



Communicating Science to the Public: A Handbook for Researchers

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Canadians Want to Know About Research

As a research scientist or engineer, you have a terrific story to tell! Your work and that of your colleagues has created extraordinary benefits for society, from longer-lasting bridges to expert systems, Canadians live more productive lives than ever before and enjoy one of the world's best living standards. We have access to more knowledge, leisure, travel and entertainment than any generation in history - much of it thanks to the contributions of research scientists and engineers.

Canadians want to know more about science and engineering research. They want to know how it is being applied and will be applied in the future. They are curious about how it will affect their lives and what it will mean for their children. They also want assurance that tax dollars devoted to research are being spent wisely and to the benefit of all Canadians.

This Guide Helps You Communicate

This Guide is designed to make the time you have available for communication as productive as possible. In developing it, we sought advice from university communications directors, science reporters in print and electronic media and NSERC communications personnel. You will find plain English explanations of the fundamental principles of effective communication, as well as practical activities to try - many of them suggested by NSERC researchers.

Your Feedback is Encouraged

We believe there is a tremendous opportunity for all of us to learn from each other. We look forward to receiving your comments - what works and what needs improvement.

Why Communicate?

Part of a Healthy Environment for R&D

Why should you communicate with the public? As a scientist or engineer, you are in a privileged position to see how advanced knowledge benefits Canadians by:

- maintaining and enhancing our standard of living
- improving our quality of life
- contributing to humankind's understanding of the world around us.

Reporting to the "Shareholders"

The vast majority of Canadians have no idea how university researchers use their tax dollars. They count on the research community to spend their dollars wisely. However, taxpayers are increasingly demanding accountability from government and publicly funded institutions. Communications is one way researchers can demonstrate accountability. Just as corporations issue annual reports to shareholders, the science and engineering research community has a responsibility to inform society about how it is spending public money.

Contribute to Society's Understanding of Science

Canada's future prosperity will depend on our ability to foster a scientifically-literate population and workforce. The country will continue to need scientists and engineers. But we will also require scientifically trained managers and a workforce that can adapt to rapid technological change. Public understanding of scientific and technical issues will also be critical in solving many difficult problems facing society.

Researchers are in an excellent position to improve public awareness of science-related issues and to inspire young people with an interest in science and engineering.

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Build Links With Other Sectors

Communications may also bring you and your research interests to the attention of prospective partners in other sectors. Closer links among universities, industry and government labs translates into more opportunities for researchers, better job prospects for graduates, and a stronger and more competitive industrial sector.

Improve Credibility of Engineering and Science

People today are concerned about the social consequences of science and technology - especially environmental impacts. Many want unqualified assurances of the benefits of new technology. These are just the sort of assurances reputable scientists are unable to give. At the same time, the public is applying higher standards of behaviour to individuals in positions of authority. Engineers and scientists are not exempt. People hear that many scientists have conflicts of interest and want to know how this affects their scientific opinions.

Like it or not, scientists and the scientific enterprise are being challenged. All engineers and scientists have a responsibility to discuss what they do and why it is important to society.

Build Acceptance for Science

Many researchers are working on scientific or technological problems - genetics and reproductive issues, for example - that impose social and ethical choices on society. Other scientists and engineers are involved in enterprises that may result in fundamental and wide-reaching changes that will disrupt many people's lives.

Change is part of modern life and criticism is an inevitable outcome of change. We need to begin now to build acceptance and support for research activities to withstand criticism in the future.

Secure Support for Future Funding

Securing funding for research is an annual battle. Political leaders are besieged by competing interests. Governments are living on borrowed money and find it increasingly difficult to make investments in our economic and social well-being, especially when the benefits are seen to be far off. Consistent support from ordinary Canadians and their elected representatives is essential to the success of the research enterprise.

Getting Started

Use Existing Resources

There are many ways to reach a broader audience. [Section 4](#) of this Guide suggests 24 different communications activities you can try. However, we recommend you consider the one or two activities with which you feel most comfortable. Because your time is limited, we also urge you to take advantage of the resources at your university. The Department of Communications will arrange speaking opportunities, set up media interviews, and help you develop speaker support materials. Faculty and professional associations may also provide speaking opportunities and other assistance.

