**Science and Ideology**

Stephen W. Hwang, MD, MPH

Affiliation: Dr. Hwang is a research scientist at the Centre for Research on Inner City Health, the Keenan Research Centre in the Li Ka Shing Knowledge Institute of St. Michael's Hospital, Toronto, Ontario; and an associate professor of medicine in the Division of General Internal Medicine, Department of Medicine, University of Toronto.

Contact Information:

Dr. Stephen W. Hwang, Centre for Research on Inner City Health,

St. Michael’s Hospital, 30 Bond Street, Toronto, Ontario M5B 1W8, Canada.

Email: [hwangs@smh.toronto.on.ca](mailto:hwangs@smh.toronto.on.ca)

Phone: 416-864-5991

Fax: 416-864-5485

Funding: None

Competing Interests: None

Word Count (text only): 1,034

Consider the following hypothetical scenario. An innovative new intervention for people with diabetes is developed. Health Canada provides funding to a highly accomplished group of academic health scientists, who have no financial conflicts of interest with respect to the new intervention, to conduct research on its effectiveness. Their work shows that the new intervention significantly reduces the incidence of a variety of diabetic complications. Despite a careful search for possible adverse effects of the intervention, none are detected. Over a 3 year period, the group’s research findings are published in leading medical journals, including the *New England Journal of Medicine, the Lancet,* and the *British Medical Journal.*

In response, the federal government calls the research inconclusive, and states its position that the only acceptable therapies for diabetes are ones that either prevent or completely cure this condition. Two national organizations state their opposition to the intervention because they fear that the availability of an intervention that reduces the risk of diabetic complications will cause people with diabetes to eat more food and become more obese. The government indicates that unless additional research can address its concerns within a year, it will likely move to ban the new intervention. Meanwhile, institutions other than the one at which the research was initially conducted are forbidden to provide the intervention.

Although this tale seems far-fetched and even Orwellian, it becomes true-to-life if one substitutes “drug addiction” for “diabetes,” “drug-related harms” for “diabetic complications,” and the “new intervention” is a supervised injection facility for injection drug users. In a series of peer-reviewed research articles, the supervised injection facility in Vancouver has been shown to provide a number of benefits, including reduced needle sharing, decreased public drug use, fewer publicly discarded syringes, and more rapid entry into detoxification services by persons using the facility.[[1]](#endnote-2) [[2]](#endnote-3) [[3]](#endnote-4) [[4]](#endnote-5) The opening of the facility was not associated with any increase in levels of crime, public disorder, or injection drug use.Error: Reference source not found [[5]](#endnote-6)

Despite this body of evidence, Federal Health Minister Tony Clement released an official statement in September 2006 in which he claimed “Right now the only thing the research to date has proven conclusively is drug addicts need more help to get off drugs.”[[6]](#endnote-7) This statement came on the heels of press releases by the Canadian Police Association and the Royal Canadian Mounted Police which asserted, in the absence of supporting data, that Vancouver’s supervised injection site was contributing to increased crime.[[7]](#endnote-8)  It remains a distinct possibility that the federal government will not renew the current exemption that allows the supervised injection facility to operate legally, thus forcing the program to close in December 2007.[[8]](#endnote-9) The fact that a highly promising intervention for the management of substance abuse appears to have been judged by an entirely different standard than interventions for other common chronic health conditions, such as diabetes, suggests that scientific evidence is about to be trumped by ideology.

We wish to affirm the vital importance of evidence-informed policy-making on issues related to substance use disorders, and to state our grave concern regarding the risks of pursuing health policies that disregard strong and credible scientific data. Of course, public policies arise through a complex process that is influenced not only by information and evidence such as that obtained through research. Other essential and legitimate factors that affect policy-making include ideologies (normative views regarding what ought to be), beliefs (convictions about the way things are or the likely effects of particular actions), and interests (who wins, who loses, and by how much).[[9]](#endnote-10) However, the health of the nation is placed in peril if our leaders ignore or discount crucial research findings simply because they run contrary to a rigid policy agenda driven by ideology or fixed beliefs.[[10]](#endnote-11)

An example of the potentially deadly consequences of this kind of approach to drug policy is the U.S. ban on the use of federal funds to support needle exchange programs for injection drug users (Canada has no such restrictions). The U.S. ban was enacted in 1988 amid accusations that needle exchange programs encourage illegal drug use. Despite the subsequent accumulation of a large body of research evidence demonstrating that needle exchange programs reduce HIV seroconversion among injection drug users[[11]](#endnote-12) and a National Institutes of Health consensus statement concluding that such programs reduce needle sharing and do not increase drug use,[[12]](#endnote-13) the ban on funding remains in effect to this day. Washington, D.C., the only U.S. city where federal law barred both local and federal financing of needle exchange programs over the last 10 years, now has the highest rate of new AIDS cases in America (128 per 100,000 people per year).[[13]](#endnote-14)

