

Communicating your research (part 2): to the wider community
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Abstract

Dissemination of research findings via digital tools and research engagement activities is rapidly becoming accepted practice for reaching a wider audience. In addition, they offer the opportunity for finding collaborative research partners, networking with peers, and informing funders, clinical practitioners and policy makers. However, exposure should extend beyond a scientific audience and should incorporate the general public, patients and their families, enabling them to be involved with research, facilitating the potential impacts of research to be realised.

Keywords

Communication, dissemination, targeted information flow, social media, open access, open data, patient and public involvement, research engagement

Introduction

Following on from the previous article on traditional methods for communicating research we now focus on some new tools for enabling rapid and wide-reaching research dissemination.¹ This has largely been facilitated by the explosion of innovative online resources for reporting research, archiving and sharing data. These approaches are in accordance with the Open Science movement, which promotes free access, re-use and sharing of research data, under the framework of the UK's Concordat on Open Research Data.^{2,3}

In addition, patient involvement, public engagement and coverage by the press and broadcasting media remain key elements of alternative routes for communicating research.

Using internet resources

As the main avenue for presenting research findings, there are a number of different online methods to communicate your research with other researchers. Most journal articles are now accessed by readers through online journal subscriptions, as open access articles or as full text papers archived in repositories.

As well as increasing readership, publishing online opens up a world of opportunities in order to add value to your research article. It is easy to add in adjuncts such as videos and images in order to explain your findings easily. Supplementary information, data or tables can also easily be linked, and increasingly the primary data underpinning research findings are required to be published alongside your paper or archived in an online data repository.⁴ In line with transparent reporting and open science there are also routes for publishing research methodology and protocols as well as interaction. Generally, the study author is also available to engage with the audience.

Blogs, such as the one hosted by BJU International, and podcasts, seen in both Talking Urology and BJU International are other outlets for discussion of your work.^{25–27} These concise offerings allow a range of readers, who would potentially otherwise not engage with

the research, another less onerous way of accessing the information. Urologists are also taking advantage of YouTube and posting videos about their research on sites such as the Urology Times and EAU TV.^{28,29} For those who are time-poor, podcasts and videos are excellent ways of obtaining the key facts in a research article, particularly as the creator of the media is often required to summarise the most important points in a short clip so is forced to include the most important details.

Research specific

There are also many online resources established specifically to communicate research. All researchers should obtain an ORCID account in order to profile their publications, uniquely identify themselves and connect all their scientific contributions.³⁰ Furthermore, ORCID is becoming the prominent tool of choice for funders, publishers and institutions to track researchers' outputs and to facilitate grant and paper submissions. Creating a Google Scholar publication profile is a useful way to direct researchers using the Google Scholar search engine to your publications, as well as determining citation metrics about yourself and your co-authors.³¹ Other popular online tools include social networking sites for scientists such as ResearchGate and Academia, which enable users to create a profile, upload published articles and conference presentations, follow other researchers and to ask and answer scientific questions.^{32,33} Members can interact with other peers working in their field of research and be alerted to new articles of interest.

Professionalism

While advancing your research reputation, communicating with integrity and respecting ethical standards are integral to using online tools for dissemination. Whether your work is peer reviewed or not, honesty and accuracy are paramount. Patient privacy and confidentiality should always be upheld, with misconduct online leading to potential disciplinary action.³⁵ An effective strategy is to maintain boundaries between personal and professional digital communication, using different platforms for different purposes, thereby separating personal accounts from research social networking and academic online profiles. Guidelines for appropriate social media use are available from the BMA and the EAU (see Table 3 for abbreviations).^{36,37}

Social media

Urology has been somewhat of a leader among medical specialties in its early adoption of social media, with urological researchers increasingly using this format to disseminate their research findings.^{15,16} The Journal of Clinical Urology maintains an official Facebook and Twitter account on which certain new articles are highlighted and relevant news is spread.^{17,18} An official Twitter account attached to urology-specific journals has also been significantly associated with an increase in journal impact factor.^{19,20} The Twitter activity at conferences has increased considerably over the past few years, including those with a urology focus. In 2013, 236 Twitter users contributed 1762 tweets at the EAU 2013 Annual Congress to contribute 1.74 million impressions.²¹ This had grown to over 20 million impressions at the EAU 2017 Annual Congress with over 12,000 tweets by nearly 2000 Twitter users.²² The International Urology Journal Club on Twitter (#urojc) was one of the first of its kind.^{23,24} Each month, a pertinent article is selected for discussion for a 48-hour period. This allows large numbers of interested individuals from around the world to participate in this real-time. The media play an important part in the dissemination of

advances in medicine to the general public. Individual researchers may be approached for a summary of their work by the media. Alternatively, funders, universities and research institutes, journals and even conference organisers select research findings and write press releases regarding them. Generally, press releases are written in an 'inverted pyramid' approach with the title followed by one to two sentences detailing the most important findings first. The methods are often summarised into a few sentences at most, with emphasis being on key results and, more importantly, their impact on clinical practice. It is ethically imperative to ensure that context is not lost or misconstrued and that any statements are supported by the data and that research findings are not used as fodder for sensational headlines. As an example, absolute risk should be used instead of relative risk. Caveats on the interpretation of the study findings also need to be clearly stated, as well as indicating whether the conclusions are based on pilot studies or large-scale robust investigations. Ensure that you engage with any press office and the media so that the press release is a collaborative effort, truly representing your findings. It is your responsibility to ensure that your research is reported with integrity, to minimise bias and inaccurate reporting. Finally, keeping the message simple is also important by using easy to understand and appropriate language.

