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Job Title:

Organisation:

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?

Keep control, don't be led by the news agenda. Too often there is an attitude that it is the role of the press officer to get something in the news, so scientists should object when they see something which goes against the tone of what they want to say (not just individual factual errors). They should also think who they are trying to reach (not their peers!) and how it might affect them.

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?

They need to see the bigger picture, not just today's story. They also need to get over the idea that a 50% increase of 1 in 10,000 is still not very much at all. They also need to get over the idea all cancer drugs are essential, but other drugs are not. That something can 'cause cancer' but still not be worth doing anything about (I'm singling out cancer because it is so obviously newsworthy). Journalists need to sell their stories to their editors, and that's not good (but what can you do) – if you look at health journalism, they go by the same values as most other journalism, so it's engrained in the news media.

Journalists also need to avoid getting sucked into conspiracy theories: sometimes the Forces of Darkness (the pharma companies) are correct, and the Good Guys can be wrong. Be cynical about pharma, but everyone has some interest (for example, I once worked on a NICE appraisal where they wouldn't accept our nominated expert because he had taken money from pharma companies, who of course want you to spend more on drugs: this was NICE, which is part of the NHS which has an interest in spending less on drugs. They didn't see that as a conflict).

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?

Press officers tend not to communicate science, they communicate stories. One hopes that taken as a whole, good science is communicated, but there is no doubt that a lot of work is aimed at communicating a story- a snapshot - to a particular audience. Meaning that there is a tendency to try to make something as interesting as possible (look at the daily Eurekalert listing). Within that framework, most press officers would die if they thought they were being inaccurate, but that's still within that framework. I know a lot of good press officers, but I can see a lot of bad press releases.

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

I'm answering a slightly different question here, but bear with me. I'm afraid that sometimes good science can be difficult to sell. I have recently taken the top-scoring 150 abstracts from a conference to try to get the best science. Then when I couldn't get enough good stories, I had to do it the other way, choose the most newsworthy, then ask the review team if they were any good. I'm afraid that newsworthiness drives the stories, which drives the press releases but if you accept that, you still need to keep the standards up, you need to be accurate.

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

Up to a point. Scientists within organisations still have their own prejudices (you try making a case for overdiagnosis to a team of cancer specialists).

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?

I try to identify this in an additional comment.

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

If it's an RCT I'll say it, it's a selling point. Observational trials have to be explained ("they looked at patients who had...and checked rates of heart disease..").

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

If the finding is big then it's not so important what they set out to find, like Columbus with America. Sometimes these things have a momentum. The 2002 WHI RCT study which torpedoed HRT was largely an incidental finding, but important nonetheless (even though subsequent analysis revealed that the population may not have been appropriate to the press release: the study was great, the interpretation...was open to interpretation).

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

I think that it's essential to mention them if they are there and possibly significant. I actually think it adds to the press release. Of course, often they come in the small print, but that reflects what happens in the papers.

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

I don't treat them so differently – it depends on the circumstances. If it's an RCT I always mention it, but does an RCT of 60 patients trump an observational study of 5000? I think that journalists do treat the two types of studies differently. There are also some areas where an RCT is impossible or unethical. So context is important (an RCT paid for by a tobacco company...?).

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

I always try. But sometimes I get sucked in. Sometimes the paper makes it difficult – if the paper is studded with %, then it's difficult to move the journalist to absolute risk.. There are also other issues, for example, communicating a Hazard Ratio /Odds Ratio is a nightmare, as it always comes out as a relative risk in the story. I ALWAYS include the abstract in the press release – yes it makes it clunky, but journalists deserve the opportunity to see at least some of the real data.

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

I think that there is a place for this, however the fact that it is early work needs to be high up in the release – the first couple of lines if possible. I would exclude 90% of animal/cell work, but not all (Alexander Fleming would have had something to say about that)

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

I'm happy to do this (it's my job so I would say that). A lot of conference work is poor (but so is some published work). I always get at least two expert opinions on the conf work. And in my experience, simply being peer-reviewed is not an absolute guarantee, although in general it's better. The danger about publicising conference work is normally that you have to try to make it worthwhile – e.g. to produce 6 or 8 releases. So you end up looking for what might work.

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?

The risk is that it's not a mainstream opinion, and so gives undue support to a dangerous position. Having said that, it has to be done sometimes. Editorials can give context. But generally, these pieces are not news.

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? Although it's my job, I don't think it works very well at all. It means that the sexiest stories get into the news. If you have a chocolate/red wine story, it will get into the news, no matter how poor the research. A tenuous autism paper will get in the news, whereas a good diabetes paper may not. The real risk is that you fulfil the demand (I used to work in

sales and marketing). In other words, you tailor your product to what the public wants. I do that.

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?

Yes the public need to understand a certain amount about how science works, but only up to a point. They need to understand that a single finding does not change everything, and that the balance of opinion is what matters. I don't think they need to know exactly how science works, any more than I need to know how a car works to drive it. Remember that the original work linking smoking with lung cancer was not an RCT, but that didn't make it any less powerful. I don't understand how zonal marking at corner kicks work, but it doesn't stop me loving football, or how a fugue progresses, and I still love Bach.

Maybe we need to communicate certain principles, rather than mechanisms. For example,

Nothing is completely safe
All drugs have multiple effects (including side effects)
Natural is not necessarily best (smallpox is natural), etc

Mechanisms will probably not stick in the mind.

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?

Nothing to say