How and when should the public hear about important results in medical studies?

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The public is entitled to information on the medical research for which it pays, and reports in the press and broadcasting media should be as near as possible to the truth. Media reports of scientific meetings and institutional press conferences should be viewed with special caution because the proceedings have not been subjetc to «peer review» —a process that, between submission and publication of a research paper, can modify the analysis and radically change the conclusions. Medical editors claim that media reports on medical research carry special hazards: premature and misleading-reports may cruelly raise or dash hopes; they often generate a flood of inquiries to physicians, who are unable to respond sensibly without access to the published paper. It cannot be denied, however, that journal editors like to be first with the story, especially when they have spent weeks or months checking facts and refining presentation; or that press publicity is a useful form of journal promotion. How then should the public learn the results? Via excellent journalists. And when? Ideally, when the work has been published, but responsible journalism is possible at all stages of the work: the important thing is for journalists to maintain a critical attitude to research —not excluding that which has passed indepedent scientific scrutiny.

I am continually astonished by what I read in the papers. Early this year *The Lancet* published an article that attracted enormous attention from the press —at least twenty-three lenghty comments in newspapers plus an item on BBC radio news. The headlines ran like this: «New Cure Hope in War on Cancer»; «Hopes Rise on Cancer»; «High Hope of Beating the Killer», «Rogue Gene May Help Point Way to Vaccine», and so on. The title of the original article was «Increased Expression of Mutant Forms of the p53 Oncogene in Primary Lung Cancer» —not one, you might think, to catch the eye. How did so many journalists come to recognise, within a few hours of publication, that this article held out such great hopes for cancer treatment and prevention? The answer is that the research was sponsored by the Imperial Cancer Research Fund, a charitable organisation with a highly effective public relations department. A day or two before publication the public relations people presented science and medical reporters with and handsome and helpful press pack.

I tell this story not because I doubt the importance of mutant forms of the p53 oncogene, or because I disapprove of the activities of the ICRF, but to illustrate muy first point —that media coverage can be manipulated. Without benefit of public relations machinery, an equally exciting article in the same issue might have suffered neglect.

Nobody goes to the trouble of writing a press release unless the effort is likely to prove rewarding. The incentive goes beyond a mere desire that the public should be well informed; scientists do it to attract research grants; funding bodies do it to publicise their activities; pharmaceutical companies do it to persuade doctors to prescribe new treatments, or to encourage patients to request such treatments; and journals do it because they believe that press comment on articles helps them to secure more good articles and more subscribers.

When should the lay person hear about important results from medical studies? Medical editors tend to say that it should happen after publication in a reputable medical jorunal. One

of their arguments is that, because most medical research is paid for directly or indirectly by the public, reports on that research should be as near as possible to te truth. As an editor I know how much can happen to a paper between the first presentation at a scientific meeting and the final presentation in *The Lancet*. Sometimes the analysis has been changed, and the conclusion may even have been reversed. Like other peer review journal, *The Lancet* devotes huge resources to the evaluation, revision, and re-writing of articles, and we judge that this costly effort increases the reliability of what we publish.

This argument applies to any paper about scientific research, but medical editors believe they have special responsibilities. Whereas a premature and misleading report on, say, cold fusion, based on a press conference, may merely generate undue optimism about a lifetime of cheap electricity, an unfounded report on a medical treatment may cruelly raise, or dash, the hopes of benighted patients. In addition they may well cause a flood of inquiries to physicians, who without access to the published report will be unable to respond sensibly.

These special features of medical reports are *part* of the reason why some medical editors take an extremely tough line on contacts between authors and the press before the papers are available to the profession. The rules were devised by Franz Inglefinger, former editor of the *New England Journal of Medicine*, and embellished by his successor Arnold Relman. Clearly, they can apply only to articles that are under consideration by the journal or awaiting publication (not to conference proceedings and so on). Furthermore, Relman concedes that sometimes the news may be too important to be withheld from journalists until publication day; just lately he sanctioned the early release of information about a then forthcoming paper on steroid treatment for spinal cord injuries. Many journalists detest the Relman/Inglefinger rule, believing that it frighten research workers into silence and thus interferes with legitimate communication between the press and the research community.

