). Each interview was also analyzed in order to identify critical points of information. Several case examples are described throughout the report. A complete list of organization-wide research integrity initiatives described by study participants is displayed in Table 4.2 (see page 28).

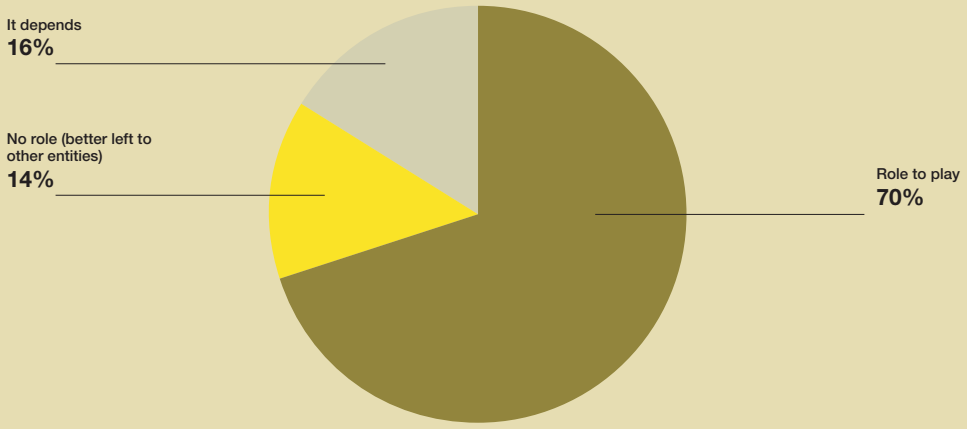
Views on the Role of Associations in Promoting Research Integrity

Associations participating in this study vary in the amount of research they conduct and/or sponsor and in the amount of research their members conduct. Ninety-five percent of associations participating in the study have members who conduct research. A number of these associations promote member research through the association's peer-reviewed journal or other scholarly publication outlets. Additionally, 82 percent of associations that participated in the study conduct research internally. Broadly speaking, this includes research conducted by association staff as well as research that may be undertaken by contracted vendors. Examples include

- Member surveys (including satisfaction studies, conference/meeting evaluations, etc.)
- Product development research
- Advocacy/policy position surveys
- Benchmarking studies
- Economic-impact research
- Industry research (e.g., salary survey, member usage of products)
- Social science research
- Publicly funded scientific research

Chart 4.1

Should associations play a role in promoting research integrity?



A strong majority (70 percent) of participants reported that associations have a responsibility to promote research integrity. An additional 16 percent thought that the association's role was situational. As Sue Sedory Holzer, executive director of the Society of Interventional Radiology (SIR), stated in her interview, "Research integrity goes with the ethical fabric of who we all are. I believe professional organizations have an obligation to establish ethics principles and ask their members to follow these in codes of ethics."

Dr. Edward Leibow, executive director of the American Anthropological Association (AAA), noted that his organization had a number of outlets for promoting research integrity and issues of ethics, including

> "…workshops at meetings, an active blog in which information is exchanged and people comment regularly, and a syllabus exchange in which university-level course syllabi are available for people to use in their classroom. Additionally, we have a standing committee on research ethics that is on call to provide consultations as the need arises. We are also a member of the Coalition on Publishing Ethics which has a specific set of guidelines for journal editors."

Participants supportive of associations assuming a deliberate and intentional role in advancing research integrity expressed a sense of shared responsibility with other entities and institutions. Associations were described as having

- A "calling" to encourage the highest standards within the field;
- A unique understanding of specific issues and ability to organize the field; and
- The ability to represent the field and promote the importance of research in a single voice.

Fourteen percent of participants did not believe it was necessary for associations to assume a specific role in promoting research integrity. Those executives indicated that the responsibility of promoting research integrity could be better left to others, citing primary reasons as resource constraints, the inability to effectively promote research, and a misalignment with the association's mission and priorities. The table below summarizes the both points of view.

Table 4.1: Reasons for/against Association Involvement in Research Integrity

Pro	Con
▮ Opportunity to provide benefit that members cannot provide to themselves ▮ Unique position to organize and clarify ▮ Consistent with focus of association ▮ Best positioned entity to understand specifics	▮ Potential liability issues ▮ Limited resources ▮ Limited effectiveness ▮ Not focus of association

While not every association will find it appropriate or feasible to provide support in the area of research integrity, the amount of interest in research integrity as a relevant issue for professional associations indicates that such a role in advancing research integrity does exist. The following table outlines the three major factors that give associations an advantage in promoting research integrity over other regulatory bodies.

Table 4.2: Associations and Research Integrity

1. Associations are qualified to promote research integrity. Associations are created by members of a field or trade. In this sense, they are representatives of the field with unique authority to share knowledge and education, to set standards, and even to resolve disputes.	2. Associations are a means to self-regulation. Associations have an intimate knowledge of issues within a field, are up-to-date with trends and new developments, and promote an ongoing dialogue among members. In many cases, external entities, such as government lawmakers and agencies, do not possess the depth of knowledge that associations represent and, consequentially, may be less able to minimize unintended consequences of rules, regulations and standards.	3. Associations have very broad reach and influence. Many research integrity standards and resources are developed by governments and may be limited by geographic boundaries. However, associations may have large, international memberships. The reach of associations can extend beyond national borders and even the field itself.

Opportunities to Promote Integrity in Members' Research

During the course of this study, association professionals routinely provided detailed descriptions of the ways in which their organizations promote research integrity among members. Many associations, particularly those that represent industries heavily engaged in research, have found it beneficial, even necessary, to actively promote and enforce research integrity as part of their overarching mission. Other associations have found the promotion of research integrity a complementary aspect of the support they provide their members more broadly.

This portion of the report describes the examples captured through in-depth interviews in the context of Steneck's responsible conduct of research (RCR) framework. Each domain (e.g., human subject research) includes 1) a definition, 2) a brief explanation of regulations that govern that area (e.g., laws protecting humans in research), and 3) examples of how associations have addressed this area in their efforts to promote research integrity. Note that only those domains that were mentioned by research participants during the in-depth interviews are included below (human subjects, animal subjects, conflicts of interest, authorship, data management, research misconduct). Readers are encouraged to consider the needs of their respective associations and the industries they represent with regard to creative, direct application of these efforts.

Human Subject Research

Background: Research with humans as research participants occurs in medical, healthcare, social sciences, and other fields and industries. It is regulated to ensure the safety and privacy of individuals, and to make certain participants are informed about the research and have given their consent to participate. These rules also help to ensure that the research is justified and that the risk to humans has been minimized.

Regulation of human subject research in the United States occurs through the following:

- **Federal, state, and local government:** The federal government regulates research that is conducted with public funds. This includes a mixture of laws, rules and guidelines.[3] Additionally, a myriad of federal information privacy laws (e.g., HIPAA) include research that collects various personal and sensitive information from human participants.[4]

[3] Steneck notes that these laws and regulations impact about one-third of R&D research and one-half of basic research in the USA (Steneck, 2007).

[4] The numerous federal, state, and local laws, and government agency regulations, rules, and guidelines are complicated to navigate (which provides an opportunity for associations to help their members understand these issues). Steneck recommends that researchers seek additional advice and assistance in order to fully understand the tapestry of norms, rules, and requirements. Beyond rules and regulations, there may be additional requirements that vary from agency to agency. For instance, the National Institutes of Health (NIH) mandates continuing education requirements in the protection of human subjects for researchers that seek NIH grants. (Steneck, 2007).