Make Your Stories Relevant to the Public

Public awareness surveys show that people want to know more about scientific research and how it affects their lives. They are curious about what your work tells them about their origins, behaviour, employment options, health, and many other aspects of their well being. What implications will research have for society in the future? How will your research make our lives more interesting or productive? How will it improve people's access to information, understanding, safety, comfort, travel or leisure? In other words, "What's in it for me?"

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Conversely, the public is rarely interested in the technical aspects of research. For that reason, it makes sense to focus on the applications of your work, rather than the technical details, when speaking to a public audience or the media.

Applied research may lend itself more easily than theoretical research to this approach. Nonetheless, all researchers, whatever their field, should be able to express simple ideas about how science works and put research in a context the public understands. Theoretical scientists might also find it helpful to show how long-term research supports applied research.

Structure Your Story Around a Few Key Messages

Researchers who are also good communicators say the public and media respond best to presentations that embody a few key points, supported by colourful examples, facts, metaphors and analogies. Determine in advance what your central messages will be ... and deliver your words in down-to-earth language, free of scientific jargon.

The Value of Visuals

Whether you are speaking to an audience or to the media, photographs, slides, illustrations, video clips, models and charts will add tremendously to your message. Preparing visuals, however, is time-consuming. For that reason, consider asking the university communications department for assistance. As well, many researchers find it useful to take photographs of their research work at different stages. Dr. Elizabeth Cannon, a researcher profiled in this manual, maintains a current stock of slides, and can quickly assemble visuals if asked to give a public presentation or appear on television.

Improving Written and Spoken Communication

Many researchers are familiar with the techniques of effective writing - or what is sometimes called "plain English." However, help is available for those who want to improve their writing skills.

One of the best sources of information is "The Art of Readable Writing" by Rudolf Flesch. This book discusses the effective use of vocabulary, sentence structure, metaphors, analogies, examples, and other writing devices, as well as old-fashioned grammar, syntax and punctuation. It also explores spoken and visual communication and provides concrete principles for using pictures in ways that really get your message across.

PC-compatible programs such as Grammatik also incorporate readability formulas and can help you bridge from technical to popular writing. Among other benefits, these programs indicate the level of comprehension needed to read your written documents.

You May Be a Better Communicator Than You Think!

According to a prominent science writer who helped with this guide, university researchers are very good at talking to the media because of their teaching experience. Speaking to the public is much like teaching, says this journalist. You have to focus on basic issues and make your message clear and understandable.

Practical Activities You Can Try

There are many ways to communicate the value of science and engineering to the general public. Here are a few of them:

Subscribe to an Electronic Newsgroup

Newsgroups are a tremendous channel for sharing your knowledge and enthusiasm with non-scientists. Take SchoolNet for example. <http://www.schoolnet.ca>

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There are many innovative and highly successful science promotion programs under way across Canada. The individuals and groups involved can be a great source of ideas on what really works with different audiences. Access the national science promotion discussion group through SchoolNet.

Browse for a while - follow the discussions without responding - to see the kinds of questions asked and answers given. Then, when you post a response, you can do so at a level subscribers will understand.

Write a Letter to the Editor

Newspaper and magazine articles often spark public debate about science and engineering issues. If an article is relevant to your research, consider responding. A simple letter to the editor can put your ideas in front of thousands of people. As an expert in your field, your letter will have considerable credibility and could have significant influence.

If interested, read the letters to the editor in a selected publication and note their tone and length. Remember that clarity and brevity count. Very few letters are longer than 300 words when printed. All letters refer to the paper's coverage of current events - or lack thereof - so relate the topic of your letter to a recent event or current issue.

Speak to a School or Youth Group

University members frequently receive requests for speakers from schools and youth groups. That's not surprising - young people are eager to explore the wonder of their world and learn about what scientists do and what science means for their future. (And they are always curious about how much money scientists and engineers earn!)

