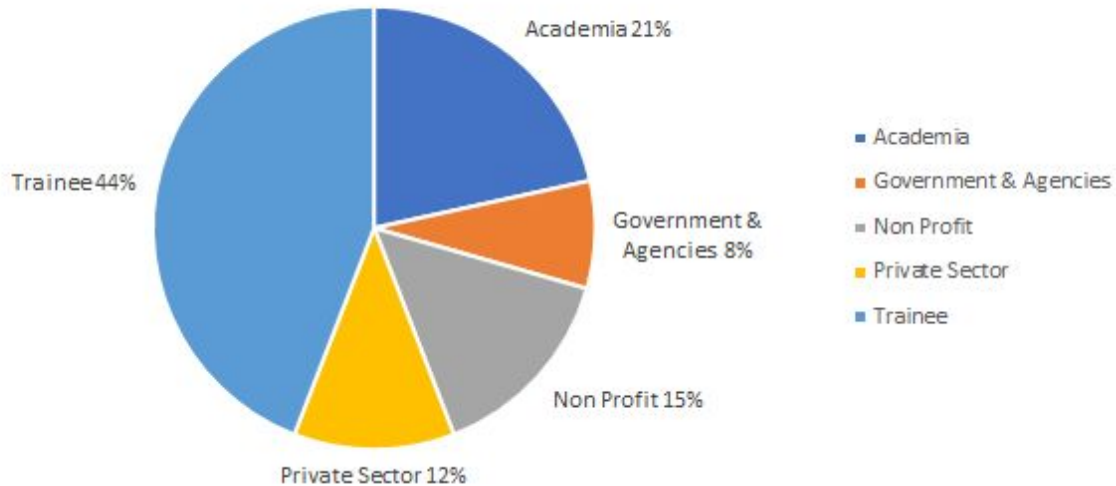


Overview

The first British Columbia Science & Policy Conference took place on May 11th, 2018 at the University of British Columbia (UBC) campus in Vancouver, British Columbia (BC). Highlights of the event include:

- Over 100 participants from a diverse range of sectors were in attendance (illustrated below)
- 16 local organizations provided cash or in kind support
- 17 speakers participated, spanning the non profit, government, private and academic sectors across BC, Canada and the US



Participant Feedback

- As a result of attending this conference,
 - 93% of respondents agree that the topic of science policy should be discussed further in BC
 - 86% of respondents agree that they have acquired new insights into the challenges and potential solutions of evidence-based decision making
 - 73% of respondents agree that they have improved their understanding of the science-policy interface
 - 40% of respondents will apply new knowledge gained towards their work
- 87% of respondents would like to see this conference run again in the future

Some positive testimonials received:

- *"The great variety of panelists and speakers, from scientists in academia, to not-for-profit employees working at the interface, to politicians! It was nice to have lots of different perspectives!"*
- *"Honest discussions of the reasons Science is used in Policy but is not the sole factor shaping policy"*
- *"I was inspired by the speakers and think you've generated some good momentum - please keep it going."*

- *“I would like to see this with some regularity and for it to gain momentum. I don’t want to wait a year for another conference/event. Maybe other types of events can be organized to keep the momentum going.”*
- *“An amazing conference! Thanks.”*

Actionable Items

At the end of the day, we all work better together:

- Both science and government ultimately strive to do public good. If both groups can shift greater effort towards building relationships and alliances with each other, the public ultimately benefits the most.
- There are many policy-relevant issues that lack the scientific evidence required to make an informed decision, highlighting a key opportunity for increased collaboration between government and scientists to better aligning research with key policy questions.

Scientists need more support to engage in the decision making process...

- Many scientists are not trained as public policy scholars, and the transition from research to entering a politicized debate is uncomfortable.
- Being “bilingual” is key for success at the science-policy interface: being able to translate both the language of science and of policy. Developing programs to help scientists build these skills would make it easier for them to wear both hats.
- Training young academics is needed to increase the success of scientists entering the policy world. Some training opportunities include how to effectively communicate with media and politicians, and how to write a policy brief.
- Scientists need to support each other: policy issues are big - bigger than any one person or discipline can touch on – so start working together; a lot more can be said collectively about these issues.