- **Institutional policies:** All research institutions (universities, hospitals, private research companies) that accept federal funds must use review boards and accept other policies that protect human subjects (Steneck, 2007).
- **Associations:** Associations may develop standards, codes of ethics, and guidelines pertaining to human subject research.[5] As noted above, associations create such standards and codes to fill gaps in existing provisions, as a means to self-regulate on behalf of their members' industry, and as a platform for the member profession to define its own code.

Associations and Human Subject Research: Fifty-five percent of the associations in this study represent members that conduct research with human subjects. Nearly all of them offer one or more initiatives to help ensure research integrity; these include training programs, mentoring, group programs, and other resources. Even a resource such as a set of guidelines provides solid philosophical ground for members' reference and protection. In a discussion with Dr. Martin Frank, executive director of the American Physiological Society, Dr. Frank noted APS and its members benefit from the guidelines the organization has produced because these statements provide "guidance on how to conduct ethical experiments using…human subjects. The statements also establish a standard across our member community for good practice in experimental design, ethical considerations, and reporting results." APS' guidelines are applied by members nationally and internationally, ensuring that industry self-regulation does not end at national boundaries.

Participants in this study that represent members that conduct human subject research have created a diverse set of research integrity programs. In some cases, the programs focus specifically on human subject issues; in others, the programs are a part of a body of programs that address integrity issues in research more generally. The solutions presented by these associations range from comprehensive educational programs to volunteer-driven presentations. The American Speech-Language-Hearing Association (ASHA) provides accreditation coursework for its members, in addition to online resources and access to outside sources for grants and ethics training. On the other hand, the American Occupational Therapy Association (AOTA) recruits the best-qualified and informed volunteers to lead training initiatives at conferences.

Despite the range in complexity, it is interesting to note that many steps associations take to support their members require few resources while still being very effective. For instance, relevant government or other industry-related resources already compiled may meet the needs of an organization to help train researchers on issues related to human subject research.[6] These publications may be accumulated and made available to members with little cost to the association.

These findings suggest that the majority of the resources offered by associations to their members are in the area of training and education.

Key takeaways

Research involving human subjects is highly regulated with a variety of regulatory bodies offering ethical guidelines. That does not mean, however, that an opportunity does not exist for associations to provide the industry they represent with guidelines, education, and training. Associations can address any gaps in knowledge that may exist—or opportunities to reinforce—what may already be provided by other entities via coursework, conferences, and workshops, and online training.

[5] Adherence to these documents may be voluntary or enforced by the organization. Further, the enforcement of standards may be limited to members or applied to non-members as well.

[6] Multiple government resources exist to provide training in human subjects research and other topics covered in this report. For instance, the Office of Research Integrity aggregates and publishes a variety of topics on its website: http://ori.hhs.gov/human-subject-research-0

Questions to consider when research is conducted with human subjects (by members or by the association staff):

- What are your members' sources for human subject research integrity guidelines? Institutional codes of conduct? National laws? Industry statements?
- What gaps exist between the regulations provided by different institutions, nations, or associations? Is there an opportunity for your association to address those gaps effectively?
- When questions or concerns about research integrity arise, how do your members address these questions? What resources do they have to establish their understanding of ethical practices?

Animal Subjects

Background: Animals are commonly used as subjects in scientific and medical research. Unlike humans, animals are not able to provide consent and are oftentimes not the primary beneficiaries of information gained from research activities. However, research that utilizes animal subjects also must adhere to several sources of rules and regulations.

Regulation of animal subjects research in the United States occurs through:

- **Federal Government:** Two federal laws, the 1966 Animal Welfare Act and the 1985 Health Extension Act, create the framework for the regulation of animal subjects research in the United States. The United States Departments of Agriculture (USDA) and Health and Human Services (DHHS) are also involved in regulating research conducted with animal subjects (2007).[7]
- **Guide for the Care and Use of Laboratory Animals (Guide):** The National Research Council of the National Academy of Sciences maintains the Guide. It covers a range of facility policies from transportation, housing, care, and use of animals.[8]
- **Institution Animal Care and Use Committees (IACUC):** Research institutions that do animal subjects research are required to have a committee that reviews research proposals, inspects facilities, and ensures research is conducted in compliance with regulations.
- **Associations:** Associations play a variety of roles in the regulation of animal subjects research. These include standard setting and other activities. For example, the Association for Assessment and Accreditation of Laboratory Animal Care (AAALAC) accredits animal use programs with the goal of "promoting the humane treatment of animals."

Associations and Animal Subjects Research: Seven of the 45 associations (16 percent) in this study represent members that use animal subjects in research. Several respondents noted specific resources provided by their association to assist researchers in working with animal subjects and in understanding the best practices associated with this aspect of their research. Further, nearly all of the seven associations provide general resources for the research conducted by members.

Resources offered by associations include training, the use of an ethics officer, guidelines and standards, and other programs. For example, the American Association for Laboratory Animal Science (AALAS) creates training for IACUC members. According to Ann Turner, AALAS's executive director, "We provide that training that the educational system

[7] Steneck encourages researchers that do animal subjects research to be familiar with both the USDA animal welfare regulations as well as the PHS Policy on Humane Care and Use of Laboratory Animals.

[8] Steneck notes, "(it) is accepted by both government and research institutions as the most authoritative source of information on most animal care and use situations." (2007).

doesn't provide. In our area, the care of the animals is related to the research results." Turner believes these efforts are beneficial to AALAS members and to the greater public:

> "Webinars offer intensive instruction on specific topics and afford the opportunity for participants to learn about the most current and critical issues. The educational offerings from AALAS benefit the research community and the public at-large by enhancing the knowledge and skills of the professionals who care for the animals, thus enhancing the research process and outcomes."

This type of training may be particularly valuable since many of the regulations and guidelines that address the use of animal subjects in research tend to focus on the institution as the primary responsible party, providing less emphasis and education for the individual researcher. Similar to human subjects, this creates an opportunity for associations to provide training and education to its members who conduct research using animals.

Interviewees also described that research with animal subjects can be subject to high levels of scrutiny and public concern, at times driven by animal advocacy organizations. This may create a unique set of issues for researchers who must cope with these concerns. Associations should be aware of this perspective when considering research integrity resources.

Key Takeaways

Like human subject research, animal subjects research is a carefully monitored and regulated field. But the opportunity remains for associations to ensure that guidelines and policies are evenly applied and enforced across their industries. Associations can also address gaps in member education, focusing specifically on areas of ethical concern and how to address them. Finally, as representatives of an industry and the professionals in that industry, associations are ideally positioned to protect their members and address members' concerns related to research integrity.

Questions to consider when research is conducted with animals (by members or by the association staff):

- What are your members' sources for animal subjects research guidelines? Institutional codes of conduct? National laws? Industry statements?
- What gaps exist between the regulations provided by different institutions, nations, or associations? Is there an opportunity for your association to address those gaps effectively?
- When questions or concerns about research integrity arise, how do your members address these questions? What resources do they have to establish their understanding of ethical practices?

Conflicts of Interest

Background: Research often involves multiple parties and individuals. These include researchers and support staff, funders, publishers, and many others. Steneck describes that conflicts of interest are an inherent part of today's complex environment, and may arise out of financial or professional pressures, conflicts of commitment (competing demands between time and loyalty), and/or personal or intellectual conflicts. Many policies exist to help researchers manage these issues (2007):

- **Financial and intellectual property conflicts:** Research requires financial resources and may result in valuable information and intellectual property. The costs and benefits of research may create conflicts of interest for those involved in a project. As a result, many states and state agencies, the Public Health Service (PHS), and the National Science Foundation (NSF) have conflict-of-interest policies for research institutions. Associations and societies may also have conflict-of-interest policies related to their journals.
- **Conflicts of commitment:** In addition to financial conflicts, there may be additional conflicts that arise out of non-financial benefits. For example, researchers oftentimes gain valuable personal knowledge from publicly funded projects. As such, federal government-funded projects have rules that direct how time is allocated for projects (i.e., including paid speaking engagements) (Steneck, 2007). Other types of institutions may also have "conflict of commitment policies."
- **Personal/intellectual conflicts:** Personal and intellectual conflicts may be among the most difficult conflicts of interest to detect. They include deep-routed beliefs and convictions that are hard to detect. Research stakeholders may minimize this as a concern by providing resources to those involved in the research process.[9]

Associations and Conflicts of Interest: Nearly every interviewee cited at least one type of conflict of interest that affects the organization's members. Primarily, associations have minimized conflicts of interest through statements and policies that clearly define possible conflicts for researchers. These are helpful in clarifying expectations and establishing transparency for members with respect to association activities and programs. They are used by publishers of research journals, with association committees, and are even applied to association policies (such as in describing funding requirements for sponsored research).