Policy makers may legitimately decide on ethical, moral, political, or economic grounds to severely restrict or even prohibit the use of an intervention, such as Vancouver’s supervised injection site, that careful scientific inquiry has shown to have significant health benefits. In these situations, however, policy makers must provide cogent reasons for their decision that make the basis for their actions explicit and transparent. Such decisions must not be justified by resorting to deceptive claims that cast doubt upon the effectiveness of the intervention, or that raise unsupported fears of harmful side-effects.

At the same time, physicians, scientists, and public health professionals must be willing to speak out in the public arena when the accumulated body of research evidence clearly supports a health intervention that faces resistance due to entrenched beliefs. As stated in a declaration by Scientists and Engineers for America, a grassroots organization that counts 15 Nobel laureates among its Board of Advisors, “[t]he principal role of the science and technology community is to advance human understanding.  But there are times when this is not enough.  Scientists and engineers have a right, indeed an obligation, to enter the political debate when the nation’s leaders systematically ignore scientific evidence and analysis, [or] put ideological interests ahead of scientific truths….”[[14]](#endnote-15)

We believe this is such an occasion. The data to date show that Vancouver’s supervised injection facility is an intervention that reduces drug-related harm, with no discernable adverse consequences. If the federal government chooses to close this facility, then it must clearly specify the nature of its objections to an intervention whose effectiveness is supported by current research evidence.

**The following Canadian physicians, scientists, and public health professionals have endorsed this commentary. Institutional affiliations are provided for identification purposes only; no endorsement by any of these institutions is intended or should be inferred.**