Generally speaking, informal presentations that develop simple concepts through hands on experiences work best. This approach is especially recommended for groups that have limited contact with researchers and whose members may be apprehensive about their understanding of science.

Consider speaking to a school class or a youth group such as Girl Guides or Scouts. Tailoring your remarks for young people is excellent preparation for communicating to a wider public audience. And you may influence a young person to pursue a career in science or engineering!

Involve Your Students

Undergraduate and graduate students make particularly effective presenters, and attractive role models for teachers and students at the elementary and secondary levels. Take the time to encourage this involvement and recognize the resulting achievements. It's a highly effective way to leverage your science promotion activities. Not only does it introduce your students to the rewards of communicating science, it may even open up career possibilities for them.

Speak to an Industry or Special Interest Group

As a researcher, you may be involved in a project of direct application to industry. If so, there is at least one, and probably several, industry and professional associations, as well as environmental and other special interest groups, that would be eager to hear about your research and what it means to them. Such an exercise is useful in demonstrating the value of academic research and establishing your credibility as an advisor or potential partner.

Join a Speakers' Bureau

University communications departments often manage speakers' bureaus which promote faculty members as speakers to schools, service clubs, women's groups, and industry associations. Joining a speaker's bureau is an excellent way of getting started. Even if the communications

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department at your institution does not have a formal bureau, it probably does receive requests for speakers. As well, your department or faculty association probably receives regular requests for speakers. Let the Dean know that you are interested in public speaking.

Notify University Publications of Your Work

Most universities publish newsletters or "tip sheets" to promote the research work of faculty and graduate students to the media. If interested in participating, you should keep the communications department or research office informed of grants and research projects in which you are involved. This is a simple and easy route to building links with science writers and the popular press.

Participate in a Media Guide

Many universities publish a media guide listing participating faculty by area of expertise. A reporter working on a story about water pollution, for example, would use the guide to identify an expert who can be interviewed and quoted for the story. This is a simple way to bring your name in front of the media.

Get Listed on ProfNet

Public information officers at more than 425 colleges, universities and other institutions - including a dozen Canadian universities - belong to an electronic cooperative called ProfNet ("Professors Network"). This service gives journalists and authors convenient access to expert sources. Reporters can query the 350,000 experts listed on ProfNet by telephone, fax or e-mail, at no charge. To find out if your institution is listed, go to the [ProfNet homepage](#).

Write an Op-Ed Article

An "op-ed" article is a feature story offering insight on current events. (Such items often appear opposite the editorial page, hence the term op-ed.) Query the editor about interest and editorial requirements (length, style) before proceeding. Keep in mind that all the rules about good writing and clear communications apply to writing op-ed pieces.

Organize a Public Lecture

Your research may be of direct interest to the larger community. If so, why not host a public lecture on campus and promote it through the general media? Remember that the audience will want to understand the social significance of your work, not the technical details.

Invite the Media to a Conference

If you are organizing a scientific conference, consider inviting the press. Identify presentations which may be of interest to the media and structure your invitation around these. Or issue a press release on the day of the conference, highlighting presentations and items of general interest.

Serve as a Technical Advisor to the Media

You don't have to appear on camera to help the media portray science accurately. You may be interested in working behind the scenes to help television writers and producers understand your discipline better. A communications specialist at your university can advise you how to make your interest known to the media.

Participate on a Radio Program

This is easier than you may think. Radio producers are always hunting for interesting guests - including people who can talk about science. In addition to national programs such as Morningside, and Quirks and Quarks, there are hundreds of local feature programs across Canada. If you have a good story to tell and identify an appropriate program, simply phone the

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show's producer and explain the story. Alternatively, your communications department may be able to arrange a radio interview.

Appear on Cable Television

Cable television broadcasts interview programs throughout the day, making it an excellent venue for reaching the local community. It also represents a great opportunity to hone skills for commercial television.

Host a Research Open House

Open houses featuring research projects often attract several thousand visitors as well as media coverage. These events represent a wonderful opportunity to promote the university and demonstrate the value of scientific and engineering research.