Some associations take additional measures to ensure that conflicts of interest are appropriately reviewed. The American Physiological Society (APS) has an ethics officer on staff who handles questions related to submissions and publication. This process allows conflict of interest and other ethics questions to be addressed consistently and authoritatively. It also provides a centralized office for communicating with authors and clarifying ethics concerns. As Martin Frank of APS noted, "Having an office tasked to facilitate these communications and educate our authors saves time and effort for all stakeholders involved." ASHA's mentoring program is another means by which experienced researchers can share insight on all aspects of research integrity issues, including conflict of interest and other authorship, publication, and peer-review questions.

Key Takeaways

Associations have the opportunity to provide resources to their members about addressing conflicts of interest, for example in the context of establishing research collaborations, in receiving external funds to support research, or in the peer review and publication process. Associations might produce their own resources or provide access to learning opportunities, and they can be conduits to resources developed by other entities (e.g., Office of Research Integrity).

Questions to consider in addressing conflicts of interest in planning, conducting, or disseminating research (by members or by the association staff):

- What are your members' sources for conflict of interest guidelines? Institutional codes of conduct? Journal requirements?
- How do your members learn about these sources?
- What gaps exist between the regulations provided by different institutions, journals, or associations? Is there an opportunity for your association to address those gaps effectively?

[9] For example, the National Academy of Sciences considers the professional history and biographies of individuals for conflicts when arranging advisory panels (Steneck, 2007).

- When questions or concerns about conflict of interest arise, how do your members address these questions? What resources do they have to establish their understanding of ethical practices?

Authorship and Publication

Background: An additional area of importance in research integrity is authorship and publication. As Steneck points out, researchers are expected to competently and truthfully maintain several important principles (2007):

- Present and report results truthfully and accurately
- Give appropriate credit to others for their work
- Maintain appropriate standards of reporting

Guidelines for authorship and publication exist, but they vary across fields. Moreover, publications and presentation venues may each have their own standards of reporting.

Associations and Authorship and Publication: Nine interviewees (20 percent) said concerns of authorship and publication affect their members. Several associations provide resources to assist members in managing those issues. Examples of resources include the use of an ethics officer, standards and guidelines, journal standards and peer review, and other programs.

Associations that publish research have a vested interest in promoting integrity in authorship and publication. The prestige and impact of journals and other publications is directly related to quality of content. Given this, a number of creative solutions have been used by associations in promoting quality authorship and research publication. These include publication standards, training, and direct guidance to members. APS used the expertise of their publications committee to create a "Publishing 101" course and reporting guidelines to educate authors preparing papers for publication. APS found the course required minimal effort on the part of association staff; volunteers already familiar with the information compiled and presented the course materials.

There are also external resources, available through such places as the Office of Research Integrity and the Committee on Publication Ethics (COPE), which may be synthesized and made available to members of an association. The American Chemical Society (ACS) is a member of COPE, a nonprofit that focuses on publication ethics. In return for this membership, ACS receives advice on research and publication ethics to help craft ACS' statements and guidelines. AAA is also a member of COPE and also makes use of COPE's guidelines for publication concerns. These materials and external information sources create an opportunity for associations to assist members in this area without having to develop a completely new set of resources.

Key Takeaways

Authorship and publication are important aspects of the research process. Existing journals and scholarly publications offer a built-in opportunity for many associations to promote responsible research practices. Key resource compilations may be provided by science-, engineering-, and social science-based associations that publish research or by organizations that promote research integrity in publishing. Associations may use these existing resources or extract from them to create their discipline-specific guidelines and education programs for professionals in their industry.

Questions to consider in addressing authorship and publication concerns when disseminating research (by members or by the association staff):

- What are your members' sources for authorship and publication guidelines? Institutional codes of conduct? Journal requirements? Other associations' guidelines?
- How do your members learn about these sources?
- What gaps exist between the codes provided by different institutions, journals, or associations? Is there an opportunity for your association to address those gaps effectively?
- When questions or concerns about authorship or collaboration issues arise, how do your members address these questions? What resources do they have to establish their understanding of ethical practices?

Data Management

Background: Research produces data that are valuable to researchers, sponsors of research and many others. Because of this, good stewardship of data is important to ensure that intellectual property is protected and used in an appropriate way. In human subject research, data management is also important in protecting participants since sensitive or confidential information may have been collected. Steneck notes several particularly important aspects of data management:

- **Data ownership:** Data ownership may vary between funding organizations, the research institution, and researchers.
- **Data collection:** Researchers must often juggle practical resource limitations and time constraints with the need to collect accurate and reliable data.
- **Data protection and sharing:** Many researchers collect and store sensitive information, including research participant's identities, health records, financial data, personal opinions and beliefs, and other private and protected information. Violating data privacy may result in harmful consequences to research participants, including financial or job loss, personal embarrassment, and other significant troubles.

Associations and Data Management: Associations may create resources to address these and other data management issues, including guidelines, standards, and educational programs that provide direct assistance to members.

Many associations will find it worthwhile to offer data management resources. Moreover, data protection is becoming increasingly complicated as advances in technology create new types of data to manage and new ways to store and share information. Referring to clinical study observation techniques, Mark Doherty, Executive Director of EMDR International Association, noted, "You may be able to review a video in a small group environment but (there is also risk)—you have to make sure that the recording does not end up on YouTube." The Marketing Research Association (MRA) promotes responsible research practices with an enforceable code of standards that define "specific privacy practices members agree to maintain and follow." MRA also publishes best practice papers, holds seminars on privacy topics, and has even offered privacy audits to its members.

Key Takeaways

Associations may consider assisting their members in managing data issues (collection, sharing, storage, and so forth) through producing standards, guidance, training and other resources on data management. Unfortunately, many researchers have not had the benefit of adequate training in this area, particularly as the pace of technological advances continually changes modes of data collection and systems of data management. Associations can offer preparation and guidance for researchers that face data management challenges through enforceable standards,

models of best practices, and educational outreach.

Questions to consider in addressing data management issues for research conducted (by members or by the association staff):

- What sort of data do your members collect during the course of their research? What are common methods for managing that data?
- How have these data types and methods for managing changed in recent years? How will they change in the years ahead?
- What are your members' sources for data management guidelines? Institutional codes of conduct? Other associations' guidelines?
- How do your members learn about these sources?
- What gaps exist between the regulations provided by different institutions or associations? Is there an opportunity for your association to address those gaps effectively?
- When questions or concerns about data management arise, how do your members address these questions? What resources do they have to establish their understanding of ethical practices?

Research Misconduct

Background: The United States Office of Science and Technology Policy (OSTP) defines research misconduct as *"fabrication, falsification, or plagiarism in proposing, performing, or reviewing research results."* Misconduct must be intentional, as in the case of an individual knowingly presenting false or incomplete results or appropriating another person's work or ideas.

