PERSPECTIVE

Ten tips to improve the visibility and dissemination of research for policy makers and practitioners

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Effective dissemination of evidence is important in bridging the gap between research and policy. In this paper, we list 10 approaches for improving the visibility of research findings, which in turn will hopefully contribute towards changes in policy. Current approaches include using social media (Facebook, Twitter, LinkedIn); sharing podcasts and other research outputs such as conference papers, posters, presentations, reports, protocols, preprint copy and research data (figshare, Zenodo, Slideshare, Scribd); and using personal blogs and unique author identifiers (ORCID, ResearcherID). Researchers and funders could consider drawing up a systematic plan for dissemination of research during the stage of protocol development.

The full potential for research evidence to influence changes in decision-making and policy and practice is not yet being realised.[1] Keeping in mind the growing interest in bridging the gap between research and policy and practice, effective dissemination in an appropriate format is of vital importance. If we wish to maximise the benefits of publication and its eventual influence on policy and practice, there are a number of actions that can be taken before and after the paper is published.

As Danny Iny wrote in his blog, 'Sure, content is king—but without an audience, the king can get awfully lonely'.[2] Even when the content is great it does not find an audience on its own. There is thus a need for a strategy to find and attract an audience.

According to the World Health Organization (WHO), a number of dissemination tools are available to researchers, including research reports, peer-reviewed publications, press releases and policy briefs.[3] In today's world of information overload, the scholarly community is also turning its attention to the use of social media and other online platforms. Not surprisingly, in recent years academics have shown a growing interest in non-traditional methods of evaluating their scholarly 'impact'. These alternative metrics, known as 'altmetrics', allow researchers to gauge the impact and reach of their research in the social web beyond the traditional science citation count and journal impact factors.

In this paper, we enlist 10 'can't miss' approaches to improve the visibility of research findings, which will in turn hopefully contribute towards changes in policy and/or practice, although we acknowledge the fact that application of research findings in making decisions about health care is complex. Effective dissemination, however, is certainly the way to get people talking about it (Table).

10 TIPS FOR IMPROVING RESEARCH VISIBILITY

Expand your co-authorship base

In addition to the usual benefit of bringing new expertise and ideas to the paper, co-authoring with a diverse group of colleagues helps to disseminate research findings more widely.[4,5] To impact changes in policy and/or practice, potential policy makers should be engaged early on, preferably right from the conception of the research question, through the conduct of the study and to eventual publication. The approach of involving policy makers early on in the process fosters a sense of ownership and responsibility, which is key to bringing about any change in policy and/or practice.[6,7]

Select your title and keywords wisely

Title and keywords have the potential to significantly impact the chances of getting picked up when searched, read, cited and included in systematic reviews that synthesise evidence on an issue.[8]

Journals, search engines, and indexing and abstracting services classify papers using keywords. An accurate list of keywords will therefore ensure correct indexing and help showcase the research to attract interested groups. It is best to select keywords from a list of key terms/phrases that are used repeatedly in the text and preferably not repeated in the title or abstract. It is recommended to use the Medical Subject Headings (MeSH) tool to choose keywords. MeSH is a comprehensive, controlled vocabulary for the purpose of indexing journal articles and books for the MEDLINE database (US National Library of Medicine®, Bethesda, MD, USA). The title should be simple, clear and catchy, while describing the study appropriately. It is strategic to think about terms that readers might use to search for the study and include them in the title. Abbreviations and jargon are best avoided.

Make your articles open access

Open access articles have the advantage of being accessible to all readers free of charge, including policy makers, which increases the chance of being cited by the readers.[9–11] Publishing in an open access journal will make the paper available to all readers free of charge.