...but scientists may need to shift their thinking, as well

- With grant money and university subsidies coming from taxpayer funding, scientists are in a way public servants themselves and should be held more accountable for disseminating research to the public and for public good.
- Don’t assume it is someone else’s responsibility to work on policy-relevant issues. Scientists should leverage their unique position within academic institutions to provide an authoritative voice that can support effective decision making.
- Acknowledge that people and organizations are critical for putting pressure on politicians. It is ok to challenge a politician’s idea and make them feel uncomfortable – that is a part of their job. It does not necessarily mean all parties will agree on everything, but that is ok too.
- The public likes and expects to see scientists out there, so speak out about your work beyond the academic circle! Scientists should not hesitate to speak out for fear of being perceived as not credible or neutral.

- Scientists must acknowledge that they are still human and can be biased: when speaking out, one must ask themselves: where is this coming from? Is it from the science or your expertise? Or from personal values? How does speaking out balance against other goals?
- Science will not always give the deciding answer to a policy question, because many other factors must be considered (e.g. political, economics, morals and values, government priorities, fiscal and resource constraints, benefit-cost, etc.)
- Science policy extends policy briefs and legislation: events, speeches, workshops, and tweets are all considered vehicles for change

Government has a role to play in supporting their relationship with the scientific community

- Recognize that science deserves a seat at the decision making table: the credibility of a scientist stems from the science they publish, which is subject to scrutiny by other experts in the same field through the peer review process
- The path to communicate with government is not clear and is not always ideal (e.g. a luncheon with your fellow MLA is not great for discussing research). Can government provide a more robust and sustainable communication link for scientist to engage in the decision making process?
- When conflict arises regarding a policy decision, are there opportunities for government to be more transparent about the decision making process? For example, when science is not used in decision making, why? What other factors are considered? Can a compromise be found through remediation processes?

Session Highlights

Conference Opening

Sam Sullivan, BC MLA for Vancouver-False Creek

- Universities strive to better understand our reality because what we believe intuitively is usually wrong
- The world of politics is different: innate beliefs and the ability to convince at least >50% of people are more important
- In theory, conflict can be resolved by adding information but in reality, this can make things more divisive
- We need to move beyond the issues and understand how humans operate in political systems: people move towards cohesion and desire a sense of identity and belonging

Lightning Talks

Showcasing how scientific research already contributes to government decision making and policy development

Amani Saini, Founder & President of Adverse Drug Reactions

The problem

- Adverse drug reactions (ADR) are the 4th leading cause of death in Canada: up to 200,000 people per year suffer from an ADR and about 20,000 people will die

The evidence

- Research demonstrates that some ADRs are caused by gene variants, and genetic testing can therefore be implemented to determine if a patient has a gene variant that may cause an ADR

The policy change

- Many countries have started using evidence to inform their health policy decisions: creating databases of ADRs (noting what drug they took and acquiring a saliva sample), providing coverage for genetic tests, and performing mandatory tests prior to prescribing a type of medicine
- In BC, BC Children's Hospital has implemented a program to determine which drugs used in pediatric oncology may cause an ADR, however, more needs to be done

Dr. Maria Giammarco, Mitacs Canadian Science Policy Fellow in the BC Public Service Agency

The problem

- Context matters - people respond differently to the same choice depending on how it is framed
- Our behaviours are shaped by our environment, the people around us, and the information we receive

The evidence

- By using what we know about psychology, together with consultations with subject matter experts and end users, behaviourally-informed interventions can be designed to modify status quo policies

The policy change

- The behavioural insights group in the Public Service Agency designs behavioural interventions to improve policies, programs and services by encouraging positive behavioural changes
- Current initiatives aim to:
 - Reducing hiring times
 - Encouraging charitable giving
 - Improving tax compliance
 - Encouraging timely income assistance submissions
 - Reducing inappropriate hospital tests
 - Improving environmental compliance

Dr. Conny Lin, Policy and Legislation Analyst at the College of Pharmacists of BC

The problem

- Outcome and adherence to substitution treatment for opioid use disorder (OUD) in clinical trials are much better than in practice.

The evidence

- Many people with OUD have a history of abuse/trauma or mismanaged treatment of pain.
- Clinical trial environment has well-designed psychosocial support and continuity of care, but in practice those supports are lacking.

The policy change

- Established a psychosocial support service framework to identify system needs to improve patient outcome and adherence to substitution treatment.