Regulation of research misconduct in the United States occurs through

- **Federal Requirements:** Research conducted with the use of public funds must meet certain criteria, including requirements that research institutions define misconduct, and establish appropriate policies for ensuring allegations of misconduct are reported and investigated. They must also protect both whistleblowers and those accused of misconduct.[10]
- **Institutional Policies:** Research institutions have policies that generally cover federal requirements but include additional features as well. They often concern federal rules, abuse of confidentiality, authorship, and responsibilities to report misconduct and not be obstructive of investigations thereof. They also include provisions that research should adhere to commonly accepted practices (Steneck, 2007).
- **Associations:** Associations can play a role in preventing, minimizing, and responding to misconduct. They may develop standards of practice, provide training and education, and may help to settle disputes that arise within a profession. Associations can play or facilitate the self-regulation of a field.

Associations and Research Misconduct: Steneck notes that the federal definition of research misconduct may be a minimum standard, and not the "ideal." (2007). Associations are uniquely situated to promote a greater standard of ethical conduct in research as they often

[10] Steneck notes that many institutions have instituted these policies for all research regardless of whether funded by public money (2007). Additionally, funding agencies may have their own requirements for research misconduct. For example, any research funded by Public Health Service (PHS) must meet certain procedural requirements.

- exist as an objective entity in fields that maintain diverse interests and positions;
- serve as a communication hub for new trends and developments in the field; and
- are able to bring respected members of the field together for common purpose.

The associations that participated in this study have created a variety of resources related to research misconduct, including financially supporting training for researchers, providing education and training, and government advocacy. One association interviewed addresses the needs of their members by supplying federally required continuing education in research ethics. There might be other sources for these credits, but according to the executive, "it is worthwhile for [our association] to offer these credits as this allows the association to play a role in training the next generation."

Key Takeaways

Research misconduct encompasses a variety of concerns regarding research practices. Associations are often well-positioned to offer impartial recourse and adjudication when instances arise. Services such as advocacy, standards review and enforcement, and education and training may help individual researchers as well as the larger community of scientists.

Questions to consider in addressing research misconduct (by members or by the association staff):

- What are your members' sources for research misconduct guidelines? Institutional codes of conduct? Journal requirements?
- How do your members learn about these sources?
- What gaps exist between the regulations provided by different institutions or associations? Is there an opportunity for your association to address those gaps effectively?
- When questions or concerns about research integrity arise, how do your members address these questions? What resources do they have to establish their understanding of ethical practices?

Opportunities to Promote Integrity in Association's Research

Research Conducted by Associations

As noted previously, eighty-two percent of the associations that participated in the study conduct research directly. The most common type of research reported is member surveys although many different examples of research were offered by participants in this study, including industry research and benchmarking, social science and scientific research, and product development research.

A variety of approaches are taken to ensure the integrity of research. These vary from informal guidelines to comprehensive policies driven by legal and ethical requirements. For example, one association noted that any research data collected by the association is only accessible to one staff member and is housed on a server that meets the standards of the U.S. Department of Health & Human Services' HIPAA Security Rule.

Associations ensure the integrity of research they conduct or sponsor through adherence to internal policies, hiring qualified research staff, and collaboration with competent partners. One participating association has a detailed review process for internal research that can include an internal review board (IRB), if necessary. Healthy Teen Network (HTN) hired a full-time researcher/evaluator to assess HTN's internal research practices and create reports and resources for the field. The researcher is trained in public health industry protocols and applies those codes and policies to her own work for HTN and HTN members.

Key Takeaways

Associations have a vested interest in ensuring that research integrity is upheld in any research they conduct. Typically this is done through internal policies, careful selection of consultants and collaborators, and validation of results. It is also important to note that associations themselves are a model for the members they represent. Establishing and maintaining adequate internal research integrity resources will help to ensure the reputation of the association as well as promote research integrity to members.

Questions to consider when establishing research integrity policies and practices to guide internal research:

- How would you define your internal research integrity guidelines? Where are these definitions posted for your membership?
- Who in your association is responsible for ensuring the integrity of research performed by the organization?
- What guidelines are in place in the event concerns are raised about internal research?
- Do you have/need policies in place for collaborations with other institutions?

Research Sponsored by Associations

In addition to conducting research directly, associations will often sponsor, or offer grants, for its members to conduct research as a way to generate information for the field they represent. Sixty-four percent of associations in this study sponsor or provide grants for research. These may include studies to advance knowledge of a field, or projects to describe or collect vital information for members that are unlikely to be undertaken by members themselves (e.g., industry data, quality outcomes, patient satisfaction).

Research integrity should not be any more difficult to ensure for association-sponsored research, where design, data collection, analysis, and reporting are conducted by an outside partner(s). Associations still have the opportunity to develop policies and apply standards to the work conducted by external consultants, partners, or grant recipients. For example, AOTA ensures that its sponsored research review panel members have experience with the National Institutes of Health (NIH) guidelines, which AOTA mirrors, so reviews can in turn ensure that the sponsored research meets AOTA's ethical guidelines.

Key Takeaways

Any research sponsored by an association will impact its reputation, and may even impact the reputation of the industry it represents. Associations may find it advisable to review internal standards to ensure they are adequately promoting research integrity for any sponsored research. In addition to internal standards and protocols, many associations in this study utilize independent panels and peer review processes to ensure research quality and integrity.

Questions to consider when addressing an association's policies and guidelines for managing sponsored research:

- What considerations do review panels make regarding the research integrity of proposed projects?
- What criteria do your review panels use? Where is it defined?
- How do you make researchers aware of your guidelines?

Solutions and Recommendations

Research may help inform the growth and direction of technology, science, healthcare, and the economy. A growing number of industries, including the association industry, are dedicating greater time and resources to conducting research. Given the unique ability of associations to represent an industry across national and international boundaries, it is not surprising that many association executives find that professional organizations have a definitive role to play in promoting ethical practices related to these research activities.

This report has highlighted numerous ways in which associations have established a role in promoting research integrity. This presence has been demonstrated in the research agenda of the organization's own internal research efforts, and in the research that it supports of its members. The results of this pilot effort clearly identify a number of methods and practices associations employ to ensure integrity in the research of the organization, the industry, and its membership.

As several executives noted, relatively low-cost and low-maintenance options—such as providing a statement or code of ethical guidelines for industry professionals—can be the most effective resource for protecting members and defining the expectations for research integrity for the profession. Integrating existing research integrity publications and training resources (produced by other sources) for members is another low-impact avenue for promoting research ethics among members.

In other cases, associations may find that, given the role of research in their industry, it is beneficial to promote research integrity through more expensive, complex, and/or more time-intensive solutions, including peer-reviewed journals, educational seminars, accreditation and certification programs, and other outreach activities.

Volunteer committees may help shoulder this burden, and, indeed, volunteers may be the best resource for understanding what an industry needs to support research integrity. ASHA uses multiple volunteer committees that guide and support staff efforts in addressing research integrity and publication ethics. ASHA has also developed mentoring programs for students and young researchers in order to ensure that emerging professionals are properly trained in ethical guidelines. Volunteers can mine existing resources to develop an association's own set of guidelines, develop coursework and lead presentations, and oversee investigations into misconduct.

Some associations have found that investing in full-time staff to serve as a centralized point of contact for questions and needs of the membership around research and research integrity is a worthwhile investment.