Create a Communications Cooperative

Larger research consortia might consider pooling resources to hire a communications specialist on a part-time basis to promote research activities to the public. The Lithoprobe research consortium, profiled below, found this approach highly effective.

Run Science Workshops

Many elementary and secondary school teachers would like to know what's current in science, technology and engineering. This helps them upgrade their own skills, and it allows them to make their own teaching more relevant. You might consider contacting a local high school or Board of Education (try talking to the Science Consultant) to offer to run a workshop for teachers.

Volunteer in a Regional Science Network

Very effective "science networks" are operating in many parts of the country. These are associations made up largely of volunteers interested in promoting science, technology and engineering. The networks sponsor many exciting and innovative projects in which experts like you can play an important part.

Judge a School Science Fair

A tremendous network of local, regional and national science fairs operates right across Canada. Each year thousands of schools mount science fairs. Qualified judges are always in demand. You could offer to help judge student projects at a science fair in your neighbourhood. Call your local school or Board of Education to see when science fairs are being held in your area.

Hire a Student (or Teacher)

Do you have research funds to hire a laboratory assistant? Why not consider hiring a high school student or even a teacher to work with you during their summer vacation? You'll be pleased by the level of dedication they exhibit.

Understanding the Media

The Challenge of Media Relations

The media is unfamiliar territory for many people. Without experience, it's difficult to anticipate what a reporter will ask and how the material will be presented to the public. This difficulty is compounded for research scientists and engineers, who often fear being misquoted or having work presented out of context.

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The Theme of this Section

The media operate according to rational and predictable rules. News organizations want to present fair and accurate coverage, not harm your reputation. By understanding the motivations and constraints of news organizations - and by using a few simple techniques - you can dramatically improve your ability to attract enlightened and accurate coverage.

What is News?

News organizations are in the business of entertaining as well as informing and educating. Consequently, reporters look for stories that will entertain and intrigue their audience, as well as impart new information.

The Human Story Within the Science Story

News stories, even those dealing with esoteric aspects of science, are ultimately human interest stories. Their currency as news depends on the ability of the researcher and reporter to find and convey the human story within the research story.

Some fields of research are more newsworthy than others. It is relatively easy to identify the human implications of research on nutrition, medicine, biology, seismology and environmental studies. Similarly, engineering stories often have implications for lifestyles and jobs.

Scientists in more theoretical fields, such as physics and chemistry, may find it more difficult to attract news coverage. Those who succeed often relate their work to the larger enterprise of science and its implications for society.

News Is Often Local or Linked to Current Events

Research that has a local "angle" is of particular interest to the media, for example, marine and fisheries research in the Maritimes and British Columbia, agricultural science on the Prairies, and mining and metallurgy in mining communities.

Sometimes events will make a field of research intrinsically newsworthy. The movies *Jaws* and *Jurassic Park* created considerable interest in shark research and palaeontology. The public's interest in fisheries research has been sparked by the disappearance of groundfish stocks, while the spread of AIDS and other diseases has created considerable interest in such fields as virology and immunology.

Research in Progress May Be News

A corollary of this is that a research project does not have to be completed to qualify as news. The purpose and findings of a research project at mid-point may be newsworthy today, but not in two or three years when public interest in the subject has waned.

The Constraints of News Reporting

News organizations work under several constraints. By understanding them, you can help the reporter produce fair and accurate coverage. Here are three key pressing limitations on news coverage, according to reporters interviewed:

The Limitations of Time and Space

Print and electronic media often face severe limitations of printing space or broadcast time. At the same time, their audience has limited time to read or to view news or current affairs. For those reasons, the reporter's role is to simplify the world for the reader in the same way that physicists seek to simplify complex phenomena with a few underlying principles. Every news story, for example, contains at least one major point, but rarely more than three. Thus, a reporter will be

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looking for the one to three major points about your research, expressed as simply, directly and colourfully as possible.

Unfortunately, misunderstandings result because researchers often fail to understand those limitations and expect that every word, fact and figure will be faithfully reported. That is simply not the reporter's role.