The arguments about the reliability and the sensitive nature of information on medical research have to be separated from another matter to which I alluded earlier —the editor's role as journalist in a competitive world. *The Lancet*, the *New England Journal of Medicine*, the *British Medical Journal*, and the *Journal of the American Medical Association* are all in strong competition not only for subscribers but also for the major clinical research papers from around the world. Editors and journal managers believe that newspaper publicity is beneficial in this enterprise (though no controlled trial has yet been reported). In the United States we are now seeing what looks like an old-fashioned newspaper war between the *New England Journal of Medicine* and *JAMA*, which has advanced its publication date so as to be one day ahead of, rather than one day behind, the *NEJM*, thus hoping for a lead in press coverage. Questioned about this development the editor of the *New England* tartly remarked thant there is now a danger that journals editors, in quest of press attention, will give «sexy» topics precedence over important science. I must admit that *The Lancet* has lately entered this area, with a modest two-page press released each week. These releases have undoubtedly increased the reporting of *Lancet* articles in newspapers and on radio and television; whether they boost the circulation or the quality of our articles I cannot say.

How do we at *The Lancet* advise authors about their contacts with journalists? We encourage them to talk freely, while expressing the hope that press reports on *Lancet* papers will be deferred until the work is formally published. The threat of sanctions for «misbehaviour» seems to us inappropriate in this context: we forbid nothing. My answer to the question, *when* should the public hear, is that responsible journalism is possible at every stage of a medical research project —even the conception. But the earlier the stage, the more sceptical should be the journalist's eye.

The question of *how* is more easliy dealt with. Ideally, it should be through the medium of excellent science journalists. In the United Kingdom, science reporting, and especially the reporting of medical research, is depressingly poor —largely because much of its is done by non-specialists. These are the people who, working against the clock, will sometimes uncritically accept the message of a press release, or muddle statistical associations with causal associations (remember the work on breakfast-eating and cancer; I still meet people who think that failure to eat breakfast is carcinogenic). Once an incorrect story has been in the newspapers, it will remain long in the public perception.

A good science reporter will interview not only the authors but also other experts: are these research results as exciting as the enthusiasts claim, or has another group found the exact opposite? What about the article on the next page, which does not have the benefit of a press re-

lease? Some newspapers already do these things very well —in the USA *The New York Times,* in the UK *The Indepedent*—but others do it atrociously. We need many more journalists who know how science works, who have the critical eye to discern what constitutes real progress in medicine, and who have the force of personality to reform the practices of their own editors and sub-editors.

To the medical research workers present, especially those paid out of public or charitable funds, I say cultivate journalists such as these. It is through them that the public should hear of the fine work you have done so far, and the pressing case for its continuation. To any novice journalists, I offer the following maxim, slightly adapted from Virgil: «Beware of the press release, when it brings gifts».

nazas de sanciones por «mala conducta» nos parecen inapropiadas en este contexto: nosotros no prohibimos nada. Mi respuesta a la pregunta de ¿cuándo debe enterarse el público? es que el periodismo responsable es posible en cualquier fase de un proyecto de investigación médica, incluso en el de su concepción. No obstante, cuanto más precoz sea la fase, más escéptico debe ser el ojo del periodista.

La cuestión de *cómo*, es más fácil de responder. Lo ideal sería que fuera a través de excelentes periodistas científicos. En el Reino Unido, la calidad de los reportajes científicos, especialmente los relativos a investigaciones médicas, es desesperadamente mala, debido en gran medida a que están realizados por periodistas no especialistas. Son esas personas que, trabajando contra reloj, aceptan a veces sin espíritu crítico redactar el contenido de una nota de prensa o que mezclan asociaciones estadísticas y asociaciones causales (recuérdese el trabajo sobre desayuno y cáncer; aún me encuentro con personas que piensan que el hecho de no desayunar es carcinogénico). Una vez que una noticia incorrecta ha aparecido en los periódicos, permanecerá durante mucho tiempo en la memoria del público.

Un buen periodista científico debería entrevistar no tan sólo a los autores sino también a otros expertos. ¿Son estos resultados tan apasionantes como aseguran los entusiastas o hay algún otro grupo que ha observado exactamente lo contrario? ¿Qué ocurre con el artículo de la página siguiente, que no ha sido favorecido con una nota de prensa? Algunos periódicos ya lo están haciendo francamente bien, como el *The New York Times* en EE.UU. o *The Independent* en el Reino Unido, pero otros lo hacen sin rigor alguno. Necesitamos muchos más periodistas que conozcan cómo opera la ciencia, que tengan espíritu crítico para discernir lo que realmente constituye un auténtico avance en medicina y que tengan una personalidad lo suficientemente fuerte para remodelar las costumbres de sus propios directores y subdirectores.

A todos aquellos que trabajan en investigación médica, especialmente a aquellos subvencionados por fondos públicos o por instituciones benéficas quisiera estimularles a que cuiden a este tipo de periodistas. Es a través de ellos que el público debería conocer el buen trabajo realizado hasta el momento y de la necesidad de su continuación. A los periodistas noveles, quisiera citarles una máxima de Virgilio, ligeramente modificada: «Cuidado con las notas de prensa, cuando vienen acompañadas de regalos».