The majority of associations that participated in this study represent members that actively conduct research. In many cases, associations have memberships that focus on research as some or all of their day-to-day work responsibilities. The experience of the participants provides insight into the delivery of research integrity resources. However, the magnitude and importance of research does not suggest that every association will find it appropriate to offer research integrity resources. Associations should first consider a variety of factors, including

- Alignment of issue with mission and strategy
- Market demand for resource(s)
- Program benefits and liabilities
- Resources provided by external sources (e.g., Office of Research Integrity)
- Resource requirements (financial and staff resources, expertise, information technology)

The following questions are intended to help guide association leaders in determining the suitability of research integrity programs to their associations:

1. What percentage of the association's membership conducts research?
2. What percentage of members will use the resources once they are developed?
3. What related organizations/institutions, if any, currently provide research integrity resources to members? Are these other sources aligned, or are there gaps in requirements that create confusion or concern among researchers?
4. Does providing research integrity resources align with association's mission, strategic priorities, and other goals?
5. What research integrity resource offerings are most likely to be successful in your association?
6. What are the long-term implications of the research integrity resource(s)? How often will they need to be updated or revised?
7. Are there any potential liability issues that need to be resolved and/or managed as part of providing the resource(s)?
8. What level of staff and/or volunteer commitment is necessary to create and maintain the research integrity resource(s)?
9. What total costs are anticipated to develop and deliver resource(s)? How do these compare to the benefits reaped by association and its membership?

Table 7.1, following, categorizes popular research integrity resources and describes several key considerations, including benefits and costs, for association managers. Table 7.2 summarizes the various methods that the participant associations use to support their members and to regulate their internal research integrity policies. Additionally, the appendix of this document includes several examples of research integrity resources that are offered by associations. We hope these examples will be a useful guide for associations examining their role in supporting research integrity.

Table 7.1: Benefits and Costs for Potential Research Integrity Support Activities

Research Conducted by Members		
Category	**Description**	**Benefits and Costs**
Training and education	**Single topic or comprehensive training in research integrity.** ▮ Delivered live or pre-recorded. ▮ Formatted as presentation, workshop, book/manual, training course, or other format.	Benefits: Promote responsible conduct of research through education, distribute knowledge and best practices to field, potential revenue source Costs: Staff resources, technology resources Effort Level: Varies/Customizable

Research Conducted by Members		
Category	Description	Benefits and Costs
Guidelines and standards	**Written policies that provide accepted practices in research integrity** ▮ May be broad (e.g., general principle) or specific (e.g., narrow rules). ▮ May be voluntary (i.e., guidelines) or required (standards). ▮ May be enforceable or unenforceable.	Benefits: Establish "norms" for field, increase efficacy of government affairs through self-regulation Costs: Staff resources, potential liability through enforcement process Effort Level: Moderate
Mentoring	**Peer-to-peer guidance and training** ▮ Structured as one-on-one or group-based. ▮ Delivered to students or early-career members. ▮ Directly facilitated or indirectly supported by association.	Benefits: Promote research integrity through education, offer engagement opportunities, leadership opportunities, networking Costs: Staff resources Effort Level: Moderate
External resources	**Resources and guidance from external organizations and/or individuals** ▮ Delivered by government, academic, nonprofit, or private sector. ▮ Publication, program or other service.	Benefits: Resource-efficient method of promoting high-quality research integrity resources to members Costs: Staff resources Effort Level: Low
Staff assistance	**Staff expertise provided to researchers** ▮ Provided by research staff or other experts (e.g., attorney). ▮ Include expert advice/opinion, review of materials, contractual engagement, or other service.	Benefits: Provide highly tailored and effective support to members, establish leadership in research integrity, potential revenue source Costs: Staff resources, potential liability Effort Level: Varies/Customizable
Research-on-research	**Research conducted or sponsored by association to advance research integrity within field** ▮ May be directed at improving research and/or research methods, or to grow substantive knowledge within the field (e.g., healthcare outcomes).	Benefits: Establish thought-leadership in research integrity, potential revenue source Costs: Staff resources, technology resources Effort Level: Varies/Customizable
Financial support	**Financial assistance for training, professional skills development, or other research integrity related activity** ▮ May include scholarships or funding to provide internal or external resources to members and/or researchers in field.	Benefits: Highly targeted efforts to deliver education and training in research integrity Costs: Staff resources, financial resources Effort Level: Varies/Customizable
Peer review	**Providing peer review and publication opportunities for research** ▮ May occur through multiple programs (peer-reviewed journal, conference/meeting).	Benefits: Directly impact research integrity through journal standards and publication of high-quality research, potential revenue source Costs: Staff resources, publication resources Effort Level: High

Research Conducted/Sponsored by Association	
Category	**Description**
Association policies and standards	**Policies, rules and procedures that govern the conduct of association conducted or sponsored research** ▮ May be formal or informal. ▮ May be specifically targeted to research activities or cover association procedures more generally (e.g., data management). ▮ May be internal association policies or an external organization's policies.
Member expertise	**Member provided guidance, review, support or oversight** ▮ May be structured (e.g., research committee) or unstructured (e.g., informal ad hoc advice). ▮ May apply to any aspect of research, from planning and conducting research to reporting findings.
Researcher qualifications	**Ensuring the qualifications and competence of researchers** ▮ May apply to association staff, contracted research suppliers, and/or investigators of sponsored projects. ▮ May be based on credentials, expertise, credentials, background checks, and/or some other factor(s).
Independent review	**External review of research** ▮ May be provided by member or external stakeholder. ▮ Provided for fee or gratis.

Table 7.2: Research Integrity Support Activities of Study Participant Associations

Resource Type	Participant Activities
Training and education	**In-person training** ▮ The American Anthropological Association (AAA) provides ethics workshops at meetings. ▮ The American Occupational Therapy Association (AOTA) offers ethics training at a sponsored research conference in collaboration with several of their university-based academic programs. They use federal guidelines to help prepare their members for the requirements of federal funding. ▮ AOTA also has a research-specific track at their national conference. ▮ The American Physiological Society (APS) established a professional skills training courses and a "Publishing 101" course to support members in developing necessary professional skills, including research integrity practices that are not emphasized in the academic setting. ▮ The American Chemical Society (ACS) offers publication workshops, including a module that deals with research integrity, through its ACS on Campus program. **Online courses and webinars** ▮ The American Association for Laboratory Animal Science (AALAS) offers webinars and more in-depth online courses in order to provide training and information that is not provided as part of the professional education for the industry. Course content is revisited every three years. **Professional accreditation** ▮ The American Speech-Language-Hearing Association (ASHA) offers accreditation in order to ensure quality and define the requisite preparation for the discipline. **Mentoring** ▮ ASHA has established a number of mentoring programs for students and young professionals to facilitate the recruitment, retention, and success of the participants. Through these programs, ASHA supports the participants in achieving their professional goals and fosters shared knowledge on issues critical to the industry, including research integrity.
Online resources	**Resource libraries and lists** ▮ AALAS offers the Learning Library, a comprehensive online learning system in the laboratory animal science field that is used extensively worldwide. Content ranges from basic husbandry to biomethodology and combines skills level courses with high-level theoretical courses. ▮ ASHA provides ethics, grants, and other resources online to help members become aware of external opportunities. ▮ ACS created a series of videos assisting authors and reviewers in understanding and improving their experience with the processes of writing, submitting, editing, and reviewing manuscripts, including ethical considerations and information on copyright and permissions. **Blogs and sites for exchange of ideas** ▮ AAA has established an active blog in which information is exchanged and people comment regularly, and a syllabus exchange in which university-level course syllabi are available for people to use in their classroom.

