

Communicating Health Risk Uncertainty: Busting the myths

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"Then we've agreed that all the evidence isn't in, and that even if all the evidence were in, it still wouldn't be definitive."

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Study Objectives

- To evaluate empirical studies of communicating uncertainty to the public in environmental health risk
- To produce evidence-based recommendations that can be used by health practitioners



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Methods

- English language articles
- Published between January 1985 and Sept. 2008
- Input from collaborators representing regional, provincial and national health agencies



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Search Techniques

■ Database search

- ❑ 38 databases in range of disciplines
- ❑ 38 related terms and synonyms

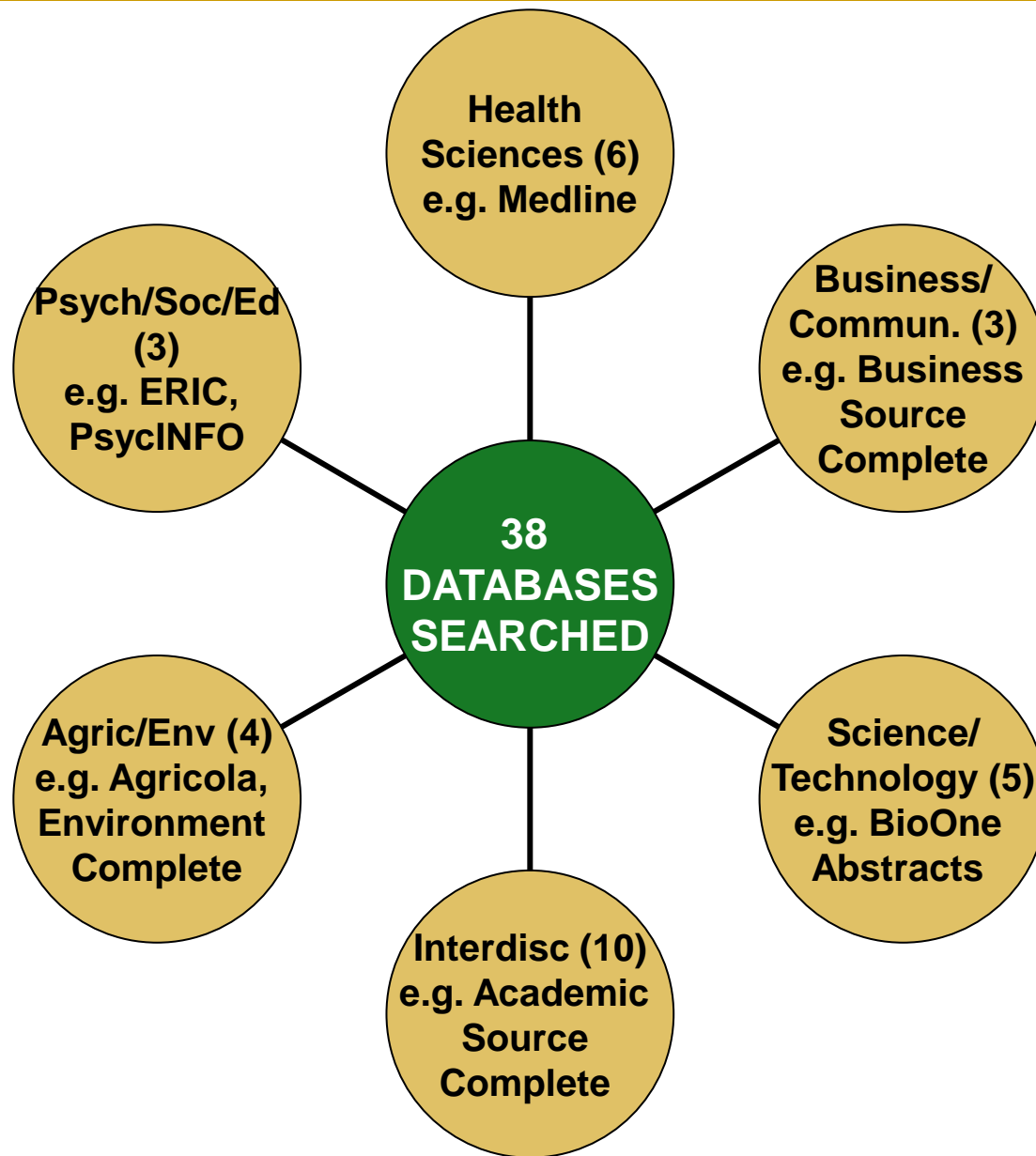