The Limitations of Deadlines

All reporters work to a deadline. It may be a strict daily deadline in the case of a news reporter, or even an hourly deadline for radio and television reporters. On the other hand, a feature writer with a newspaper or magazine may be working with deadlines a few days or even weeks away. Reporters will appreciate your thoughtfulness if you ask them for their deadline and then do your best to help them meet it. If you cannot provide answers by the deadline, tell the reporter.

The Limitations of the Reporter's Knowledge

No matter how sophisticated a reporter may be - and some science writers are very well informed - he or she will probably know next to nothing about the details of your field of research. Be prepared to take the time to explain what you are doing using the same concepts and language as you would in teaching a first-year class. The reporter in turn will prepare a story using language that can be understood by the average junior high school student - the comprehension level of most news stories.

Working with Different Media

Most researchers are familiar with various media and their differing approaches to news and current affairs. You should also be aware that different media - print, radio, television - have very different expectations of you as an interview subject.

Print

Print stories may be hard news or features, sidebars or columns. Hard news is an objective treatment of a new development or breakthrough. A feature treats a subject in depth and provides more opportunity for the writer's own conjectures. A sidebar is a short item that relates to a feature story. A column, of course, appears on a regular basis under the byline of a specific reporter. You should find out before the interview what type of story the reporter is working on.

The more information you have, the easier it is to help the reporter prepare an accurate story. A reporter will usually want to interview you over the telephone or in your office. In some cases, the reporter will also be interested in photographs. If your work does not lend itself easily to photography, prepare a simple illustration that simplifies your research.

Don't shoot the reporter! Editors, not reporters, write the headlines for their story. If you feel the headline does not accurately reflect the story, the reporter probably agrees with you. Similarly, it is the editor, not the reporter, who decides whether or not to attribute the reporter's name or byline to the story.

Television

Television, for the most part, deals not with issues but with images supported by brief bursts of sound. This is a medium in which "visuals" - moving images of people, nature or machinery - are as important to the story as your words. An in-depth story may run no longer than three minutes. You may be interviewed for half an hour, but your words will likely be edited down to 30 seconds. The key to getting your message across on TV is to use brief, direct and colourful language. Your most important points should be the punchiest and most memorable. Otherwise they may be edited from the broadcast.

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A television interview might be shot in your office or laboratory, in the studio, or at another location. You can usually discuss the questions beforehand with the reporter. If the interview is being taped - rather than broadcast live - you can usually ask the reporter to repeat questions if you want to rephrase your answers.

Media advisors counsel men to avoid wearing white shirts and stripes, and women not to wear heavy jewellery when appearing on camera. While this is good advice, we also suggest that you wear clothes you feel comfortable in, prepare for the interview and then relax and enjoy it. And always remember to look straight at the reporter during the interview!

Radio

Radio is a fast-moving news medium. Reporters frequently work against deadlines of an hour or less. News interviews tend to be very brief and are tightly edited before broadcast. Understandably, reporters prefer to interview people who keep remarks concise and direct. As with television, active verbs and colourful metaphors are most likely to survive the editing process.

Radio features have a slower, more relaxed pace. With features, radio becomes a story-tellers' medium, ideal for those with a gift for conversation. Many stations broadcast feature programs of a half hour or an hour in length, sometimes combined with phone-ins. These may be aired live or taped in advance.

Local Stations vs. Networks

Radio in Canada is broadcast locally, with the primary exception of CBC and Radio Canada. An interview on these two networks may be broadcast locally, regionally or nationally. Similarly, television interviews may be taped for broadcast locally or nationally. Find out whether the reporter represents a local station or a network, as it may influence your remarks.

General vs. Science Reporters

Reporters have varying levels of sophistication and very different reasons for being interested in your research activities. A general reporter may know very little about your discipline. A professional science writer may be well informed. Occasionally, a researcher will be contacted by a reporter who is a specialist in some other area altogether - business, entertainment, or lifestyles - who is looking for information to complement a story in his or her field. Consequently, you should find out as much as you can about the reporter's interests before the interview.

Dealing With the Media

Taking the Initiative

Science writers report that researchers rarely take the initiative in contacting the media to discuss a story. Yet writers welcome approaches from scientists with an interesting research story. Otherwise, much good science goes unreported.