If you are contacted directly by a journalist, it is worthwhile knowing the angle/context of the story, the potential audience and whether anyone else has been asked for their point of view. With regards to live broadcasts, such as radio and television, media engagement training can be beneficial. Sometimes questions may already be provided to you before you appear on air. It is also worthwhile asking to see a draft before going to air or to print to ensure that you have not been misconstrued or taken out of context.

Articles with the highest scientific impact or the most robust and reproducible findings are not necessarily those to which the media give the most attention. Altmetrics offers an alternative means to track the impact of your research, encompassing metrics from a wide range of audiences and online publications, including grey literature.³⁸ A score is calculated based on the number of views, media articles, social media posts and citations an article has received. A recent analysis of urology papers found that those articles covered most by the media were not the most highly cited in academic publications.³⁹ As with the most accessed BJU International articles, the articles with the most media attention were in the field of sexual medicine.⁴⁰ An example of the variety of communication methods used in the publication and subsequent coverage of the landmark ProtecT trial.

Interacting with patient organisations

Patient groups play a pivotal role in health prevention, support and research. They contribute to reporting research findings through newsletters, feeding back to research participants and speaking at conferences and forums. However, as well as dissemination patient groups can help researchers to refine their research questions, be applicants on funding applications, be members of research advisory or steering groups or develop patient information leaflets. Interacting with patient groups not only expedites the wide circulation of translational research findings but can advance changes to clinical practice. Direct patient interaction or through registered patient organisations and charities, such as Cancer Research UK, Prostate Cancer UK, Prostate Cancer Foundation of Australia, Kidney

Cancer Support or Fight Bladder Cancer, can be one of the best avenues for the dissemination of medical advancements.^{43–47}

These charities are excellent sources of information for helping patients to understand cancer, for engaging patients with clinical trials and research studies and for publishing lay summaries of research findings. Charities and the NHS communicate through a variety of platforms encompassing research engagement activities, their websites, press offices, Facebook, Twitter, YouTube, Google+, Instagram and science blogs. An excellent starting point for involving patients in your research is the National Institute for Health Research's INVOLVE website, with a library of guidelines on putting the who, what, why and how of patient and public involvement into practice.⁴⁸ Another route is to use Cancer Research UK's recently launched patient and public involvement toolkit, designed to facilitate researchers involving patients and the public in all stages of their research as well as communicating research findings.⁴⁹

Research engagement

Engaging with the general public to disseminate research findings is also extremely important and can play a crucial role in sharing knowledge, education and recruiting patients to research studies. The value of this is recognised by many research funders, charities and research institutions who offer funding and training to support research engagement activities, under the framework of the Concordat for Engaging the Public with Research.^{50,51} Most UK universities have research engagement networks to coordinate and support events such as lab tours and open days, school outreach programmes, public lectures, science blogs and the development of interactive engagement activities. Community engagement forums, ANZUP being a good example, are another way to engage, involve and encourage patient participation in research.⁵² Open forums, such as Café Scientifique and Pint of Science, as well as local and national science festivals, exist enabling researchers to present their work in a more accessible way, and thereby share ideas with a diverse range of people.^{53–55} Research engagement can come in many forms and the National Co-ordinating Centre for Public Engagement has a wealth of resources to help researchers target their efforts in a relevant and impactful way.⁵⁶

Conclusion

While publishing research in scholarly journals is important for advancing knowledge and precisely recording research findings, the use of alternative communication methods offers other advantages and benefits. The use of digital tools, patient involvement and research engagement is more than just about communicating research; it can open up dialogue, build interprofessional networks, expand your knowledge, create academic and public confidence in science and medicine and impact on clinical practice and funding priorities. When using these methods, consider who your target audience is, what you want to convey and use the appropriate language to do so.

Take home messages

- Use different language styles and platforms to communicate research to different audiences.
- Digital tools offer opportunities for communication, sharing data and transparency.
- Retain boundaries between professional and personal uses of social media.

- Collaborate responsibly with the media to avoid sensationalising your research.
- Personal interactions through patient involvement and research engagement are valuable forms of communication.
- Communicate with integrity, regardless of format. Conflicting interests

The authors declare that there is no conflict of interest.

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Ethical approval

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