■ Key journal search

- ❑ e.g. *Risk Analysis, Journal of Risk Research, Health Risk and Society*

■ Key author search

- ❑ 109 key risk communication authors





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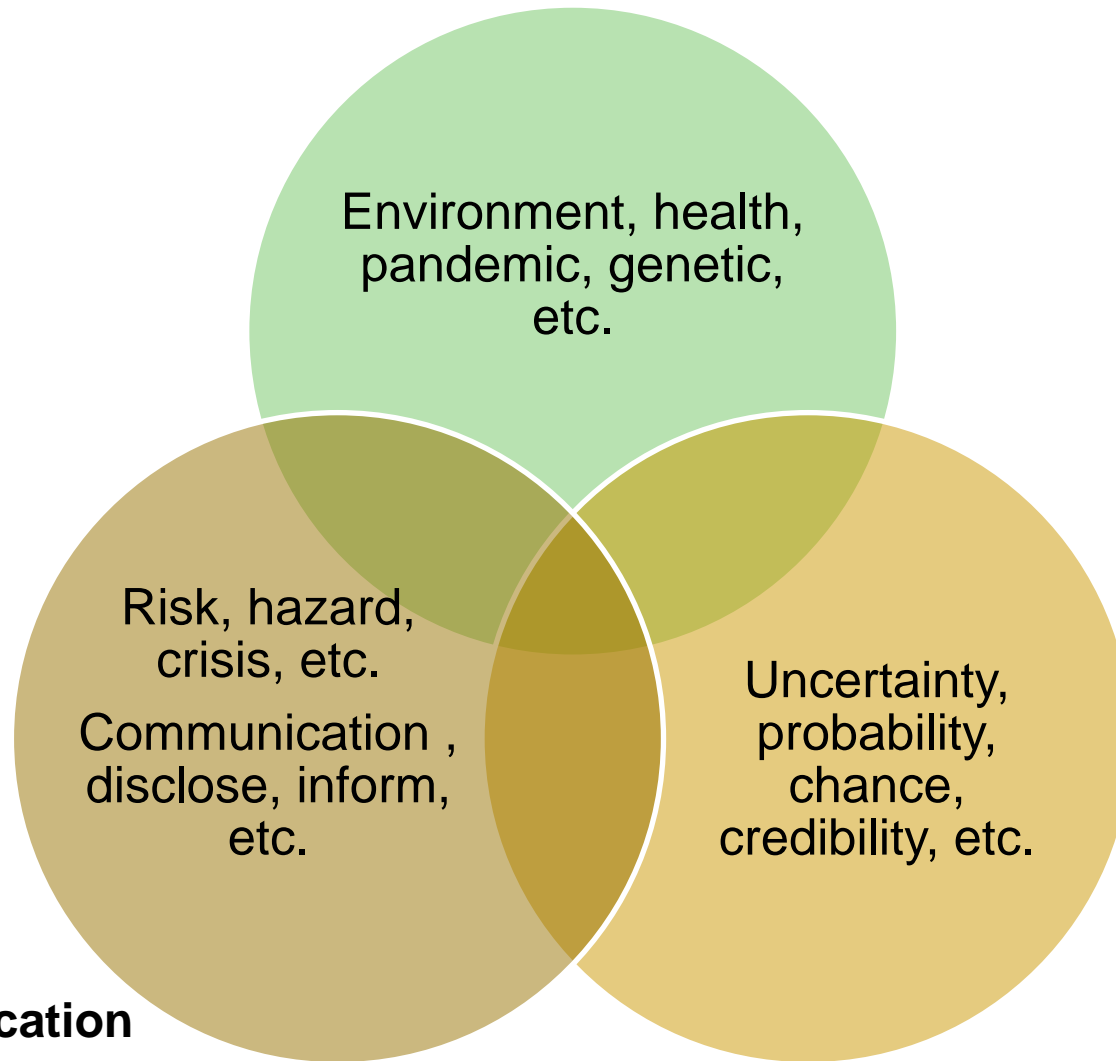
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Environmental Health



Risk Communication

Uncertainty



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Volume of Applicable Literature

Screening Level	Total
Quick Exclusion	29,499
Broad Screening	23,104
Sorting Paper Types	2,365
Review with Full Text	1,026
Literature Used for Extraction	282
Final	28



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Methods – Data Extraction

- Inclusion:
 - Explicit focus on the public and uncertainty
- Exclusion:
 - where uncertainty is only mentioned in passing
 - no empirical evidence; and
 - studies about occupational health or economic risk



