

Public Outreach and Communication Careers

BY NANCY MCGUIRE

Scientists keep up with the latest research developments by reading scholarly journals and attending science conferences, but how does the general public receive this information? When a freak storm hits or a new species of fish is discovered, how do news reporters find experts to help them explain the science?

Public communication professionals work in all job sectors, including industry, academia, government, and nonprofit organizations.

Communications professionals who work in industry focus on presenting their company's message to the public and ensuring that the company's positive contributions are communicated to such groups as stockholders, reporters, employees, and people who live in the community where the company operates.

Colleges and universities have public information officers (PIOs) who keep the public informed about research taking place at the university. Public institutions and nonprofit organizations have public outreach programs that educate people about science in general, especially scientific issues at the forefront of current

events. Communications offices organize community events, science fairs, science cafés, or exhibits where nonscientists can converse with scientists in an informal setting.

Public affairs officers (PAOs) in government agencies handle similar responsibilities, and they oversee their agency's official communications to ensure accuracy, security, and adherence to policy. They help keep the taxpaying public informed about their agency's work, and they act as the agency's spokespeople to ensure that various sources within the agency are not issuing conflicting or confusing information. Some government agencies sponsor public outreach programs. Government agencies also have legislative affairs offices that provide information about their agency's activities to legislators and other policymakers. Legislative affairs officers keep their own agencies informed on legal and policy issues that affect them.

Museums, including science museums, organize tours and classes, school visits, citizen-scientist programs, and other efforts to educate the general public. Professional societies often organize outreach activities for the public at their national meetings, issue press releases to notify media outlets of significant research that has just been presented or published, and provide access to experts who can make public presentations or give interviews to the media. ACS, for example, sponsors Reactions, a series of short, entertaining videos about chemistry topics at www.acs.org/reactions.

On occasion, science communications specialists are called on for "crisis communications," providing information to the media and the general public after a natural disaster, fire, or other emergency. Some organizations require a communications officer to be on call any time of the day or night in the event of such emergencies. They may provide lines of communications between upper management and first responders on the scene, or they may keep the press informed during situations where access to the scene is limited.

Is this career a good fit for you?

Science communications requires a broad general knowledge of a range of scientific fields and research areas, as well as the ability to see how these fields relate to the organization's overall mission. Communications specialists must tailor their message to the intended audience (management, government officials, junior high science students, etc.). This requires an ability to talk to nonscientists in understandable terms without "dumbing down" the information.

Communications skills are vital, including writing, speaking, presenting visual information, and interacting with journalists,

Typical work duties include the following:

- Communicate with funding agencies, regulatory agencies, and the general public
- Translate scientific content into understandable language for a variety of non-technical audiences, pointing out why the science matters
- Act as official spokespeople for their organizations
- Gather and provide scientific background information for publications and presentations
- Answer questions for visitors to science facilities and museums
- Develop clear, consistent responses to current events, including crisis communications
- Write press releases, newsletters, website content, speeches, opinion pieces, and articles
- Produce videos, podcasts, and social media content
- Help media representatives locate and speak with experts in their organizations
- Provide media training to scientists
- Organize and conduct tours, exhibits, and community events

policy-makers, and the public on a formal or informal basis. Because science communications specialists cover many different programs within their organizations, they must be able to come up to speed quickly on a variety of topics, which is a skill that is sometimes referred to as being an “instant expert”. They must also have an understanding of how their agency, institution, or organization works and be able to articulate its mission and activities.

Depending on the organization, the job may involve a simple reporting of factual information, integrating information from various sources into a coherent theme, offering interpretations of events and policy decisions, advocating for a specific position on an issue, presenting an organization in the best possible light, or presenting information that advances a specific program or agenda. Science communications specialists must understand which of these functions they serve, and adhere to ethical guidelines that delineate facts from opinions and reporting from advocacy work.

Communications specialists read a wide variety of science journal articles, patents, grant awards, and other background sources to stay current on the activities of their organization and the wider environment in which it operates. A solid science background is very helpful in understanding research publications and technical presentations.

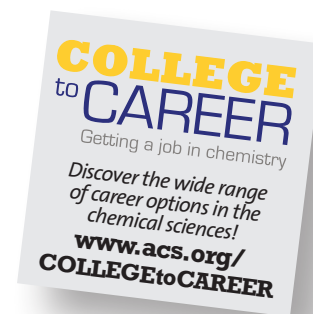
Career path

Entry-level positions include working in university, government, nonprofit organization, or industrial public affairs or press offices. Such positions usually involve writing press releases and research news items, writing content for blogs and websites, arranging media interviews for scientists, preparing and staffing exhibits and tours, or producing podcasts and videos.

Experienced communications specialists may take positions as public communications directors, which entails manag-

ing other communications specialists, coordinating with upper management on outreach efforts and communications strategies, and preparing responses to emergencies and sensitive issues.

They may act as official spokespeople for their organizations. Larger organizations may have positions for vice presidents of public relations or corporate communications. Alternatively, experienced communications professionals may go into independent consulting after they have established their reputations and professional networks. They may advise clients on communications strategies, help them with special projects, offer media training to their clients' employees, or help them prepare crisis communications responses. Some communication professionals also move over to journalism at some point in their careers — working for magazines, newspapers, broadcast outlets, wire services, or web publications. **IC**



Quick Facts

OPPORTUNITIES

- The job outlook remains strong, especially as organizations place more emphasis on communicating their research programs and accomplishments to outside audiences.

EDUCATION NEEDED

- Public information and outreach specialists may enter the field with degrees in science, journalism, communications, or related topics. Scientists can learn communications by taking courses, workshops, and learning on the job, or they may pursue a master's degree in science writing or communication. It is not uncommon for scientists to go into communications after working in a research or laboratory environment.

SALARIES

- Salaries for communications and public information specialists vary widely, depending on the job sector, size of the organization, and level of experience required. Indeed.com lists 2015 annual salaries for “science public information officer” ranging from \$40,000 to more than \$120,000, with a median salary of \$66,000.
- In 2012, the National Association of Science Writers conducted a survey of its membership. Members who described themselves as full-time staff writers for their organizations reported average and median annual salaries between \$50,000 and \$75,000. A small percentage reported salaries less than \$10,000 a year, and an equal number reported salaries greater than \$200,000 a year. **IC**

Resources

Emily Calandrelli is a recent MIT graduate in Aeronautics & Astronautics and Technology & Policy, who hosts a TV show that explains science-related topics in an easily understood and entertaining way. www.emilycalandrelli.com/about

Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook*, 2014–15 Edition, Public Relations Specialists (includes public affairs). www.bls.gov/ooh/media-and-communication/public-relations-specialists.htm

Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook*, 2014–15 Edition, Public Relations and Fundraising Managers. www.bls.gov/ooh/management/public-relations-managers.htm

Science Writers Compensation Survey Report. Compiled by Cell Associates Marketing Consultants for the National Association of Science Writers. March 2014. (Available to NASW members.)

Public Relations. For Your Information, Chris Woolston. *Nature* 2014, 509, 123–125. DOI: 10.1038/nj7498-123a. www.nature.com/naturejobs/science/articles/10.1038/nj7498-123a