1. Barry Adam, PhD, University of Windsor
2. Alix Adrien, MD, CM, MSc, Direction de santé publique de Montréal
3. Michel Alary, MD, PhD, Université Laval
4. Nelson Ames, MD, MHSc, Interior Health, BC
5. Jonathan Angel, MD, University of Ottawa
6. Nelson Arruda, MSc, Direction de santé publique de Montréal
7. Mark Asbridge, PhD, Dalhousie University
8. Greta Bauer, PhD, MPH, University of Western Ontario
9. Ahmed Bayoumi, MD, MSc, University of Toronto
10. Hallgrimur Benediktsson, MD, University of Calgary
11. Cecilia Benoit, PhD, University of Victoria
12. Philip Berger, MD, University of Toronto
13. Barry Beyerstein, PhD, Simon Fraser University
14. John Blatherwick, CM, CD, MD, Vancouver Coastal Health, BC
15. Neil Boyd, LLB, LLM, Simon Fraser University
16. Susan Boyd, PhD, University of Victoria
17. Serge Brochu, PhD, Université de Montréal
18. Julie Bruneau, MD, MSc, Université de Montréal
19. Robert C. Brunham, MD, University of British Columbia
20. Jane Buxton, MBBS, MHSc, University of British Columbia
21. Roy Cain, PhD, McMaster University
22. Bill Cameron, MD, University of Ottawa
23. John Carsley, MD, MSc, McGill University
24. Isabelle Casavant, RN, Direction de santé publique de Montréal
25. Mélanie Charron, RN, Direction de santé publique de Montréal
26. Éric A. Cohen, PhD, Institut de Recherches Cliniques de Montréal.
27. Evan Collins, MD, University of Toronto
28. Curtis Cooper, MD, University of Ottawa
29. Trevor Corneil, MD, MHSc, Vancouver Coastal Health, BC
30. André Corriveau, MD, MBA, Department of Health & Social Services, Government of the Northwest Territories
31. François Coutlée, MD, Université de Montréal
32. Joseph Cox, MD, Direction de santé publique de Montréal
33. Patricia Daly, MD, University of British Columbia
34. Harold Dion, MD, Clinique médicale l'Actuel, Montréal
35. Peter Dodek, MD, MHSc, University of British Columbia
36. James R. Dunn, PhD, University of Toronto
37. Brian P. Emerson, MD, British Columbia Ministry of Health
38. Gilbert Émond, PhD, Université Concordia
39. Patricia G. Erickson, PhD, University of Toronto
40. Mylène Fernet, PhD, Université du Québec à Montréal
41. Benedikt Fischer, PhD, University of Victoria
42. Sarah Flicker, PhD, York University
43. Lisa Forman, LLB, MA, SJD, University of Toronto
44. John Frank, MD, MSc, University of Toronto
45. James Frankish, PhD, University of British Columbia
46. Jacqueline Gahagan, PhD, Dalhousie University
47. Richard H. Glazier, MD, MPH, University of Toronto
48. Kevin Gough, MD, MEd, University of Toronto
49. Jason Grebely, PhD, University of British Columbia
50. Reka Gustafson, MD, University of British Columbia
51. Nathalia Gutierrez, MSc, Direction de santé publique de Montréal
52. Helga Hallgrimsdottir, PhD, University of Victoria
53. Michael Hayes, PhD, Simon Fraser University
54. Clyde Hertzman, MD, MSc, University of British Columbia
55. Nikolaus Heveker, PhD, Université de Montréal
56. J. David Hulchanski, PhD, University of Toronto
57. Marian Hutcheon, MD, MHSc, Interior Health, BC
58. Lois A. Jackson, PhD, Dalhousie University
59. Patti Janssen, PhD, University of British Columbia
60. Mikael Jansson, PhD, University of Victoria
61. Prabhat Jha, MD, DPhil, University of Toronto
62. Klaus Jochem, MD, Direction de santé publique de Montréal
63. Mira Johri, PhD, MPH, Université de Montréal
64. Amy Kaler, PhD, University of Alberta
65. Jeff Karabanow, PhD, Dalhousie University
66. Ken Kasper, MD, University of Manitoba
67. Rupert Kaul, MD, PhD, University of Toronto
68. Perry Kendall, MBBS, MSc, Provincial Health Officer, British Columbia, and University of British Columbia
69. Susan Kirkland, PhD, Dalhousie University
70. Marina Klein, MD, CM, MSc, McGill University
71. Murray D. Krahn, MD, MSc, University of Toronto
72. Richard G. Lalonde, MD, McGill University
73. Gilles Lambert, MD, Direction de santé publique de Montréal
74. Michel Landry, PhD, Centre Dollard-Cormier, Montréal
75. John N. Lavis, MD, PhD, McMaster University
76. Pascale Leclerc, MSc, Direction de santé publique de Montréal
77. Lynne Leonard, PhD, University of Ottawa
78. Francesco Leri, PhD, University of Guelph
79. Richard Lessard, MD, Agence de santé et de services sociaux de Montréal
80. Danièle Longpré, MD, Clinique médicale l'Actuel, Montréal
81. Mona Loutfy, MD, MPH, University of Toronto
82. Jo-Ann MacDonald, RN, PhD(cand.), University of Prince Edward Island
83. Nimâ Machouf, PhD, Clinique médicale l'Actuel, Montréal
84. Bruce MacLaurin, MSW, PhD(cand.), University of Calgary
85. Joan MacNeil, PhD, RN, University of Victoria
86. David C. Marsh, MD, University of British Columbia
87. Richard Mathias, MD, University of British Columbia
88. Lorna Medd, MD, Northern Health, BC
89. Edward Mills, PhD, MSc, LLM, Simon Fraser University
90. Carole Morissette, MD, Direction de santé publique de Montréal
91. Stephen Moses, MD, MPH, University of Manitoba
92. Gerry Mugford, PhD, CMH, Memorial University of Newfoundland
93. Shree Mulay, PhD, McGill University
94. Stephanie Nixon, PhD, University of Toronto
95. Brian O'Connor, MD, MHSc, Vancouver Coastal Health, BC
96. James Orbinski, MD, University of Toronto
97. Mario Ostrowski, MD, University of Toronto
98. Anita Palepu, MD, MPH, University of British Columbia
99. Nathalie Paquette, RN, Direction de santé publique de Montréal
100. Gilles Paradis, MD, McGill University
101. Bernadette M. Pauly, RN, PhD, University of Victoria
102. Hélène Poliquin, RN, Direction de santé publique de Montréal
103. Martin Potter, MD, McGill University
104. Janet Raboud, PhD, University of Toronto
105. Patricia Rodney, RN, PhD, University of British Columbia
106. Michel Roger, MD, PhD, Université de Montréal
107. Eric A. Roth, PhD, University of Victoria
108. Sean B. Rourke, PhD, University of Toronto
109. Jean-Pierre Routy, MD, McGill University
110. David J. Roy, STL, PhL, DrTheol, Institut de recherches cliniques de Montréal, and Université de Montréal
111. Élise Roy, MD, MSc, Université de Sherbrooke
112. Elizabeth M. Saewyc, PhD, RN, University of British Columbia
113. Chandrakant P. Shah, MD, University of Toronto
114. Naglaa Shoukry, PhD, Université de Montreal
115. Jean Shoveller, PhD, University of British Columbia
116. Fiona Smaill, MB, ChB, McMaster University
117. Marek Smieja, MD, PhD, McMaster University
118. Hugo Soudeyns, PhD, Centre de recherche du CHU Sainte-Justine
119. Richard Stanwick, MD, MSc, Vancouver Island Health Authority, BC
120. Steffanie A. Strathdee, PhD, University of California San Diego
121. Carol Strike, PhD, University of Toronto
122. Terry-Nan Tannenbaum, MD, Direction de santé publique de Montréal
123. Réjean Thomas, MD, Clinique médicale l'Actuel, Montréal
124. Sally Thorne, PhD, RN, University of British Columbia
125. Robb Travers, PhD, Ontario HIV Treatment Network
126. Joël Tremblay, PhD, Centre de réadaptation Ubald-Villeneuve, Beauport, QC
127. Jeffrey Turnbull, MD, University of Ottawa
128. Mark Wainberg, PhD, McGill University
129. John Walsh, PhD, R.Psych, University of Victoria
130. Franklin White, MD, CM, MSc, Pacific Health & Development Sciences, Victoria, BC
131. T. Cameron Wild, PhD, University of Alberta
132. Robert F. Woollard, MD, University of British Columbia
133. Catherine Worthington, PhD, RSW, University of Calgary
134. David Zakus, MES, MSc, PhD, University of Toronto