Results – Overview of research

- 28 articles from 1985 to 2008 (Sept.)
 - 22 articles from 2000 to 2008
 - 6 articles from 1985-1999
- Most studies from the US(14) and the UK (5)
- Quantitative, qualitative and mixed methods
- Disciplinary perspectives: Public Health, Health Policy, Communication studies, Risk Management, Medicine, Social Sciences, Nutritional Sciences



Myth #1:

All uncertainty is the

same



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One size (doesn't) fit all



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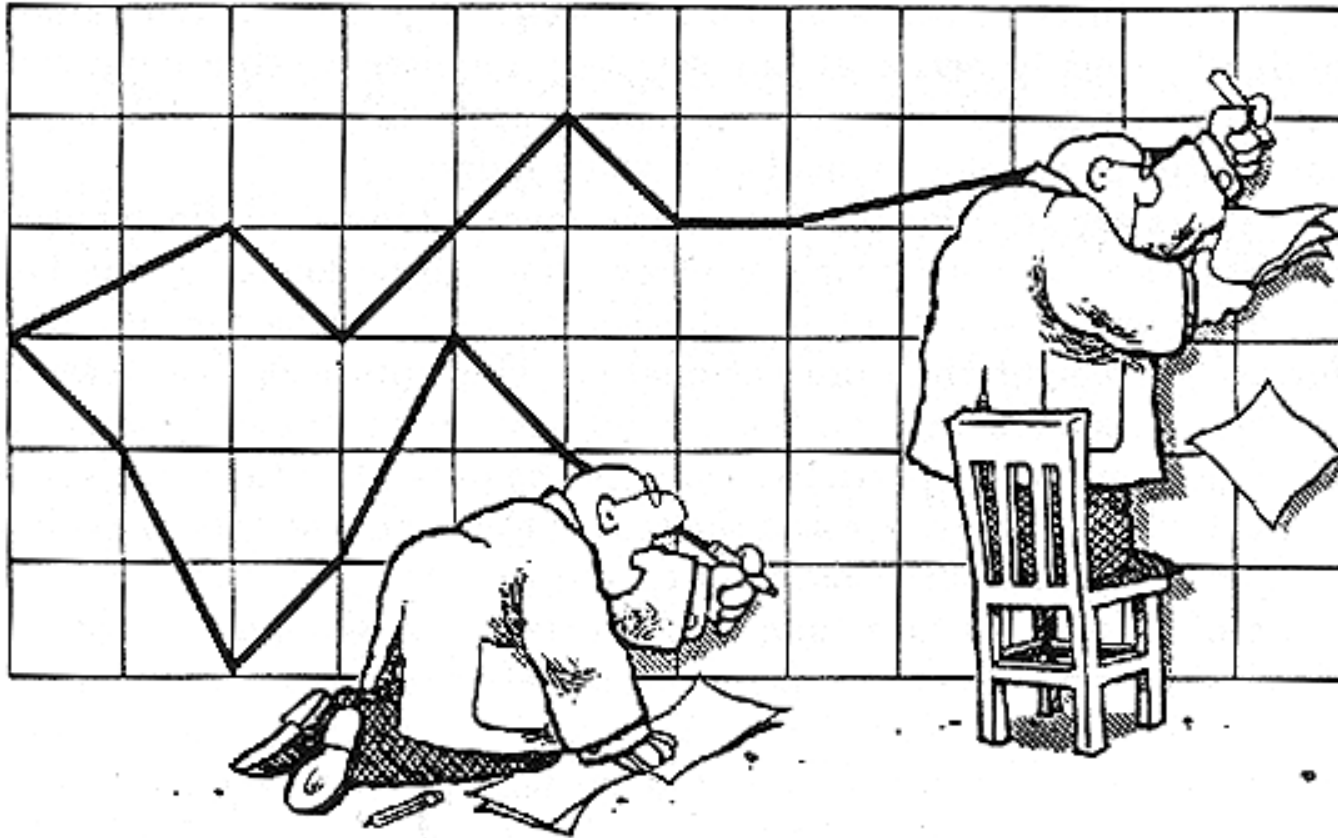
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Variability vs. Uncertainty



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Conflicting knowledge vs not knowing



"HEY, I THOUGHT WE WERE WORKING WITH THE SAME DATA..."



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Source of uncertainty



"What have I got?"