Dr. Ashley Whillans, Assistant Professor Business Administration at Harvard Business School

The problem

- Spending money on others increases personal happiness but charitable giving is on the decline

The evidence

- Worked together with nonprofit organizations, the BC government and academia to increase charitable giving by seeking out how to foster a culture of charitable giving
- By exploring the current barriers that prevent people from donating, research identified a missing component: empowering people to make changes that matter most to them with whatever they can give

The policy change

- Government can use this insight from research to create services and programs that increase charitable giving among the public.
- Additional work is underway in collaboration with children sports teams to better understand what motivates the next generation to give, and whether this in turn encourages their parents to give

Spencer Murch, PhD Candidate at the Centre for Gambling Research at the University of British Columbia

The problem

- The Centre for Gambling Research aims to reduce the harms associated with problem gambling and to improve evidence-based gambling policies

The evidence

- When taking a public health approach towards problem gambling, we must consider environmental factors and not focus blame towards the individual or the game itself

- Eye tracking glasses were used to connect where slot machine players are looking to what the machine is doing
- Preliminary data suggests the majority of attention is on the reel of the machine and very little is paid towards the credit window; moreover, the feeling of immersion (feeling in the zone) occurred more often when players were looking at the credit windows than the reel

The policy change

- If the feeling of immersion is a risk factor for problem gambling, games can then be designed to break this feeling

Keynote Sessions

Speakers presented their experience working to support evidence-based decision making, discussing the importance of science in policy development and the challenges faced when balancing all other factors that influence policy development.

Terry Lake, Vice President of Corporate Social Responsibility for Hydrotheatry and former BC MLA for Kamloops-North Thompson and Minister of Health

From Evidence to Action - BC's Response to the Fentanyl Crisis

Take away message:

In a time of crisis, such as the recent opioid epidemic in BC, drastic changes are required to stop and revert its negative impacts. Following the evidence of what works to revert a crisis is critical when finding the best solutions and creating impactful policies. In the end, good policy leads to good politics but such drastic changes might not be so easy to implement when collaboration with multiple communities, the Federal government, and fellow political colleagues is required.

Dr. Wendy Palen, Associate Professor of Biological Sciences at Simon Fraser University and Board Chair for Evidence for Democracy

Science Advocacy in Support of Science and Society

Take away message:

As a scientist doing policy-relevant work, you can find yourself thrown in the middle of a very politicized debate (which can be very uncomfortable if you have no training in the public policy field). It can be very frustrating when you are doing honest, credible, policy-relevant work as a scientist, but you are not being heard and the decision making process is not transparent. But don't assume it is somebody else's responsibility to speak out these issues. Many scientists have the privilege of working within academic institutions where their rights are protected, and can therefore provide independent, authoritative voices to speak out if something is being portrayed incorrectly.

Kei Koizumi, Visiting Scholar at the American Association for the Advancement of Science, former Assistant Director for the Federal Research and Development and Senior Advisor to the Director for the National Science and Technology Council at the White House Office of Science and Technology Policy

Science for Policy, and Policy for Science in the US White House

Take home messages:

There are two faces to science policy: policy for science and science for policy. In both cases, policy development requires many meetings with various stakeholders (within government and external), cross jurisdictional analyses, literature searches, and consultations with the academic community. Science policy is also more than just written documents - it is also events, speeches, workshops, social media, and using what you have available in your own science policy 'tool kit'. To be effective within the science policy realm, easy access to the decision making table is critical. Moreover, being 'bilingual' is a key asset: the ability to speak as both a policy maker and a scientist. It is equally important to realize that just because you are in the room, it does not mean you are going to win - and science is rarely the deciding factor.

Panel Discussion

A panel of part scientists and part policy researcher/influencers sat down together to discuss the roles and responsibilities of scientists towards policy development and how government can help maintain and strengthen this partnership. The panel was made up of the following participants:

Moderator - Dr. Wendy Palen

Dr. Sally Otto, Professor of Zoology at the University of British Columbia, Founder of the Mitacs Canadian Science Policy Fellowship program

Dr. Laurel Schafer, Professor of Chemistry at the University of British Columbia, Canadian Research Chair in Catalyst Development

Dr. Lynn Raymond, Professor in Psychiatry at the University of British Columbia, Clinic Director of the Centre for Huntington Disease

Dr. Max Cameron, Professor of Political Science at the University of British Columbia, Director of the Centre for the Study of Democratic Institutions

Dr. David Castle, Vice President of Research at the University of Victoria

Terry Lake

Below are the questions that were asked to the panel, along with highlights from their responses.

Question 1: For those who identify as scientists -what has been the biggest frustration or gap where science has failed to inform policy (ideally highlighting a BC-specific issue)? For those who identify as a policy influencer/researcher - what might be some of the reasons for these failures?