Resource Type	Participant Activities
Guidelines and standards	**Internal guidelines** ▮ APS established statements concerning the humane use of animals and the use of human subjects. Both guidelines are nationally and internationally utilized by the profession. The statements establish a standard across the member community for good practice in experimental design, ethical considerations, and reporting results. ▮ The Society of Interventional Radiology (SIR) developed and posted online a Code of Ethics for the profession. ▮ The Marketing Research Association (MRA) published an enforceable code of standards that includes specific privacy practices members agree to maintain and follow. **External guidelines and resources** ▮ ACS and AAA are members of the Committee on Publication Ethics (COPE). COPE, a nonprofit separate entity, provides advice to editors and publishers on all aspects of publication ethics and, in particular, how to handle cases of research and publication misconduct. COPE provides a Code of Conduct and flowcharts designed to help editors follow COPE's Code of Conduct and implement its advice when faced with cases of suspected misconduct.
Financial support	**Awards and grants** ▮ ASHA created an ethics award to focus attention on the importance of professional ethics and advances deliberation and debate on challenging ethical issues. ▮ AALAS established the Grants for Laboratory Animal Science (GLAS) program in 2007 to fund research that leads to better welfare for animal subjects. AALAS has invested a million dollars in the program, which has resulted in 42 funded projects, 40 professional journal articles, and 40 presentations at professional conferences.
Internal processes	**Sponsored research review policies** ▮ AOTA uses a volunteer review panel to ensure that research projects selected for sponsorship meet ethical guidelines. Panel members have a history of NIH funding, and guidelines mirror those of the NIH.
Staff and volunteer support	**Staff dedicated to research integrity issues** ▮ APS has an ethics officer on staff whose role is related to the content of articles submitted to and published in the APS science journals. The position ensures that each question or concern is addressed in a consistent manner that supports APS authors, reviewers, editors, and staff. ▮ ASHA dedicates staff units to accreditation, ethics, and research, all of which touch on research integrity issues for members. ▮ Healthy Teen Network employs a full-time PhD-level researcher/evaluator for assessing internal operations and activities/projects as well as creating reports and resources for the field. **Volunteer support for research integrity** ▮ AAA established a standing committee on research ethics that is on call to provide consultations as the need arises. ▮ AALAS has two volunteer committees dedicated to educational content, including ethics education. ▮ ASHA has several volunteer committees related to research and ethics.

About the Authors

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Appendix:
Examples of Research Integrity Resources

ACS Publications
Most Trusted. Most Cited. Most Read.

Ethical Guidelines to Publication of Chemical Research

The guidelines embodied in this document were revised by the Editors of the Publications Division of the American Chemical Society in May 2014.

Preface

The American Chemical Society serves the chemistry profession and society at large in many ways, among them by publishing journals which present the results of scientific and engineering research. Every editor of a Society journal has the responsibility to establish and maintain guidelines for selecting and accepting papers submitted to that journal. In the main, these guidelines derive from the Society's definition of the scope of the journal and from the editor's perception of standards of quality for scientific work and its presentation.

An essential feature of a profession is the acceptance by its members of a code that outlines desirable behavior and specifies obligations of members to each other and to the public. Such a code derives from a desire to maximize perceived benefits to society and to the profession as a whole and to limit actions that might serve the narrow self-interests of individuals. The advancement of science requires the sharing of knowledge between individuals, even though doing so may sometimes entail forgoing some immediate personal advantage.

With these thoughts in mind, the editors of journals published by the American Chemical Society now present a set of ethical guidelines for persons engaged in the publication of chemical research, specifically, for editors, authors, and manuscript reviewers. These guidelines are offered not in the sense that there is any immediate crisis in ethical behavior, but rather from a conviction that the observance of high ethical standards is so vital to the whole scientific enterprise that a definition of those standards should be brought to the attention of all concerned.

We believe that most of the guidelines now offered are already understood and subscribed to by the majority of experienced research chemists. They may, however, be of substantial help to those who are relatively new to research. Even well-established scientists may appreciate an opportunity to review matters so significant to the practice of science.

Guidelines

A. Ethical Obligations of Editors of Scientific Journals

1. An editor should give unbiased consideration to all manuscripts offered for publication, judging each on its merits without regard to race, religion, nationality, sex, seniority, or institutional affiliation of the author(s). An editor may, however, take into account relationships of a manuscript immediately under consideration to others previously or concurrently offered by the same author(s).
2. An editor should consider manuscripts submitted for publication with all reasonable speed.
3. The sole responsibility for acceptance or rejection of a manuscript rests with the editor. Responsible and prudent exercise of this duty normally requires that the editor seek advice from reviewers, chosen for their expertise and good judgment, as to the quality and reliability of manuscripts submitted for publication. However, manuscripts may be rejected without external review if considered by the editors to be inappropriate for the journal. Such rejections may be based on the failure of the manuscript to fit the scope of the journal, to be of current or sufficiently broad interest, to provide adequate depth of content, to be written in acceptable English, or other reasons.
4. The editor and members of the editor's staff should not disclose any information about a manuscript under consideration to anyone other than those from whom professional advice is sought. (However, an editor who solicits, or otherwise arranges beforehand, the submission of manuscripts may need to disclose to a prospective author the fact that a relevant manuscript by another author has been received or is in preparation.) After a decision has been made about a manuscript, the editor and members of the editor's staff may disclose or publish manuscript titles and authors' names of papers that have been accepted for

publication, but no more than that unless the author's permission has been obtained. If a decision has been made to reject a manuscript for ethical violations, the editor and members of the editor's staff may disclose the manuscript title and authors' names to other ACS journal editors.

5. An editor should respect the intellectual independence of authors.
6. Editorial responsibility and authority for any manuscript authored by an editor and submitted to the editor's journal should be delegated to some other qualified person, such as another editor of that journal or a member of its Editorial Advisory Board. Editorial consideration of the manuscript in any way or form by the author-editor would constitute a conflict of interest, and is therefore improper.
7. Unpublished information, arguments, or interpretations disclosed in a submitted manuscript should not be used in an editor's own research except with the consent of the author. However, if such information indicates that some of the editor's own research is unlikely to be profitable, the editor could ethically discontinue the work. When a manuscript is so closely related to the current or past research of an editor as to create a conflict of interest, the editor should arrange for some other qualified person to take editorial responsibility for that manuscript. In some cases, it may be appropriate to tell an author about the editor's research and plans in that area.
8. If an editor is presented with convincing evidence that the main substance or conclusions of a report published in an editor's journal are erroneous, the editor should facilitate publication of an appropriate report pointing out the error and, if possible, correcting it. The report may be written by the person who discovered the error or by an original author.
9. An author may request that the editor not use certain reviewers in consideration of a manuscript. However, the editor may decide to use one or more of these reviewers, if the editor feels their opinions are important in the fair consideration of a manuscript. This might be the case, for example, when a manuscript seriously disagrees with the previous work of a potential reviewer.

B. Ethical Obligations of Authors

Authors are expected to adhere to the following ethical guidelines; infractions may result in the application of sanctions by the editor(s), including but not limited to the suspension or revocation of publishing privileges.

1. An author's central obligation is to present an accurate and complete account of the research performed, absolutely avoiding deception, including the data collected or used, as well as an objective discussion of the significance of the research. Data are defined as information collected or used in generating research conclusions. The research report and the data collected should contain sufficient detail and reference to public sources of information to permit a trained professional to reproduce the experimental observations.
2. An author should recognize that journal space is a precious resource created at considerable cost. An author therefore has an obligation to use it wisely and economically.
3. When requested, the authors should make every reasonable effort to provide data, methods, and samples of unusual materials unavailable elsewhere, such as clones, microorganism strains, antibodies, etc., to other researchers, with appropriate material transfer agreements to restrict the field of use of the materials so as to protect the legitimate interests of the authors. Authors are encouraged to submit their data to a public database, where available.
4. An author should cite those publications that have been influential in determining the nature of the reported work and that will guide the reader quickly to the earlier work that is essential for understanding the present investigation. Except in a review, citation of work that will not be referred to in the reported research should be minimized. An author is obligated to perform a literature search to find, and then cite, the original publications that describe closely related work. For critical materials used in the work, proper citation to sources should also be made when these were supplied by a nonauthor.
5. Any unusual hazards inherent in the chemicals, equipment, or procedures used in an investigation should

be clearly identified in a manuscript reporting the work. Authors should inform the editor if a manuscript could be considered to report research that, based on current understanding, can be reasonably expected to provide knowledge, products, or technologies that could be directly misapplied by others to pose a threat to public health and safety, agricultural crops and other plants, animals, the environment, or materiel.