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Consequences of uncertainty



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Presentation of uncertainty



"FEWER THAN ONE IN TEN THOUSAND - SOMETHING LIKE ONE IN FOURTEEN THOUSAND - GETS THESE SIDE EFFECTS. HARDLY ANYBODY GETS THESE SIDE EFFECTS. THEY'RE EXTREMELY RARE. YOU SHOULD BE VERY PROUD."

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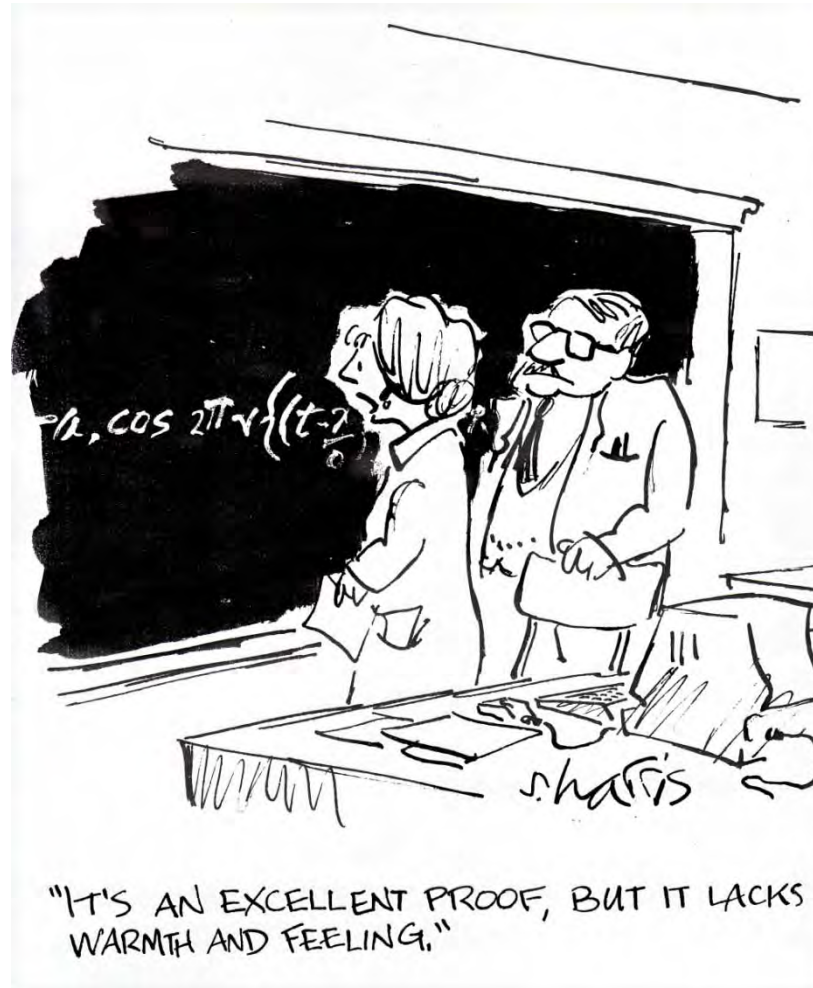
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Interpretations of uncertainty



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Interpretations of uncertainty



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Policy default assumptions



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Myth #2:

People will not accept uncertain information



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People need *some* information



"'BE CAREFUL'! ALL YOU CAN
TELL ME IS 'BE CAREFUL'?"