How can you tell if a research story will interest the media? Here is a simple test. If you are so excited about your research that you want to discuss it with friends and neighbours, and they become intrigued as well, then you probably have a real news story.

Testing the Story Idea

If so, discuss it with a specialist in the communications department. That person will be able to gauge the potential media interest in your research and advise on the best approach to the media.

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Preparing to Meet the Media

Whether a story is initiated by you or a news organization, at some point a reporter will contact you. Find out as much as you can from the reporter before the interview begins. What is the publication, radio or television station? What type of story is it? What questions will be asked? Who else is being interviewed? In the case of radio or television, find out if the reporter wants to hold the interview over the phone, in your office, in the studio or elsewhere, and whether the interview will air live or be taped in advance.

The reporter may want to interview you right away on the phone. If you want time to prepare, tell the reporter so and negotiate a time that fits within the deadline.

Once you've made contact with the reporter, you may want to contact your communications department. A media specialist may be able to pass on useful information about the reporter and tips for handling the interview.

Then take some basic steps to help ensure that your research is reported fairly and accurately.

Identify Key Messages

Prepare for the interview by identifying the two to three main points you want to convey. Write them down on paper, along with facts and examples. In choosing your key messages, focus on what is new or different about your research and what it means for society as a whole. (It's as if you are giving a mini-lecture.) A review of your grant application may help in selecting key words and phrases that explain the significance of the research.

Don't make the mistake of preparing for the interview by making copious notes. Instead, think of colourful ways to explain your research. Remember that a simple metaphor or analogy can often convey the intent of your ideas far more effectively than a 10-minute explanation.

Simplify Your Work

Simplify your words as much as possible. Choose expressions that use simple language, concrete nouns, and active verbs. Absolutely avoid jargon, even if the reporter understands it. Otherwise, you are relying on the reporter to translate your research for the public.

Also, give some thought to creating strong "quotes." A quote is not a new piece of information. It is simply a colourful expression that vigorously conveys the essence of an idea. The history of science and technology is full of memorable quotes, such as: "God does not play dice with the universe"; "That's one small step for man, one giant leap for mankind"; and "If I have been able to see farther than others, it was because I stood on the shoulders of giants." Your quotes may not be as memorable as those. But if they are colourful, they will be used.

Describe Your Research in a Single Page

Write down your main message on a single piece of paper and give it to the reporter as background. If it is a telephone interview, offer to fax it. The backgrounder makes the reporter's job easier and helps ensure that the message is accurately reported. Similarly, offer to share additional background information that might be helpful in preparing the story.

During the Interview

With a little preparation, you will have no trouble conveying your research story clearly and forcefully. Here are a few more tips to help you with the interview:

- Let the reporter know where you are coming from. Clarify whether you are speaking for yourself, your research group or the university. Be clear about subjects you do not wish to discuss or which you believe to be outside your realm of competence. In the latter case, you may wish to refer the reporter to another researcher.

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- Speak directly to the reporter's questions and don't ramble. Stress your main points clearly and concisely, and support them with facts, figures or examples. If the reporter's questions fail to touch on your messages, then take the initiative and use the questions as a bridge to your points.
- Always be honest and straightforward in answering questions. If you do not know the answer to a question, then say so. If possible, offer to find out and get back. Then make sure you follow-through.
- Avoid speaking "off-the-record" unless you have a very good relationship with the reporter and a commitment that your remarks will be used for background only, and will not be attributed to you. In recent years, journalists have come to regard all comments as "on-the-record."
- Clarify and solicit feedback during the interview. Don't be afraid to ask the reporter if your explanation is clear to him or her or whether further clarification is needed. If you are concerned the message is not being understood, you might ask the reporter to explain it to you, and then clarify the points that are misunderstood.
- Remember to credit your research funders - such as NSERC - and your collaborators. In fact, we suggest giving the reporter a prepared list of collaborators at the end of the interview. The reporter may not have time or space to use the information, but you will have given credit where it's due.
- Offer to follow up afterwards. Ask the reporter if there is any further background information you can provide. Urge the reporter to call you at work or at home if there are further questions. Suggest that you are available to review for accuracy the technical details and quotes that will be used in the story.
- However, never ask to see the story in advance of publication. Reporters regard this as interference on your part. That said, some will offer to show you their piece in the interest of ensuring scientific accuracy.

