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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?

That's a big question, but in my experience the most important things are

- To check releases carefully, and ensure that the press release text is not open to misinterpretation (or simply doesn't contain mistakes) – my heart sinks when a researcher responds 30 seconds after a request to check a press release saying "yes, fine", because we rely on them to ensure that our interpretations of their work are correct and unambiguous, and this takes longer than 30 seconds! I think this problem sometimes comes from the researcher not really understanding what's being asked of them, also possibly from excessively combative press officers putting researchers off engaging.
- To appreciate that a press release has to be comprehensible to a lay reader, and sometimes a certain amount of detail needs to be sacrificed in order to ensure that the work is understood. There are certain concepts – statistical significance, risk ratios, etc – which journalists and the public simply don't understand well enough for us to include them in releases.
- To make clear to press officers (especially those who aren't science specialists) the limitations of what they're saying, and distinguishing between evidence and informed opinion (this relates to question 12 below).

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've sometimes read coverage which makes me despair as to whether the journalist really appreciates the potentially damaging effect that sloppy or inaccurate reporting can have. But...I think we can sometimes be overly pious about this – readers are not empty vessels waiting to rush out and act immediately on whatever they read in the papers, and a glance at the comments section of any news story suggests that many people approach the news with scepticism and intelligence (and many do not, but that's life). As such, I'm slightly uncomfortable with the suggestion that journalists have a "responsibility" to report accurately – that starts to take us down the route of suggesting that the ideal position would be if journalists simply regurgitated (accurate) press releases – this would be a triumph for accurate reporting, but nobody would read it, which undermines the whole reason why we do this. Nobody tells financial journalists they have a responsibility towards their readers' investments. Journalists' accuracy should be kept in check by the credibility and reputation of their news outlet – the presence of Editorial checks and balances is ultimately why we trust news from the Telegraph or the Sun more than some guy on the internet. However, there's no doubt that this system is eroding – as the traditional news outlets struggle financially, the Editorial relationship seems to be breaking down in some cases, and the public increasingly don't make a distinction between "some guy on the internet" and

journalism. I don't know how we navigate these changes, and in some ways, I think it's by far the biggest challenge facing science communication (and journalism in general) in the coming decades.

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?

Science press officers are the conduit between researcher and journalist – they should help researchers to understand how best to present themselves and their work to the media, and they should help journalists to access and understand that expertise. I'm not sure it's quite right to say that press officers have a responsibility to ensure articles originating from press releases are accurate – in some ways the researcher is best placed to enforce that (with the press officer's guidance and assistance), as they will usually be the best judge of what is and isn't an acceptable interpretation of their work. If press officers were continually nagging journalists about accuracy, the relationship would break down and we'd be back to square one. But it's best judged on a case-by-case basis, and perhaps press officers as a whole are sometimes too shy about calling out shoddy coverage – if we all took a stand, maybe the world would be a better place.

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

I don't think they should be viewed as a trade-off. If everybody conformed to the same standards of accuracy, the temptation to "hype" releases wouldn't exist, because there would be a level playing field. To some extent I think we're already part way there – most of the university and journal press officers I work with work hard to ensure accuracy, though that's not universally true.

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

Organisationaly, yes, but externally I think there's a distinct lack of resources available for press officers in this area.

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?

This isn't difficult to do, but even if you include it in the press release, and even if the journalist includes it in their article, I feel like a general reader will nearly always make the causation connection anyway, so handling this type of research is a more subtle than just making sure you say "X linked to Y" and including a caveat sentence about the lack of evidence for causation.

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

Difficult – it's never going to be the main point of interest in an article, and I don't feel like general readers understand the different types of trial (and their implications) well enough for it to have much impact.

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

Also difficult – again, even if you state it clearly (and the journalist does the same), the reader is going to come away thinking about that incidental finding, not the trial design or reporting.

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

It really depends on the subject – sometimes very useful, but sometimes a bit of a waste of time.

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

I'd like to know the journalists' answer to that one! My view has always been that they don't, because what they want is the story – what's the key finding – and how it was reached will always be of secondary importance. I guess I've reflected this in my approach to press releases.

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

I think the importance of stating absolute risk can be overstated – it depends how easily the reader will understand it and what it means to them. I always include it in press releases where possible (though bear in mind that for some study designs – particularly metas – it isn't possible to state it) but my impression is that if you give journalists a choice of "risk six times greater" and "risk increases from 0.1% to 0.6%" they'll always go for the former. And maybe that's not always a terrible thing – the recent Meningitis B news shows that even where a risk is very small, people will still react strongly if it's something that matters very much to them. So I don't think we ought to demonise relative risks, but I do believe it's important to be clear in press releases, and this is often an area where the negotiation with scientists can be difficult (see question 1).

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 obvious risk is that the relevance of the findings are misjudged – like the issues mentioned in question 6, however much you bang on about it being preliminary or whatever, people will still go away thinking about the main finding. But again, sometimes I think we in the field over-react to this – it's also very important that people understand why and how basic science is conducted, and if the only way to get that into a newspaper is to point out the possible further implications for human health, I don't necessarily think that's a bad thing, provided the press officer ensures it's done responsibly.

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

Same as 10, really. I haven't personally come across any disasters in public understanding arising from reporting of conference presentations, and I don't see why journalists (or the public) should be barred from hearing about science that is in progress – peer review and publication is important, but I don't think it's the be all and end all (and we all know it's far from infallible). Conference presentations can certainly make press officers' lives difficult (especially at journals), but in principle I feel that conference presentations are a healthy addition to the health communication scene.

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?

This is a tricky one, largely because I don't think the public make much distinction between a story based on a peer reviewed RCT and a story based on an off the cuff remark by an eminent Professor. This has undoubtedly led to misunderstandings and miscommunications in the past, but in a way, I don't feel that we should get too upset about it – if the leading expert in a field wants to say that he or she thinks X is the case, they probably hold the most informed view on X, even if their view isn't entirely based on research findings, so who are we to say that they should or shouldn't put their views out there? To some extent, I think this is really a question about what your organisation wants to achieve with PR.

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?

I think it's a pretty good system by and large. We mustn't let perfection be the enemy of the good. Perhaps there might be a case for forcing journalists to do a bit more work on choosing their stories and understanding the research (something like the Royal Society's journals systems of giving them just a paragraph or so on each research paper), but that system isn't perfect either, and I certainly can't suggest an alternative system that is.

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 don't think the public as a whole understand the process of science terribly well, and sometimes I think that's a huge barrier to people's ability to properly appraise what they read about health in the news (although the same probably also goes for economics and politics...and a lot of other things). I think press officers and journalists can play an educative role, although I'd emphasise the use of "can" over "should" – many (most?) of us do this job because we care about the public understanding of science, but if we start viewing ourselves as pedagogues, I think we lose sight of what our primary purpose is (see question 3).

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?

To be honest, it's not something I have a huge amount of experience with, so I'm not sure I have anything to say here.