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Is this input submitted as an organisational or individual response? Individual

Are you happy for your response to be published by the Academy? Yes

Roles and responsibilities

1. What can scientists do to ensure their work is communicated accurately when working with you on press-released research?

Time is so often key here. Being aware of a piece of research when it's submitted to - and as soon as it's accepted by - a journal really helps with planning and preventing a hurried response. Academics thinking about the take-home points of their research can expedite the press release process and ensure the novel aspects are agreed early on.

2. What is the role of journalists in communicating the benefits or harms of medicines, and how much responsibility should they take? How does the pace of journalism affect this?

I believe journalists should bear ultimate responsibility for the way they talk about medicines, and indeed all research findings. Fact checking and confirming statistical significance with specialists should be standard practice before running a potentially incendiary headline. Press officers and researchers have a duty here too, through proper communication and 3rd parties like the SMC, to ensure that journalists have little opportunity to get the wrong end of the stick. Journalism churns over at a fast pace, but that simply isn't an excuse for hurrying a story that could have widespread implications.

3. What is the role of press officers in communicating science to the public via the media, and how much responsibility should they take for accuracy of articles that originate from press-released research?

The press officer is the broker, they can spot the value in a piece of research and work to make sure the novel aspects of a study are clear. They have a responsibility to ensure their release is accurate and appropriate. There is often pressure to 'sell' a research story to the media, sometimes by anticipating the angle the media might take, but I believe press officers have a duty to rise above this and present the facts clearly and without bias.

4. What is the relative importance of accuracy and newsworthiness when working with scientists on press releases?

This question seems a little nebulous? Accuracy is essential, and a consideration of whether an article is newsworthy should form part of any initial discussion about what to do with the research. Is a press release appropriate? Would a blog post for somewhere like the Conversation be more suitable? Do we need an infographic instead of a load of cryptic text? Would a video of the research process help? It's up to the news cycle to determine if it's interested in that content, but that's not the only medium through which research findings can be disseminated.

5. Are you supported in your efforts to communicate the robustness of evidence – are appropriate guidelines available?

I think it's irresponsible to press release any findings that aren't robust in terms of significance or scale. More conversational opinion-type discussions pitched to blogs should be the format for anything that isn't robust. Most recently, especially in medical research, I've been considering the argument for whether we should only be press releasing the findings from systematic reviews and meta-analyses, to avoid media hype over single studies.

Evaluating and reporting evidence

**6. What are the challenges of including sufficient clarity in press releases regarding:
- whether something is an association or a causative relationship?**

Language. I don't think the majority of the public understand that talking about an association or link does not mean cause and effect. Should we be press releasing this research? We can caveat the release but this often translates to a single line in a published article. We can underline the relationship in a quote but this is almost always beneath the fold. This is where the systematic review debate comes in from me, should we only be talking about associations that have been shown across a body of research, rather than in one study??

- whether a study is, for example, an observational study or a randomised control trial?

I predominantly work with secondary dataset analyses but I'm sure 95% of the public would have no clue what an RCT is.

- whether the main result being reported was the finding related to the original hypothesis or an incidental finding?

If this is the case, it should be central to the release, no discussion.

7. What in your opinion can be the effect of emphasising limitations and caveats in press releases?

It can turn journos off. And perhaps, rightly so. If we don't have enough confidence in the findings that we can't issue a release without a stream of caveats mentioned then it's probably not a good candidate for release. A good press officer should be able to determine if the limitations stem from a researcher's insecurities rather than the paper's shortcomings, and work to allay those fears accordingly.

8. Do you think journalists treat observational studies and randomised controlled trials differently, and do you approach press releases for each differently?

Limited experience in this area.

9. How important do you think absolute risk is when communicating risk, and do you always include it in press releases?

Limited experience in this area.

10. What do you think are the benefits and risks of publicising preliminary research (e.g. work in cells, before animal or human trials)?

The risks of misinterpretation are very large and I don't think there's a benefit large enough to outweigh that.

11. What do you think are the benefits and risks of publicising unpublished science that's being presented at conferences?

Misinterpretation and undermining the academic process – wait until it's been accepted and published in a journal.

12. What do you think are the benefits and risks of press releasing opinion pieces and editorials (rather than original research with new data) being published in journals?

Never press release an opinion piece, and in my experience they get very poor take up anyway. Best option is to syndicate to other outlets and raise awareness through other channels, like social media.

The process of communicating evidence

13. What do you think are the challenges of communicating evidence through the research → press release → media process? Do you think there might be a better system; and if so what would it look like?

A press release and a media story are very light. A published piece of research is incredibly heavy. There's a huge gulf between the two and if someone wants to learn more after reading a media story, but isn't an academic, they have nowhere to go. We've tried to combat this by producing accessible stepping stones for our research (examples here <http://bit.ly/1QBmx1a> and here <http://bit.ly/1QBmCCj>) which segue someone from media story to research paper. If we're serious about making the process of research more accessible, this approach should be common place regardless of a study's perceived newsworthiness.

14. How much do the public understand about the way science works (the process of research and publication; different types of studies; etc.), and does it matter if they don't? Do you think press officers and journalists have any role in educating the public in interpreting the quality of evidence?

I think they know extremely little about the process, and yet the academic community assume its second nature. I don't think it's necessary for the public (catch-all term for anyone who isn't an academic) to understand the nuances of the scientific process, but we should endeavour to reiterate the unbiased rigour associated with scientific research.

15. What are the challenges of working with scientists with opposing views, and how do you navigate working with scientists that may have views that might be seen as different from those of the mainstream scientific community?

I'd call the SMC!