Scientist:

- The muzzling of federal scientists: while their work was still being published, they were unable to talk about it to media and discuss any policy implications
- More relevant to BC is the gap between what the science says about species at risk and the lack of action taken to protect them
- Scientist may face additional barriers of negative public perceptions of science and scientists when trying to engage with government (e.g. a chemist would not be helpful because chemicals are problematic)
- The lack of public awareness of research and lack of funds for fundamental science research
- Proposed cannabis legalization does not align with neuroscience research: much evidence demonstrates that the brain continues developing until 25 years of age but government still aims to make the minimum cannabis consumption age 19

Response from the policy researchers/influencers:

- Scientist and politicians live in two different worlds and they both have preconceived perceptions about each other: science is objective, neutral, impartial, and non-partisan, while politics is messy, dirty and unseemly
- Everyone needs to recognize that advocacy is intrinsic to science, which aims at doing public good, however, we may need to rethink how to go about doing it; advocacy should be about building relationships and alliances, and finding ways to help each other out
- We need to acknowledge that all forms of evidence need to be considered, including different kinds of science (e.g. neuroscience vs population health)
- Both sides of the story need to be explained: when the muzzling of scientists was revealed, it was never properly explained that government scientists operate under very different conditions (ex: employment contractual conditions) compared to academic scientists and they do not have a contractual obligation to academic freedom like academic scientists have
- Under some circumstances, control of government message is required with some kinds of science

Question 2: For the scientists - What do you think are the responsibilities of scientists to support government decision making and policy development (if any)? How can more scientists be encouraged to engage with outside communities beyond their academic circles (be it public or political, and beyond just increasing grant funds)? For the policy influencers/researchers - What is government's role towards sustaining evidence-informed decision making in BC? How can they best support scientists to be engaged within the process?

Policy Researcher/Influencer:

- Consider how do you position science and scientists in a way that is useful for policy
 - Condition expectations for government decision making: science is just one part of it and other forms of evidence (apart from scientific) need to be considered (e.g. legal, economic, political environment, polling data)
 - Acknowledge that having received the information does not mean the government is obligated to use it, but....
 - ... remind politicians that is their job to look at all of the options to find the best solution
- Establish more pathways for science to enter policy in effective ways; for example:
 - Appoint a Chief Science Advisor at both national and sub-national levels
 - Provide support for fellowships within government (e.g. the Mitacs Canadian Science Policy Fellowship)
 - Set up expert panels to provide advice and serve as a means to engage
 - Create the right environment for information to flow and for politicians to make wise decisions that are in the public's best interest rather than ones that will earn them the most votes

Scientist:

- Utilize our knowledge on social license to shift public opinion; this has been particularly important in Europe for shifting public perception on green chemistry
- Create a roadmap for scientists to connect with government and discuss their research more effectively
- Be more transparent about how scientific evidence is utilized in decision making and weighed against other evidence
- Better utilize the capacity of scientific communities to articulate the consequences of decisions that have not properly considered scientific evidence

Audience Discussion

This session engaged the the audience in a group discussion on how BC can better support and strengthen the use of science for policy development.

Moderator - Dr. Dan Reist, Assistant Director (Knowledge Exchange) at the Centre for Addictions Research of BC

The following questions were posed to the audience for discussion:

1. Can BC better support and strengthen the use of science for policy development?
2. Should BC better support and strengthen the use of science for policy development?
3. "The *estimation* of risk is a scientific question – and therefore, a legitimate activity of scientists ... The *acceptability* of a given risk, however, is a political question, to be determined in the political arena." Do you agree that this is an accurate description of one critical role division between science and policy?
4. "For want of a nail the shoe was lost,

*for want of a shoe the horse was lost,
for want of a horse the knight was lost,
for want of a knight the battle was lost,
for want of a battle the kingdom was lost.
So a kingdom was lost—all for want of a nail.”*

Assuming this as a hypothesis, what is the scientific concern? What is the political concern?

5. Understanding something of the complexity of the issues involved, what should we do in BC?
6. What are you going to do to better support and strengthen the use of science for policy development?

| The British Columbia Science & Policy Conference 2019

The Science & Policy Integration Network is currently reassessing the purpose and format of next year's conference. If you have a suggestion for how to improve this conference next year, we would be happy to hear from you: info@thespin.ca. For the latest information, please check out our website (thespin.ca) or connect with us on social media (Twitter: @SPINSciPolicy, Facebook, LinkedIn).