Persistence Pays Off!

It's not always easy to generate coverage of your activities. However, you can increase the likelihood of attracting news interest simply by analyzing the media as you read, watch and listen. TV current affairs producers say they know within a few seconds whether a person calling with a story idea watches their program or not. Those who do usually understand the producer's needs and stand a much better chance of being interviewed.

We also suggest that persistence and a commitment to building a good relationship with the media over time will pay dividends down the road. As you become known to the media as a competent communicator, you will be increasingly in demand as a spokesperson.

Good Luck!

We hope you find this section helpful. The popular media can be a wonderful vehicle for promoting the value of scientific and engineering research. It is also rewarding personally to see your work given wide public coverage and to know that you are contributing to the public's appreciation of science.

Handling Difficult Interviews

This Guide is designed to encourage researchers to talk about the positive contribution they are making to Canadian society through scientific research. However, you may be contacted by a reporter critical of your work. Such a situation may represent an opportunity to change the reporter's perception of an issue. Here are a few helpful techniques:

- Make a list of the positive points you wish to stress before the interview. Use the reporter's questions or accusations to introduce those points. (Example: "We appreciate

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- the public's concerns about the use of animals in research. But let me tell you the steps we have taken in recent years to reduce the use of animals in our research and prevent suffering to those animals, etc...)
- Remain dispassionate and deal with the questions in a straightforward manner. Don't become antagonistic. If the reporter cuts you off, politely insist on finishing your point. If the reporter presents you with a series of questions all at once, break them apart and begin answering the one which best lets you present your message. If an accusation is true, you may want to admit the mistake, then move on to the steps taken to correct it.
 - Hostile interviews can easily provoke a person to speculate in their own defence or to comment on third party actions or statements. Try and avoid this. Stay calm and stick to the facts as you know them. Once you have answered the question or presented your point, wait for the next question. Do not fill the void by rambling on. Where there is fundamental disagreement, acknowledge the fact and invite the next question or switch to a key message.
 - Do not repeat the reporter's accusations in answering the question. An editing mistake or a misunderstanding may attribute to you a point of view you do not share.
 - A television or radio audience will judge you as much on your tone of voice or appearance as on your words. People are more likely to sympathize with your viewpoint if you remain positive and confident throughout the interview.

Monitoring Your Success

We Want to Hear From You!

Just as you capture data during experiments, you should monitor communication activities. The results provide a personal gauge of what works and useful information to share with colleagues. NSERC also wants to hear about your experiences. Please e-mail, fax or write to us about your adventures in communications. We may include your practical advice in future editions of this Guide.

Monitoring Speeches and Conferences

Colleagues and university communications specialists can help you evaluate your speaking performances. The sample evaluation form included in the Appendix of this Guide will also provide useful feedback. When you speak, ask the conference host to hand out the evaluation forms and collect them at the end. Soliciting feedback not only provides useful information but helps establish personal contact with the audience.

This Guide also contains a form for soliciting feedback at an "open house." Distribute the forms as people are entering and provide a box for depositing the completed forms at the exit.

Measuring Media Relations

The news article or broadcast provides immediate feedback on your media efforts. If you are not pleased with the results, discuss your experiences with a colleague or campus communications specialist and determine how you might do things differently next time.

If you missed the broadcast or article, your communications department can usually obtain radio and television clips or newspaper articles containing your interview. You can make the job easier by alerting the department in advance of the broadcast.

Where to Get Help

A wealth of resources is available to help you communicate. The most important include:

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University Department or Communications

The university communications department - or office of public affairs or public relations - is a great place to start. All Canadian universities have communications specialists on staff, and many of these people have expertise in science communications. The department maintains on-going relationships with the media, and can help you prepare for an interview, place a newspaper article, or create media interest in your research. In some institutions, the department of communications arranges public speaking venues and assists in preparing slides and overheads.

