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The role of dissemination in promotion and tenure for public health

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“Share your knowledge. It is a way to achieve immortality.”

~ Dalai Lama XIV

Public health scholars are often driven by a desire to impact their field, but what is impact? For many years, impact in the scientific and academic disciplines has been limited to metrics such as impact factor and h-index, both of which are dependent on journal citations, which are produced by a small segment of the population (ie, other researchers).¹ One might argue that “academic impact” is but one imperfect way one’s work can impact the world we live in, but what does that world encompass? More pointedly, what matters most beyond academic impact? The traditional promotion and tenure process has largely cemented the prominence of academic impact with the majority of emphasis at top tier universities focused on research productivity, and to some extent teaching, with dissemination to non-research audiences documented as part of the service component.

It can be argued that academic researchers are overly dependent on the passive diffusion of knowledge to practitioners, policy makers, and the general public, relying on word of mouth and earned media to spread news of their work. Dissemination “is an active approach of spreading evidence-based interventions to the target audience via determined channels,”^{2–4} which requires planning, tools, coordination, and motivation. This effort is warranted, as it can hasten the transfer of knowledge and evidence-based practices to a greater extent than passive diffusion. As such, it should be nurtured, supported, and rewarded by institutions that employ public health researchers such as governmental and non-governmental public health agencies and universities. As annual reviews, promotion, and tenure for faculty are often motivating factors, dissemination activities and results should be formal components in performance reviews, including those that inform promotion and tenure decisions. Although

not sufficient, dissemination is an increasingly necessary component of one's portfolio if she/he is to have an impact on not just the field but population health in general.⁵

Dissemination can occur through a number of channels, both traditional and non-traditional. Scholars can share their work by traditional means such as public forums, grand rounds at health departments, or at "open houses" for members of the community. Education of the latest research findings to elected and appointed officials can also be done in 1:1 meetings, committee hearings and through formal testimony. TV, radio, and newspaper interviews can also be used to share information to a broader audience of non-journal readers and viewers. Blogs and podcasts can serve as excellent direct-to-consumer vehicles. Finally, social media such as Twitter, YouTube, Facebook, and Instagram can be effective channels of communication. The great value of so-called "new media" is that tracking of views and interactions is becoming increasingly easier, which is why collecting these data is paramount. These alternative metrics of impact can tell scholars not only how many individuals encountered their content, but basic demographic information about the audience as well. Scholars can also ascertain how much individuals interacted with their content by accessing how long they stayed on an article they wrote, listened to their podcast, or viewed a video. These data can be captured and utilized to gain an appreciation of the breadth and depth of one's impact on the scientific community, practice community, and the public's knowledge.

If dissemination is important and can have measurable impact, then what is the role of the university or health department in helping the scholar in these endeavors? First, it's paramount for employers to provide training on the various channels available and guidance on the best fit for the target audience. Furthermore, employers can provide software, hosting space, editing services, and related services that can enable authors to share their work with a broader audience. Second, employers should have active public relations offices that assist authors in promoting their work, starting upon acceptance and leading to press releases, social media, or other appropriate tools. Employers can also host speakers' bureaus, grand rounds, science cafes, and public forums. Third, and perhaps most important, employers can provide time, encouragement, and mentorship for dissemination. Public health practitioners rarely have time or incentive to write-up or disseminate their work. Academic researchers have time and *some* incentive to disseminate, but are rarely rewarded for their efforts. Both can be remedied with systemic changes to the annual review, promotion, and tenure system, and through promotion of academic-practitioner writing teams.

Annual performance review, promotion, and tenure guidelines should include indices of dissemination efforts and impacts if one is to expect dedicated effort from those under review. First, academic units in public health need to establish a definition of *impact* that is broader than relatively easily measured metrics related to citation rates. This expanded definition might include use of a faculty member's research in practice guidelines or policy documents, contribution to analytic tools, or teaching practices that are disseminated widely.

¹ The next step would be to "add a leg" to the three-legged beast of promotion and tenure in academic settings. Traditionally, teaching, research, and service make up the whole of the package one must present, with dissemination efforts often falling within the *service* bucket. But because there are so many activities that can fall under service, dissemination activities

can be superfluous at best and absent at worst. As such, dissemination should form a fourth pillar of the promotion and tenure package to ensure that it cannot be ignored or neglected. The extent of emphasis on dissemination will depend on the discipline and can be addressed in departmental level tenure and promotion criteria. For instance, biostatisticians may have a much lower expectation for dissemination than behavioral scientists, but they should still be encouraged to disseminate their work (eg, <https://jphmpdirect.com/on-the-brink-at-the-intersection-of-data-health/>). Related, metrics should be included to inform subjective assessments but should not replace them. One can attract a great number of followers pushing junk science (see, the “Food Babe”), but this should not be rewarded with promotion. However, there are a number of commercially and freely available alternative metrics (eg, Altmetrics, Lagotto, Mendeley, ResearchGate) that can be employed to build a report card to demonstrate dissemination to a broad audience. One important step to move this forward is to convince Deans and Department Chairs of the importance of dissemination and the ability to accurately measure quantity and quality of these activities in a fair and comprehensive way. Additionally, faculty senates and other departmental committees should address the importance of including these measures in the tenure and promotion process. A similar approach can be taken by a non-academic employer, where non-traditional impact measures can be included in annual reviews to reward those who spread promising practices or research with the broader community.

In summary, dissemination efforts can and should be documented as part of a comprehensive effort to determine scientific and practical impact on society. How an institution goes about documenting such efforts, and the value placed upon the results, however, deserves careful deliberation and consideration. Traditional individual-level, article-level, and journal-level metrics have merit, but they tell an incomplete story of the impact of one’s academic work. If the goal is to retain, promote, and reward the most impactful scholars at our institutions, we need to be able to identify them in a holistic manner. If we as a profession are to counter the anti-scientific tone of the political and public,⁶ it is imperative that we learn to better communicate directly to the end users of our work in public health practice, the decision makers who will fund it, and the public who will be affected by it.

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References

1. Brownson RC, Eyler AA, Harris JK, Moore JB, Tabak RG. Getting the word out: new approaches for disseminating public health science. *J Public Health Manag Pract*. In press.
2. Rabin BA, Brownson RC, Haire-Joshu D, Kreuter MW, Weaver NL. A glossary for dissemination and implementation research in health. *J Public Health Manag Pract*. 2008; 14(2):117–123. [PubMed: 18287916]
3. Lomas J. Diffusion, dissemination, and implementation: who should do what? *Ann N Y Acad Sci*. 1993; 703(1):226–237. [PubMed: 8192299]
4. MacLean DR. Positioning dissemination in public health policy. *Can J Public Health*. 1996; 87(Suppl 2):S40–43. [PubMed: 9002342]

5. Wandersman A, Duffy J, Flaspohler P, et al. Bridging the gap between prevention research and practice: the interactive systems framework for dissemination and implementation. *Am J Commun Psychol.* 2008; 41(3–4):171–181.
6. Otto, SL. [Accessed August 9, 2017] Antiscience beliefs jeopardize U.S. democracy. *Scientific American.* 2012. <https://www.scientificamerican.com/article/antiscience-beliefs-jeopardize-us-democracy/>