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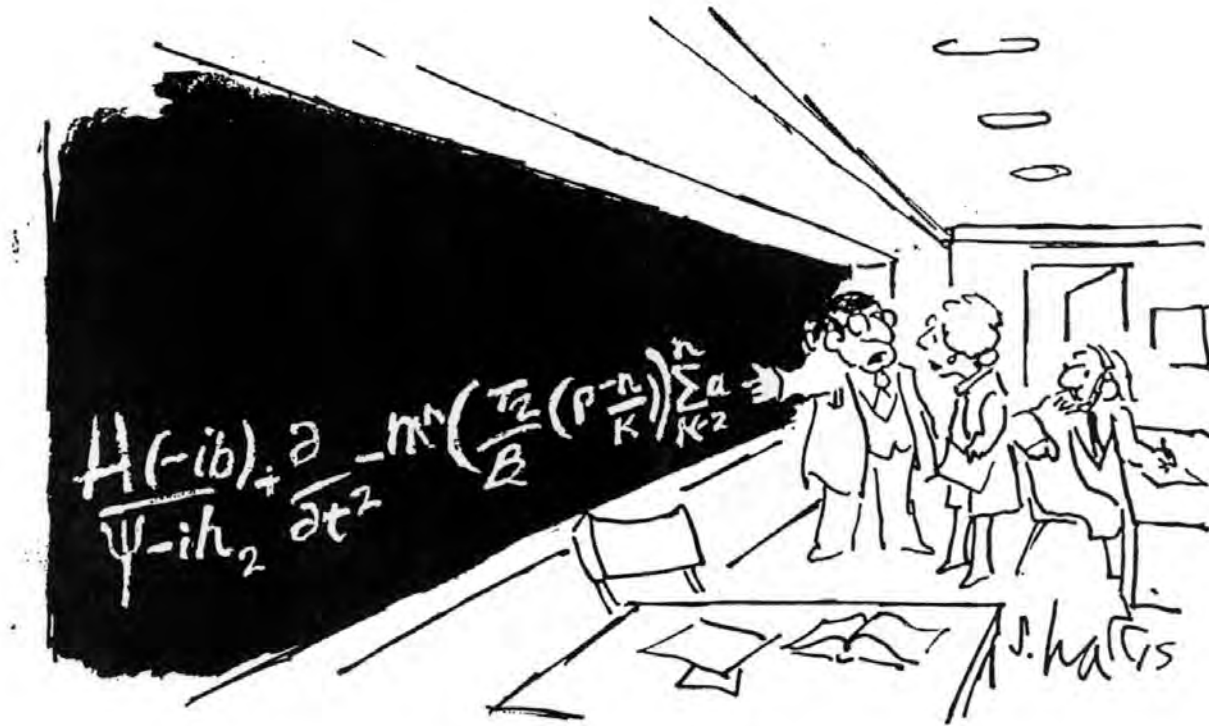


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Importance of plain language



But this *is* the simplified version for the general public.

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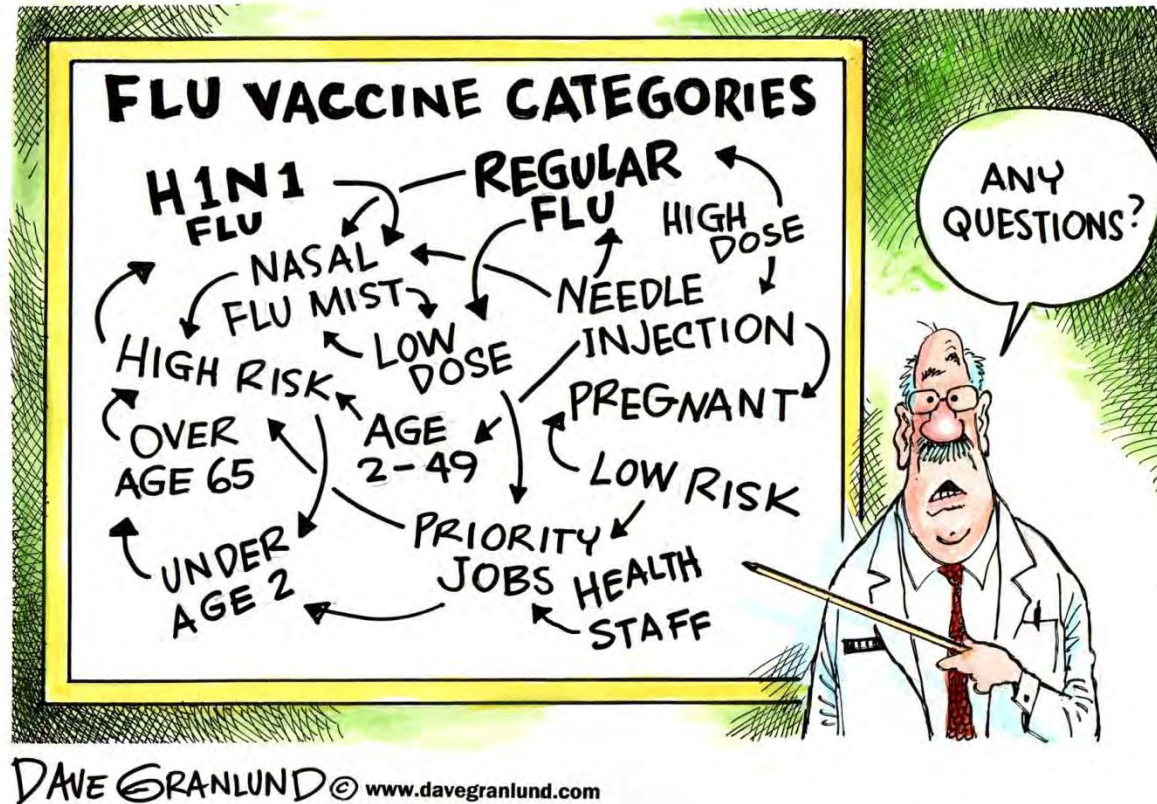