TABLE   Ten tips to improve the visibility and dissemination of research findings

Number	Tip
1	Expand your co-authorship base and include key stakeholders early in the research process
2	Select your title and key words wisely
3	Make your articles open access by publishing in an open access journal or by self-archiving in ResearchGate, Academia or other online repositories
4	Effective use of social media: Twitter, Facebook, LinkedIn, Academia
5	Create and share podcasts
6	Share your research outputs other than the manuscripts: SlideShare, Scribd, Data Dryad, Zenodo, FigShare
7	Dissemination through personal blogs: Tumblr, Wordpress, Research blogging
8	Get unique author identifier, ORCID, to distinguish yourself and your work from that of other researchers
9	Draft policy briefs and evidence summaries in lay language and communicate strategically with policy makers and key stakeholders
10	Other tools for dissemination: Kudos, ImpactStory, Google Scholar

ORCID = Open researcher and contributor ID.

Self-archiving is the act of the author depositing a free copy of an electronic document online in order to provide immediate open access to it. ResearchGate (Berlin, Germany) and Academia.edu (San Francisco, CA, USA) are free online repositories where published work can be shared for wider circulation and greater visibility of research and where there can be better connection and interaction with peers. Authors can also put their articles in institutional repositories, but prior to doing so it is important to check on the self-archiving policy of the publisher. For example, the Médecins Sans Frontières (MSF, Geneva, Switzerland) repository (http://fieldresearch.msf.org/msf/) hosts full free-text articles on field research conducted in several countries published in over 100 peer-reviewed journals.

Effective use of online social media

Many studies have shown that there is a statistically significant correlation between social media mentions such as posts, tweets, blogs and citation counts.[12,13]

Authors need to engage with individuals and groups within and beyond academia, including key policy influencers and decision makers, and with individuals with shared interests through Facebook posts (Facebook Inc, San Francisco, CA, USA) and tweets, joining LinkedIn (LinkedIn Corp, Mountain View, CA, USA), Academia.edu and other groups, sharing research and commenting on blogs. There needs to be proactive engagement with researchers, non-governmental organisations, patient groups or other groups that might be interested in the work, and to engage them through various online social platforms. Policy makers or key decision makers/influencers also need to be engaged through various social media channels to keep them informed of the research evidence generated (Figure).

Authors can create an account on Twitter (Twitter Inc, San Francisco, CA, USA) (https://twitter.com/) and add a short description of 160 characters or less stating their experience, research interests, organisational affiliation and a link to personal blogs, if any. They can engage with other researchers, policy makers and the public by finding users who share common interests and electing to 'follow' them to start receiving their updates. Twitter makes it easy to find other people to follow via their 'Who to follow' panel.

Authors can tweet on a variety of subjects: research publications and findings, opinions on a study, news or blogposts relevant to their topics of interest, recent developments in their field. Tagging sector specialist journalists will help in promoting and increasing the searchability of the research paper. Tagging policy makers will bring an author's piece of evidence into the limelight within policy circles.

The hashtag (#) is the most widely used means of classifying content on social media. It makes one's own content searchable and allows one to find relevant content from related areas. The hashtag also allows one to connect with and engage other social media users based on a common theme or interest. The more focused and exact the hashtag, the more targeted the audience will be—and a targeted audience generally means better engagement. Making infographic summaries of research findings helps in gaining attention and rapid dissemination using social media, as images are easier to share.

Every social media platform offers the facility to form thematic groups or clubs. Adding relevant people to a like-minded, subject-related group will create a personalised channel to reach a larger number of target audiences and ensure reception. Do share your social media coordinates for people who want to connect with you.

MethodSpace (www.methodspace.com) (Sage Publications, Thousand Oaks, CA, USA), OR network (http://ornetwork.ning.com/) and the Social Science Research Network (SSRN, Rochester, NY, USA) (http://ssrn.com/en/) are social network services for social and medical scientists where one can ask questions on forums, discuss research, connect to other researchers in the field and blog about one's own latest research.

LinkedIn (www.linkedin.com) is a professional networking site for professionals in which people can create a profile, connect with peers and network. Authors can list their publications and other research outputs, experiences, skills and current and past positions.

