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Why I wrote an impact CV

It's not easy to demonstrate research impact, says Katherine Andrews — even when there's a clear clinical need, as in malaria drug development.

Katherine Andrews

Credit: Mark Kauzlarich/Bloomberg/Getty

The past five years have seen a dramatic change in the academic research community, with funders increasingly requiring explicit evidence of research 'impact', in addition to conventional metrics such as a researcher's previous publications, funding success and the quality of the journals they've published in. The motivation behind this shift is

the need to keep the end use of our research in mind, whether that's improving human health, changing policy, creating economic or social benefits, or providing education and building capacity — that is, developing the potential for people and organizations to respond effectively to a community's needs.

But compiling evidence of impact can be challenging. In my own field of malaria drug discovery, there is great potential to translate findings into health benefits for the more than 200 million people who experience malaria each year. However, as anyone working in this area knows, discovery and development timelines are long, and most potential drugs will fail long before human clinical trials, making 'impact' difficult to document. For researchers in other fields, providing evidence of research impacts might be even more complicated.

Lacking any existing framework for documenting such evidence, I decided to confront the problem head on: I created an Impact CV.

My Impact CV is distinct from my standard CV. The latter focuses on my career in Australia and Germany, and covers funding, publications, and teaching and mentorship roles. My Impact CV, by contrast, is where I gather evidence that I can use to build impact stories targeted to different audiences, including funders, promotion and award committees, donors and community members. This approach has been beneficial — helping me, among other things, to win multiple leadership awards. I update my Impact CV several times a year, often in tandem with my annual university professional development review.

Documenting impact

Drawing on application requirements of competitive grant schemes and data from the Association of Australian Medical Research Institutes, my Impact CV includes seven main sections, each split into several parts. Here, I focus on three key elements.

The section most relevant to my research focuses on knowledge-gain impacts. In addition to familiar indicators such as manuscript citations, invited lectures and prizes, this section documents ways in which I have reached outside my own research

area to demonstrate cross-disciplinary or downstream use of the knowledge that I have generated. In practical terms, this means taking the time to consider who is citing my work and why, and how others have then used these researchers' findings to enable further outcomes. As an example, findings that my colleagues and I made on the activity of certain HIV drugs against malaria parasites contributed to the knowledge base that led others to initiate clinical trials to investigate the effects of these drugs in people. The ultimate finding was that some combinations of malaria and HIV drugs should be avoided — an important piece of knowledge that can inform clinical treatment strategies.

Knowledge exchange

A second section of my Impact CV documents research-capacity building. Beyond conventional indicators such as mentorship and training of research staff and students, this section includes details of visits that I've hosted to promote knowledge exchange among international researchers, as well as how I build and lead collaborative networks. Contributions to research infrastructure and capability that enable research outcomes are another important example. For instance, I have included contributions to our national Compounds Australia facility at Griffith University in Brisbane, which houses more than one million chemical compounds that can be tested by researchers globally. Other examples include contributions to biobanks or open-access databases, as well as participation in industry or government infrastructure-building initiatives.

To help demonstrate social impacts, my Impact CV details community engagement activities, including how many people those activities have reached. For example, I founded a science, technology, engineering and mathematics (STEM) engagement project called That's RAD! Science. Through this initiative, I work with other professionals in these fields to promote diversity and careers in STEM to young children through engaging picture books; so far, these have explored parasitology, nanotechnology, forensics and structural biology. I collect evidence such as the number of books donated, presentations to school children and hands-on science activities. This evidence indicates that That's RAD! Science has reached more than 20,000 people. Funders and review panels respond well to this kind of data because it

shows the scale of these impacts, and their potential to have downstream effects — such as informing children's career choices. Some of my colleagues demonstrate social impacts in other ways, such as by using creative social media posts and blogging.

Positive impact

Other sections in my Impact CV provide space for documenting participation in government, industry or community groups; engagement with consumers and people who might benefit from research outcomes; and health and economic effects. For many of these elements, I don't yet have evidence of impact, and it is tempting to delete these sections. But I choose to leave them in place to remind myself that research can produce many kinds of benefit, and to prompt me to consider how I can better measure the positive impacts of my research and engagement. For example, in 2020 I stepped out of my comfort zone to quantify the impact of That's RAD! Science by surveying adults on their perceptions of the books — including how women are presented as role models in them — and of STEM engagement. Among other things, we found that 49 of 51 survey respondents agreed "that featuring identifiable women in STEM careers contributes to promoting an understanding that careers in STEM can be fun, exciting and achievable."

By using my Impact CV to document how my research affects others, both directly and indirectly, I can better articulate that the passion I have for my research and community engagement makes a difference to people's lives.

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