Speaking Science to a Lay Audience

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Speaking to the Public Should be Fun, Not a Survivor Reality Show
Speaking Science to Public

- Know your audience
- The elevator pitch (or the Tweet)
- Tell a story
- Keep it simple and no jargons (KISS)
- Use illustrations
- Use analogies
- Engage the audience
For the next exercise, I want everyone to pair off into apples and oranges...
Science to Public: Know Your Audience

- Volunteers of Heart & Stroke Foundation
- Members of Hospital Board (some are patients or family members)
- Preparing a press release
- Speaking to funders / politicians
- Facing journalists on TV
- Trying to raise money for your company
The Key Message

Elevator pitch
The Pitch

• It is Canadian research that has led to a dramatically new effective treatment to lower bad cholesterol in blood – now changing lives around the world.
Turning Tragedy into Hope

• Martin, a 23 year old active young man, just had a heart attack

• This is less than a year after going to his brother's funeral, who died at age 29

• The family has ultra high cholesterol levels that doctors do not know what to do

• Now Martin is on a newly discovered treatment given by injection, his cholesterol has dropped dramatically

• The deposits in his arteries are disappearing
Role of PCSK9 in CV Disease

• The proteinase K–like serine protease PCSK9 binds the low-density lipoprotein (LDL) receptor at the surface of hepatocytes, this protein-protein interaction prevents its recycling and enhancing its degradation in endosomes/lysosomes, resulting in reduced LDL-cholesterol clearance. Rare gain-of-function PCSK9 variants lead to higher levels of LDL-cholesterol and increased risk of cardiovascular disease.

Nabil G. Seidah, et al., Circulation Research 2014; 114:1022-1036
Avoid Jargon or Tech Talk

• Scientific jargon creates Towers of Babel, blocking communication
• My goodness, what do “LDL, HMGRi, CRISPR-Cas9, CAD…” stand for?
• Really good speakers use simple language, making science accessible
• Avoid talking down to audience, they are intelligent, but don’t have time for your jargon
A brand new class of drugs, called PCSK9 inhibitors, are actually custom made antibodies. They target and inactivate a specific protein in the liver. Knocking out this protein, PCSK9, dramatically reduces the amount of harmful LDL cholesterol circulating in the bloodstream. Lowering LDL this way can translates into healthier arteries and fewer heart attacks and strokes.
Keep the Story Really Simple

- Have only one message
- Have maximum of 3 points
- Slides not more than 5 lines (max 7)
- Keep the story flowing
Why this Discovery is Special?

- Observations in families with mutations led to the discovery of the function of PCSK9
- Canadian contribution to the discovery and understanding of PCSK9
- From discovery to an approved treatment for a common disease taking place in less than 9 years – a record
Use Illustrations

- Picture is worth a thousand words
- Transcend language barriers
- “Word pictures” if pictures not allowed
**PCSK9 Inhibition**

 Leads to more LDL Receptors available to take up LDL, thus Lowering LDL in blood.
Use Analogies

- Make connections to understandable experiences
- Bring to scale and activities that audiences can relate to
PCSK9=Torpedo; LDLR=Rescue Ship
Ship Destroyed - Passengers (LDL) Stranded
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Are You Staying on Message?
The End

Thank You!