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Unambiguous information



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Know your audience



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Myth #3: Admitting uncertainty undermines credibility



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Different demands for certainty



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Withholding information



*"Yes, I agree. But what really caught my attention
is what the boss ISN'T saying!"*

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Not saying doesn't mean people don't know



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Myth #4: Information should be withheld until there is reasonable certainty



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Timing matters



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10 day hypothesis re: timing



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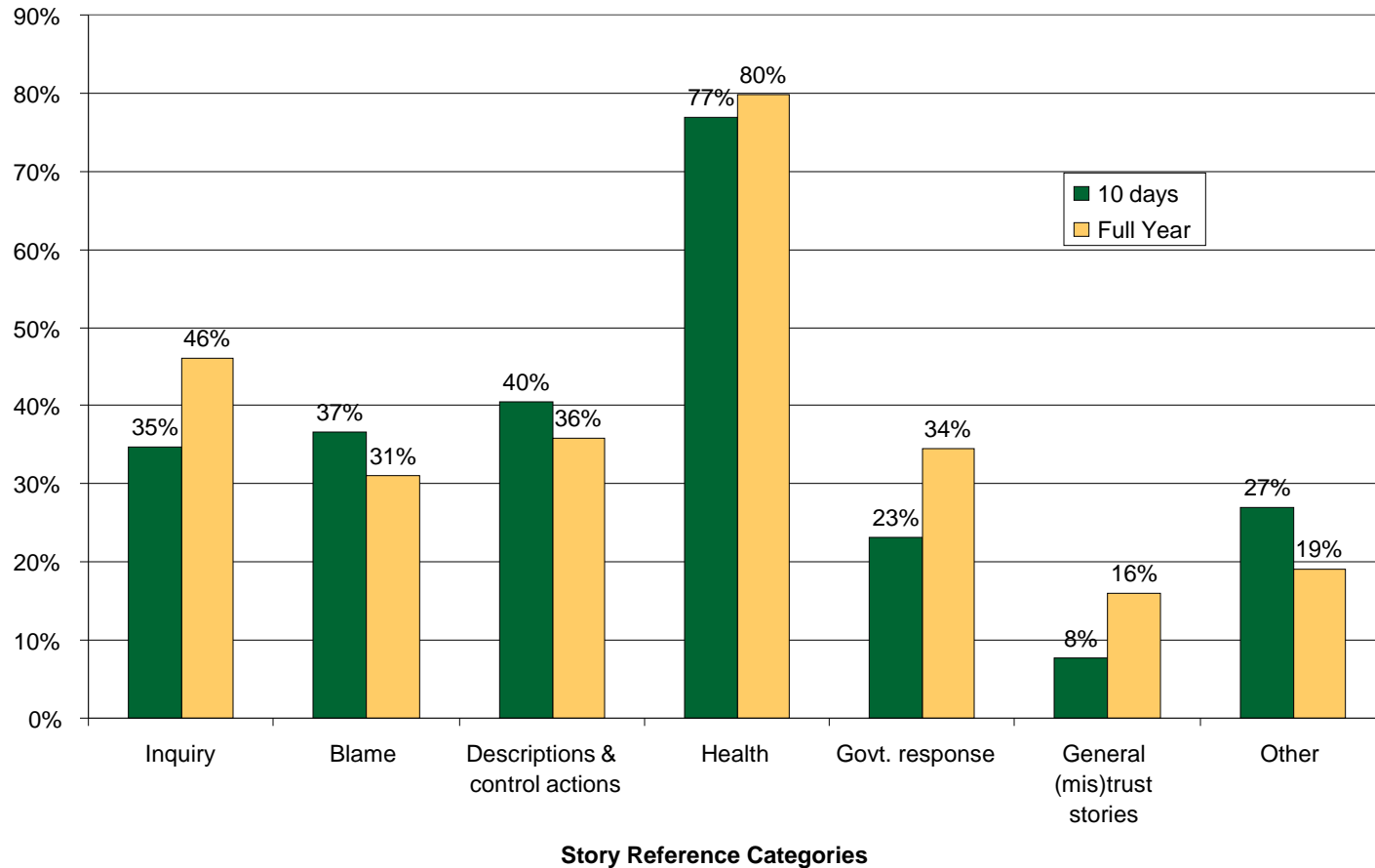