Academia.edu is another multidisciplinary academic networking site. It has a strong profile and curriculum vitae feature and is excellent for showcasing achievements, publications and expertise. Available measures of impact include counts for profile views, document views, document downloads, unique visitors, external links to documents, geographic distribution of visitors and referrals.

Create and share podcasts

Creating a podcast (an audio or video file in digital format for automatic download over the Internet) describing the research project and key findings and posting it to YouTube (YouTube LLC, San Bruno, CA, USA) or Vimeo (InterActive Corp, New York, NY, USA), or sharing them in social media platforms such as Twitter, Facebook or your personal blog, will help in rapid dissemination.

FIGURE   Improving visibility and dissemination of research.

Sharing research outputs other than the manuscript
In addition to published articles, preprints, conference papers and posters, presentations, reports, working papers, protocols, pre-print copy, research data and videos are all evidence of your re-search activity. By making them all publicly accessible you can increase visibility, preserve your output and make it available for future use.

Slideshare (LinkedIn Corp, Mountain View, CA, USA) and Scribd (Scribd Inc, San Francisco, CA, USA), while not exclusive to the research community, are useful for sharing presentations and keynotes and providing basic usage statistics. F1000 Research (Science Navigation Group, London, UK) is an option for researchers in the life sciences that allows free deposit of research posters and presentations. Publishing research data in Data Dryad (Dryan, Durham, NC, USA) or via multi-purpose services such as figshare (London, UK) (http://figshare.com/) or Zenodo (Geneva, Switzerland) (https://zenodo.org/) for a range of outputs will improve visibility.

Create a personal blog
Create a personal blog where you can share your thoughts, re-search ideas and/or key findings, promote your work, or write case studies of how your work has impacted others. Blogging plat-forms such as wordpress.com (Automattic Inc, San Francisco, CA, USA) or tumblr.com (Tumblr Inc, New York, NY, USA) are quick and easy tools for creating a blog.

Get a unique author identifier ORCID to distinguish yourself and your work from other researchers.
Using a consistent name throughout a research career facilitates easy retrieval of a researcher's output. Common problems with a consistent author name include inconsistent name formats, legal name changes, highly similar names or common names, which can make it difficult to associate research output to the correct author.

It has been suggested that using an author identification sys-tem such as ORCID (Open Researcher and Contributor ID) (OR-CID Inc, Bethesda, MD, USA) or ResearcherID (Thomson Reuters Corp, New York, NY, USA) could help. ORCID IDs are permanent identifiers for researchers. They protect your unique scholarly identity and help you keep your publication record updated with very little effort. After you have created an ORCID account, you can link it to your Google Scholar (Google Inc, Mountain View, CA, USA) and LinkedIn profiles, your personal website and any other websites where you have a scholarly profile.

Lay language policy briefs/evidence summaries for policy makers
A lay language policy brief is a short, to the point, jargon-free document written for non-specialists, especially policy makers or those who can influence policy. It presents research findings/evi-dence to policy actors and other key stakeholders, highlighting the relevance of the specific research to policy and offering rec-ommendations for change. This is an effective way of bringing important research to the attention of policy actors as they can be read in a short amount of time.

Other tools for dissemination
Present your study findings at conferences or any academic gath-erings. Include your Twitter handle and links to some of your pro-files in presentations, an e-mail signature and business card. Re-searchers can use their institutional newsletter/bulletin/local newspaper to disseminate study findings in layman language.

Kudos (Oxford, UK) (https://www.growkudos.com/) and Im-pactStory (https://impactstory.org/) are powerful tools that help researchers promote their research outputs together with measures

of their impact. They allow authors to showcase their publications by creating links to full texts and including additional information such as a short title, a lay language explanation, an impact statement and links to additional related content, such as underlying data, code, video, slides, or other elements. In addition, it offers a streamlined process for sharing your content via social media and allows you to monitor the results of that activity through the number of tweets, posts, visits, downloads and views, and a score generated by Altmetric.com.