6. Fragmentation of research reports should be avoided. A scientist who has done extensive work on a system or group of related systems should organize publication so that each report gives a well-rounded account of a particular aspect of the general study. Fragmentation consumes journal space excessively and unduly complicates literature searches. The convenience of readers is served if reports on related studies are published in the same journal, or in a small number of journals.
7. In submitting a manuscript for publication, an author should inform the editor of related manuscripts that the author has under editorial consideration or in press. Copies of those manuscripts should be supplied to the editor, and the relationships of such manuscripts to the one submitted should be indicated.
8. It is improper for an author to submit manuscripts describing essentially the same research to more than one journal of primary publication, unless it is a resubmission of a manuscript rejected for or withdrawn from publication. It is generally permissible to submit a manuscript for a full paper expanding on a previously published brief preliminary account (a "communication" or "letter") of the same work. However, at the time of submission, the editor should be made aware of the earlier communication, and the preliminary communication should be cited in the manuscript.
9. An author should identify the source of all information quoted or offered, except that which is common knowledge. Information obtained privately, as in conversation, correspondence, or discussion with third parties, should not be used or reported in the author's work without explicit permission from the investigator with whom the information originated. Information obtained in the course of confidential services, such as refereeing manuscripts or grant applications, should be treated similarly.

10. An experimental or theoretical study may sometimes justify criticism, even severe criticism, of the work of another scientist. When appropriate, such criticism may be offered in published papers. However, in no case is personal criticism considered to be appropriate.
11. The co-authors of a paper should be all those persons who have made significant scientific contributions to the work reported and who share responsibility and accountability for the results. Authors should appropriately recognize the contributions of technical staff and data professionals. Other contributions should be indicated in a footnote or an "Acknowledgments" section. An administrative relationship to the investigation does not of itself qualify a person for co-authorship (but occasionally it may be appropriate to acknowledge major administrative assistance). Deceased persons who meet the criterion for inclusion as co-authors should be so included, with a footnote reporting date of death. No fictitious name should be listed as an author or coauthor. The author who submits a manuscript for publication accepts the responsibility of having included as co-authors all persons appropriate and none inappropriate. The submitting author should have sent each living co-author a draft copy of the manuscript and have obtained the co-author's assent to co-authorship of it.
12. The corresponding author must reveal to the editor and to the readers of the journal any potential and/or relevant competing financial or other interest (of all authors) that might be affected by publication of the results contained in the authors' manuscript. Conflicts of interest and sources of funding of the research reported must be clearly stated at the time of manuscript submission and will be included in the published article. In addition, all authors must declare (1) the existence of any significant financial interest (>$5,000 or >5% equity interest) in corporate or commercial entities dealing with the subject of the manuscript; (2) any employment or other relationship (within the past three years) with entities that have a financial or other interest in the results of the manuscript (to include paid consulting, expert testimony, honoraria, and membership of advisory boards or committees of the entity). The corresponding author must advise the editor at the time of submission either that there is no conflict of interest to declare, or should disclose potential conflicts of interest that will be acknowledged in the published article.

13. Plagiarism is not acceptable in ACS journals. ACS journals adhere to the U.S. National Science Foundation definition of plagiarism as "the appropriation of another person's ideas, processes, results, or words without giving appropriate credit" (45 Code of Federal Regulations, Section 689.1). Authors should not engage in plagiarism - verbatim or near-verbatim copying, or very close paraphrasing, of text or results from another's work. Authors should not engage in self-plagiarism (also known as duplicate publication) - unacceptably close replication of the author's own previously published text or results without acknowledgement of the source. ACS applies a "reasonable person" standard when deciding whether a submission constitutes self-plagiarism/duplicate publication. If one or two identical sentences previously published by an author appear in a subsequent work by the same author, this is unlikely to be regarded as duplicate publication. Material quoted verbatim from the author's previously published work must be placed in quotation marks. In contrast, it is unacceptable for an author to include significant verbatim or near-verbatim portions of his/her own work, or to depict his/her previously published results or methodology as new, without acknowledging the source. (Modeled with permission from Society for Industrial and Applied Mathematics: Authorial Integrity in Scientific Publication http://www.siam.org/books/plagiarism.php.)
14. The American Chemical Society Publications rules and ethical guidelines provide mandatory standards of practice in experimental studies performed using biological samples obtained from animals or human subjects. Studies submitted for publication approval must present evidence that the described experimental activities have undergone local institutional review assessing safety and humane usage of study subject animals. In the case of human subjects authors must also provide a statement that study samples were obtained through the informed consent of the donors, or in lieu of that evidence, by the authority of the institutional board that licensed the use of such material. Authors are requested to declare the identification or case number of institution approval as well as the name of the licensing committee in a statement placed in the section describing the studies' Material and Methods.

15. Images should be free from misleading manipulation. When images are included in an account of research performed or in the data collection as part of the research, an accurate description of how the images were generated and produced should be provided.

C. Ethical Obligations of Reviewers of Manuscripts

1. Inasmuch as the reviewing of manuscripts is an essential step in the publication process, and therefore in the operation of the scientific method, every scientist has an obligation to do a fair share of reviewing.
2. A chosen reviewer who feels inadequately qualified to judge the research reported in a manuscript should return it promptly to the editor.
3. A reviewer (or referee) of a manuscript should judge objectively the quality of the complete manuscript and the Supporting Information, including the experimental and theoretical data, the interpretations and exposition, with due regard to the maintenance of high scientific and literary standards. A reviewer should respect the intellectual independence of the authors.
4. A reviewer should be sensitive to the appearance of a conflict of interest when the manuscript under review is closely related to the reviewer's work in progress or published. If in doubt, the reviewer should return the manuscript promptly without review, advising the editor of the conflict of interest or bias. Alternatively, the reviewer may wish to furnish a signed review stating the reviewer's interest in the work, with the understanding that it may, at the editor's discretion, be transmitted to the author.
5. A reviewer should not evaluate a manuscript authored or co-authored by a person with whom the reviewer has a personal or professional connection if the relationship would bias judgment of the manuscript.

6. A reviewer should treat a manuscript sent for review as a confidential document. It should neither be shown to nor discussed with others except, in special cases, to persons from whom specific advice may be sought; in that event, the identities of those consulted should be disclosed to the editor.
7. Reviewers should explain and support their judgments adequately so that editors and authors may understand the basis of their comments. Any statement that an observation, derivation, or argument had been previously reported should be accompanied by the relevant citation. Unsupported assertions by reviewers (or by authors in rebuttal) are of little value and should be avoided.
8. A reviewer should be alert to failure of authors to cite relevant work by other scientists, bearing in mind that complaints that the reviewer's own research was insufficiently cited may seem self-serving. A reviewer should call to the editor's attention any substantial similarity between the manuscript under consideration and any published paper or any manuscript submitted concurrently to another journal.
9. A reviewer should act promptly, submitting a report in a timely manner. Should a reviewer receive a manuscript at a time when circumstances preclude prompt attention to it, the unreviewed manuscript should be returned immediately to the editor. Alternatively, the reviewer might notify the editor of probable delays and propose a revised review date.
10. Reviewers should not use or disclose unpublished information, arguments, or interpretations contained in a manuscript under consideration, except with the consent of the author. If this information indicates that some of the reviewer's work is unlikely to be profitable, the reviewer, however, could ethically discontinue the work. In some cases, it may be appropriate for the reviewer to write the author, with copy to the editor, about the reviewer's research and plans in that area.
11. The review of a submitted manuscript may sometimes justify criticism, even severe criticism, from a reviewer. When appropriate, such criticism may be offered in published papers. However, in no case is personal criticism of the author considered to be appropriate.
12. Reviewers should notify editors of concerns with respect to manuscripts that report research that, based on current understanding, can be reasonably expected to provide knowledge, products, or technologies that could be directly misapplied by others to pose a threat to public health and safety, agricultural crops and other plants, animals, the environment, or materiel.