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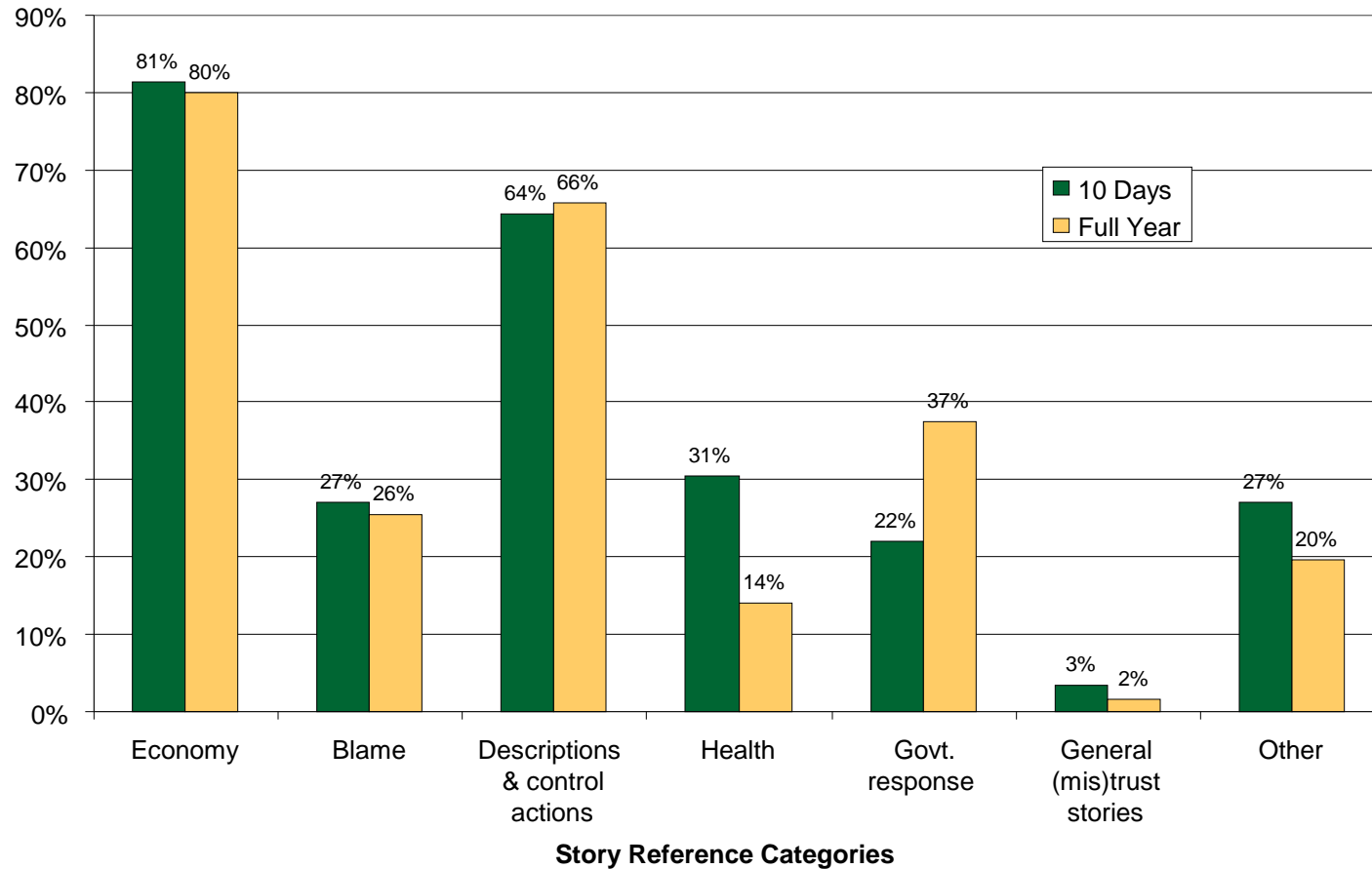


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10 days to full year - Walkerton



10 Days to full year - BSE



Myth #5:

The media never get it right



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The media 'bad dog'



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Need to cultivate media relationships



"This just in. All the things previously thought to be good for us are in fact harmful to our health."