Would you like to become a media spokesperson in your discipline? Many universities publish directories for the media, listing faculty members by area of expertise so that the press can easily contact a researcher for information. Alternatively, your institution may place faculty listings on the ProfNet. Many universities also distribute media newsletters, highlighting new grants and results of research projects.

At some universities, the communications department organizes workshops on media relations for faculty members and graduate students.

Canadian Science Writers' Association (CSWA)

This is a professional organization of 200 science journalists, communications specialists in industry, and scientific researchers with an interest in communications. CSWA issues a quarterly newsletter that frequently contains items on the research activities of members. This is an effective way of introducing your work to many of Canada's leading science journalists. The Association's electronic usergroup, available on the Ottawa FreeNet, is another effective vehicle for promoting research and talking with science writers.

CSWA hosts an annual conference with workshops designed to hone communications skills. Several regional groups also have regular gatherings. The Association's full-time executive director is available to answer any questions you might have.

Canadian Science Writers' Association

PO Box 75 Station A

Toronto ON M5W 1A2

1-800-796-8595

1-613-548-8500 (outside Canada)

Executive Director: Andrew Visser

<http://www.sciencewriters.ca/>

Association des communicateurs scientifiques du Québec

The Association des Communicateurs Scientifiques du Québec (ACSQ) is a smaller, less formal organization than CSWA. Membership consists of about 100 journalists, public relations specialists and museum experts, although it does invite researchers to join. The association issues a newsletter, and hosts an annual conference for members to which researchers are also invited to attend. Experienced Association members are an excellent source of advice on science communications.

Association des Communicateurs Scientifiques du Québec

c/o Agence Science Presse

3995, rue Sainte-Catherine Est

Montréal, QC H1W 2G7

(514) 522-1304

Président: Félix Maltais

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Industry, Government and Centres of Excellence

Many researchers work in partnership with industry, government, and publicly funded agencies. Your freedom to communicate research activities may be limited, or even prohibited, in such a partnership. If not, you might explore communications opportunities with the other partners, who can use their in-house communications specialists as resources.

Natural Sciences and Engineering Research Council

NSERC's communications staff can answer many of your questions and provide media and public affairs support. For advice, call NSERC at 613-995-6295. Help is also available from the [Canadian Institutes of Health Research](#) (613-941-2672) and the [Social Sciences and Humanities Research Council of Canada](#) (613-992-0691).

Professional and Faculty Associations

Many of these organizations have public relations committees or staff, who can be a source of speaking opportunities and communications advice.

Appendix

Presentation Evaluation Form

1. The theme of the presentation was explained (circle one):			
Excellent	Well	Adequately	Poorly
2. How would you rate the content provided (circle one):			
Too Technical	Just Right	Too Shallow	
3. The presenter's ability to convey the information in terms you understand was (circle one):			
Excellent	Good	Adequate	Poor
4. Would you rate the visuals (pictures, charts, etc.) (circle one):			
Excellent	Good	Adequate	Poor
5. Based on what you heard, public funding of research is (circle one):			
Worth It	A Waste	Need More Information	
6. What was the most useful information you heard in the presentation?			

7. If there is one area that could be improved, what would that be?			

Thank You Very Much

* Please provide your name and address so information can be sent to you.

Open House Evaluation Form

1. On the whole, the main idea of the exhibits was explained (circle one):			
Excellent	Well	Adequately	Poorly
2. The ability of the presenters at the booths to convey the information in terms you understand was (circle one):			
Excellent	Good	Adequate	Poor
3. How would you rate the content of the exhibits (circle one):			
Too Technical	Just Right	Too Shallow	

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4. Would you rate the visuals (pictures, charts, etc.) in the booths (circle one):			
Excellent	Good	Adequate	Poor
5. Based on what you heard, public funding of research is (circle one):			
Worth It	A Waste	Need More Information	
6. What was your favorite booth?			

7. If there is one area that could be improved, what would that be?			

Thank You Very Much

* Please provide your name and address so information can be sent to you.