Google Scholar is by far the most widely used bibliographical tool for scholarly publications. Create an account in Google Scholar and go to 'My citation'. The profile shows your list of publications in Google Scholar, with basic metrics. You can use the citation alert in Google Scholar to notify you whenever your article is cited in the scholarly web. A benefit of Google Scholar Profiles is that they function as a landing page for your name and your publications, although this functionality only works if your profile is set to Public. Thus it increases the 'Google-ability' of your profile.

To highlight a real project experience, in the European project SOPHIE (Evaluating the Impact of Structural Policies on Health Inequalities and Their Social Determinants and Fostering Change), dissemination was one of the key objectives to achieve the purpose of fostering policy change based on research findings. The use of online platforms (website, Twitter, and Slideshare), production of informative videos, partnership with civil society organisations and organisation of final concluding scientific events enabled wider dissemination within the scientific community, civil society, and policy circles, and influenced public view on the impact on health and equity of certain policies.[14] Similarly, the Agency for Healthcare Research Quality, through their Translating Research into Practice (TRIP) initiative, has shown commitment in disseminating research results through a dissemination framework involving multiple methods and tools which has led to improved patient care practices, thus ultimately making the health care system safer.[15]

Considering the key role of dissemination in knowledge translation continuum, funders should demand some commitment or effort on the part of grant holders to disseminate the findings of their research. The Economic and Social Research Council, UK, has made a dissemination framework available to grant applicants or holders.[16] A plan of dissemination including a social media strategy or any of the dissemination products such as a project video, monograph, newsletter, bulletin, press release, policy brief, poster, infographic summary, dissemination workshop or project website, etc., could be budgeted in the grant proposal.

CONCLUSION

Given the current emphasis on enhancing the uptake of evidence into routine practice and policy making, both researchers and funders could consider drawing up a systematic plan for research dissemination during the stage of proposal development. Researchers should learn the art of using social media and other online platforms to increase the dissemination of their work. Involvement of policy influencers and decision makers right from the beginning of the conception of the research question is the most crucial step in enhancing policy uptake.

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Une dissémination efficace des résultats de recherche est cruciale pour combler le fossé qui existe entre la recherche et la politique de santé, ainsi que sa mise en œuvre. Dans cet article, nous énumérons 10 approches visant à améliorer la visibilité des résultats de la recherche qui vont, si tout va bien, à leur tour contribuer au changement en matière de politique. Les approches actuelles incluent le recours aux réseaux sociaux (Facebook, Twitter, LinkedIn), le partage de podcasts et d'autres résultats de recherche comme des documents de conférences, des affiches, des présentations, des rapports, des protocoles, des photocopies, des données de recherche (figshare, Zenodo, Slideshare, Scribd), l'utilisation d'un blog personnel et un identifiant unique de l'auteur (ORCID, ResearcherID). Les chercheurs et les financeurs pourraient envisager d'ébaucher un plan systématique de dissémination de la recherche dès l'élaboration du protocole.

Es importante lograr una difusión eficaz de las pruebas científicas, con el objeto de superar la brecha que existe entre la investigación y las políticas y las prácticas. En el presente artículo se mencionan diez enfoques que mejoran la visibilidad de los resultados de las investigaciones, con la intención de que contribuyan a su vez a la modificación de las políticas. Las estrategias vigentes incluyen la utilización de las redes sociales (Facebook, Twitter, LinkedIn), el intercambio de las redifusiones multimedia (podcasts) y de otros productos de las investigaciones como son los artículos, los afiches, las presentaciones en las conferencias, los informes, los protocolos, los manuscritos antes de su publicación, los datos de investigación (figshare, Zenodo, Slideshare, Scribd) y la utilización de bitácoras personales (blogs) y de los identificadores únicos de los investigadores (ORCID, ResearcherID). Los investigadores y las instituciones patrocinadoras deben procurar la elaboración de un plan sistemático de difusión de las investigaciones durante la etapa de preparación del protocolo.