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Filling the information void



Time spent dispelling rumours...



...means less time effectively communicating



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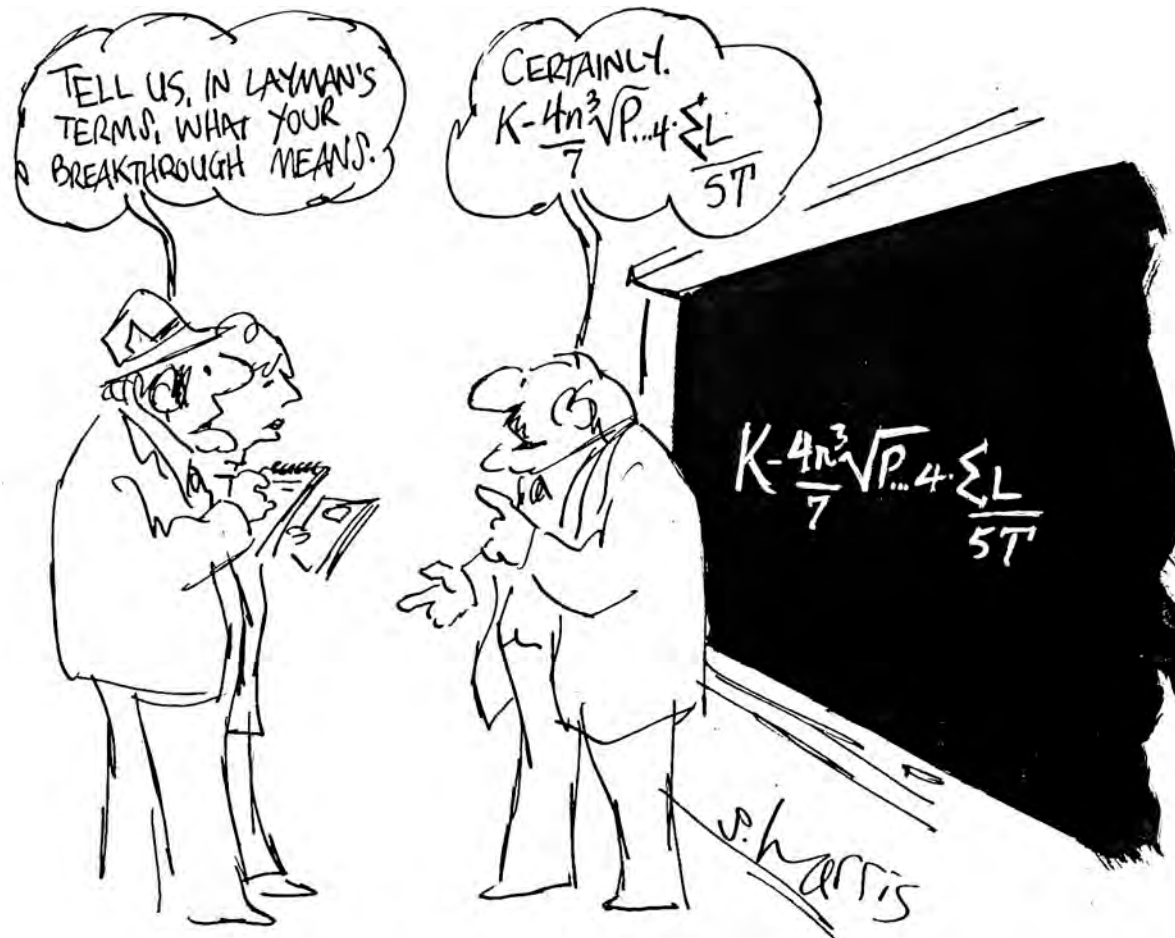


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The spokesperson matters



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The spokesperson matters



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Take home messages



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Acknowledgements

- **Funded by:** Canadian Institutes of Health Research, Knowledge Synthesis & Knowledge Translation
- **Research Assistants:** Alison Watson, Chantal Ritcey, David Sulz, Darby Love, Andrea Milne, Elizabeth Deblois, Erica Wright, Amanda Boyd, Bhavnita Mistry, Elizabeth Cooper, Stephanie Kowal
- **Collaborators:** Dr. Mike Routledge (Manitoba Health), Dr. Maura Ricketts (Canadian Medical Association), Mr. Alex MacKenzie (Alberta Health and Wellness), Mr. Nelson Fok (Alberta Health Services), Ms. Tamara Magnan (Health Canada)



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