D. Ethical Obligations of Scientists Publishing outside the Scientific Literature

1. A scientist publishing in the popular literature has the same basic obligation to be accurate in reporting observations and unbiased in interpreting them as when publishing in a scientific journal.
2. Inasmuch as laymen may not understand scientific terminology, the scientist may find it necessary to use common words of lesser precision to increase public comprehension. In view of the importance of scientists' communicating with the general public, some loss of accuracy in that sense can be condoned. The scientist should, however, strive to keep public writing, remarks, and interviews as accurate as possible consistent with effective communication.
3. A scientist should not proclaim a discovery to the public unless the experimental, statistical, or theoretical support for it is of strength sufficient to warrant publication in the scientific literature. An account of the experimental work and results that support a public pronouncement should be submitted as quickly as possible for publication in a scientific journal. Scientists should, however, be aware that disclosure of research results in the public press or in an electronic database or bulletin board might be considered by a journal editor as equivalent to a preliminary communication in the scientific literature.

Conflict of Interest Disclosure

To: **Research Committee Members**

From: **Liz O'Keefe**
Research Committee Staff Liaison

Subject: **March 2014 Research Committee Meeting Conflict of Interest Disclosure**

To pursue our ongoing commitment to disclosing potential areas of conflict, we have instituted the practice of signing a Conflict of Interest (COI) form prior to each Research Committee meeting. This form allows each member to disclose any actual or perceived conflicts with respect to the grants being reviewed. These forms will be reviewed by the staff liaison and committee chair.

If a conflict exists, you may be asked to:

1. Abstain from discussion or voting on matters of conflict
2. Leave the room during the committee discussion on matters of conflict
3. Recuse yourself from participation on matters of conflict

CONFLICT OF INTEREST DISCLOSURE

I have reviewed the ASGE guidelines for disclosure of possible Conflict of Interest and am disclosing the following details regarding any actual or potential conflict I have with respect to the grant review agenda for the above mentioned ASGE Research Committee meeting.

_____ **YES**, I have an actual or potential conflict of interest with an agenda item at this Research Committee meeting:

Grant Submission Author (Please list the authors name and Institution)

_____
_____
_____

NATURE OF CONFLICT (e.g., direct interaction with study being discussed)

_____
_____
_____

_____ **NO**, I have no conflict of interest with any agenda item presented at this meeting.

Signature: _____ Date: _____

Print Name: _____

Please return completed form to Liz O'Keefe at the meeting.

Membership Access Guidelines, Policy and Agreement

Membership Access for Research

The following guidelines have been established for accessing AONE membership for research participation. Access to membership may be obtained by mailing list rental or request for research participation through an electronic format: AONE eNews; AONE Working for You (AWFY)

Request for Research Participation: Mailing List Rental Policy

See Mailing List Rental Agreement.

Request for Research Participation: Electronic Format

1. All requests for membership access for research participation must be made in writing using the *AONE Membership Access for Research Participation Agreement*; accompanied by the research proposal, evidence of IRB approval and a copy of the survey/questionnaire, must be provided to AONE in advance for its review and approval. AONE evaluates each request within 14 business days after receiving a copy of the *AONE Membership Access for Research Participation Agreement*. Any rejection shall specifically state the reason(s). Negotiations for any proposed revisions for membership access can be made between the parties; however, it is understood that AONE has final authority to approve or reject the request.

2. Each request must be accompanied by the request for research participation language that will be used that will be used to solicit participants.

3. Requests will be accepted only for purposes appropriate to the nurse leader roles and responsibilities, and shall not be in conflict with the AONE mission, goals and activities.

4. Access to AONE membership for research participation is available for the conduct of academic research. Access will be permitted only for those that conform to generally accepted norms and standards for survey research and that impact the role of nurses in executive practice who design, facilitate and manage patient care delivery across the health care continuum. Study publications must include the following statement: "Participation of AONE members does not indicate AONE review or endorsement of this study."

5. The researcher is responsible for providing approved language requesting research participation and an active URL directing participants to the survey and or research home page.

6. Publishing the request for research participation occurs at the first opportunity after the receipt of approved language and payment.

7. Approved requests are published on a first come first served basis. AONE has the right to limit the number of requests at any one time.

8. AONE will not provide refunds for early withdrawal of request for research participation.

Placement
Placement of requests for research participation will appear in a designated section of AONE eNews and AWFY; "Researcher seeking participants". The design and formatting of the research language is the responsibility of the researcher and must meet the parameters of AONE's electronic newsletter platform.

Pricing:
Members:
$250.00 - Includes two published requests in *AONE eNews* and or *AWFY*. $50 for each additional placement referencing the same research proposal.

Non-Members:
$500 - Includes two published requests in *AONE eNews* and or *AWFY*.
$100 for each additional placement referencing the same research proposal.

All payments shall be made prior to publication of research participation request.

Indemnification: It is understood that the Researcher is acting as an independent contractor and assumes the entire responsibility for performance under this agreement. AONE, its employees and agents are harmless against all liabilities, claims, causes of action, losses and damages to persons and property, including expenses and attorneys' fees, arising out of or caused by the researcher's performance, excluding any such liability caused by the sole negligence of AONE, its employees and agents.

Duration: This Agreement will begin on the first publication of the research request and conclude on the last published date. This Agreement may be cancelled by either party in writing within 14 days.

Miscellaneous:
1. This Agreement supersedes all prior agreements, oral or written, and constitutes the entire understanding among both parties.

2. This Agreement shall be governed by the laws of the State of Illinois.

IN WITNESS WHEREOF, the parties have executed this AGREEMENT by and between the American Organization of Nurse Executives (AONE), a subsidiary of the American Hospital Association (AHA), an Illinois not-for-profit corporation with principal offices at 155 North Wacker, Chicago, IL 60606.

American Organization of Nurse Executives:	Researcher:
Signature	Signature
Title	Title
Date	Date

M.T. Meadows, RN, MS, MBA
312-422-2807 312-278-0475(fax)
mmeadows@aha.org

www.aone.org

The American Organization of Nurse Executives

Membership Access for Research Participation Agreement

Researcher:		
Primary contact:		
Address:		
City:	**State:**	**Zip code:**
Telephone:	**FAX:**	
Email:		

INCLUDE

☐**Purpose:** Attach research proposal.

☐**IRB Approval** Attach evidence of IRB approval.

☐**Language for publication**. Microsoft word format.

Membership Access Order:	☐ **Member***	☐**Non-member****

	Number Of Placements	**$ Total**	**Preferred dates**
AONE eNews			
AWFY			

*Member:
$250.00 - Includes two published requests in *AONE eNews* and or *AWFY*.
$50 for each additional placement referencing the same research proposal participation.

**Non-Members:
$500 - Includes two published requests in *AONE eNews* and or *AWFY*.
$100 for each additional placement referencing the same research proposal participation.

Payment Method:		
☐ **Check: Made payable to: AONE**		
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ISBN 978-0-88034-381-7

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