**References**

1. Wood E, Tyndall MW, Montaner JS, Kerr T. Summary of findings from the evaluation of a pilot medically supervised safer injecting facility. *CMAJ*. 2006;175(11):1399-404. [↑](#endnote-ref-2)
2. Wood E, Kerr T, Small W, Li K, Marsh DC, Montaner JS, Tyndall MW. Changes in public order after the opening of a medically supervised safer injecting facility for illicit injection drug users. *CMAJ.* 2004;171(7):731-4. [↑](#endnote-ref-3)
3. Kerr T, Tyndall M, Li K, Montaner J, Wood E. Safer injection facility use and syringe sharing in injection drug users. *Lancet.* 2005;366(9482):316-8. [↑](#endnote-ref-4)
4. Wood E, Tyndall MW, Zhang R, Stoltz JA, Lai C, Montaner JS, Kerr T. Attendance at supervised injecting facilities and use of detoxification services. *N Engl J Med.* 2006;354(23):2512-4. [↑](#endnote-ref-5)
5. Kerr T, Stoltz JA, Tyndall M, Li K, Zhang R, Montaner J, Wood E. Impact of a medically supervised safer injection facility on community drug use patterns: a before and after study. *BMJ.* 2006;332(7535):220-2. [↑](#endnote-ref-6)
6. Health Canada News Release 2006-85. “No new injection sites for addicts until questions answered says Minister Clement.” September 1, 2006. Available at: <http://www.hc-sc.gc.ca/ahc-asc/media/nr-cp/2006/2006_85_e.html> [↑](#endnote-ref-7)
7. # CBC News. Police group takes aim at Vancouver safe injection site. September 1, 2006. Available at: http://www.cbc.ca/news/story/2006/09/01/bc-police-sis.html

   [↑](#endnote-ref-8)
8. Wainberg MA. The need to promote public health in the field of illicit drug use. *CMAJ.* 2006;175(11):1395. [↑](#endnote-ref-9)
9. Lomas J. Connecting research and policy. *Isuma: Can J Policy Research.* 2000;1(1):140-4. [↑](#endnote-ref-10)
10. Rosenstock L, Lee LJ. Attacks on science: the risks to evidence-based policy. *Am J Public Health.* 2002;92(1):14-8. [↑](#endnote-ref-11)
11. Gibson DR, Flynn NM, Perales D. Effectiveness of syringe exchange programs in reducing HIV risk behavior and HIV seroconversion among injecting drug users. *AIDS.* 2001;15(11):1329-41. [↑](#endnote-ref-12)
12. Interventions to Prevent HIV Risk Behaviors. NIH Consensus Statement Online. 1997 Feb 11-13;15(2):1-41. Available at: <http://consensus.nih.gov/1997/1997PreventHIVRisk104html.htm> [↑](#endnote-ref-13)
13. Urbina I. Alone in a city’s AIDS battle, hoping for backup. New York Times. May 29, 2007. Available at: <http://www.nytimes.com/2007/05/29/washington/29district.html> [↑](#endnote-ref-14)
14. Scientists and Engineers for America. Welcome message. Available at: [http://www.sefora.org](http://www.sefora.org/) [↑](#endnote-ref-15)