Sharon Terry, Patient Advocate from Open Access Videos on Vimeo. Taxpayers everywhere underwrite billions of dollars of public research each year, and the widespread sharing of the results is an essential component of our government's investment in science. Faster and wider sharing of knowledge fuels the advancement of science and, accordingly, the return of health, economic, and social benefits back to the public.

However, as scientists themselves assert, the current system of disseminating scientific articles, a legacy of print regime, is failing us. Libraries, whose subscriptions finance the system, would agree. Even industry analysts see the imperative for change: We would expect governments (and taxpayers) to examine the fact that they are essentially funding the same purchase three times: governments and taxpayers fund most academic research, pay the salaries of the academics who undertake the peer review process and fund the libraries that buy the output, without receiving a penny in exchange from the publishers for producing and reviewing the content. We do not see this as sustainable in the long term, given pressure on university and government budgets. In order to ensure that the value of this collective investment is maximized, a growing number of public and private funders are adopting policies to require that the results of the research they fund – published in scientific journal articles – are made freely available to the public, in a timely manner on the Web.

The U.S. National Institutes of Health (NIH) for example, which funds $29B USD in scientific research each year, adopted a policy in 2008 requiring that NIH-funded researchers submit an electronic version of final peer-reviewed manuscripts to PubMed Central (PMC), the online archive of the National Library of Medicine. Manuscripts are to be made publicly available within 12 months of publication in a journal, in a manner consistent with copyright law. The policy helps to ensure that the ~80,000 articles resulting from the U.S. taxpayer investment in research are made available to the taxpayers – who include scientists, doctors, and patients.

Since October 2006, The Wellcome Trust, the United Kingdom's largest private biomedical research funder, has required its grantees to submit an electronic copy of the final manuscripts of their research papers into PubMed Central. Wellcome also provides grantholders with additional funding to cover publication fees charged by some open access journals.

Public Access is an Opportunity for Publishing and Other Industries

Public access policies provide new avenues for the industry to innovate and create value-added products and services. The accelerated exchange of these results can lead to growth in patentable discoveries and to their commercial application. It opens the door to creation of new jobs in industries that support medical research, such as manufacturing of lab equipment, instrumentation, and chemical analysis.

Economic studies have shown that even a modest increase in accessibility to research produces considerable social and economic benefits. For example, in a 2006 study of the economic impact of access to research findings, Houghton and Sheehan noted that: "With the United States Gross Expenditure on Research and Development (GERD) at $312.5 billion and assuming social returns to R&D of 50%, a 5% increase in access and efficiency would have
been worth USD $16 billion…”

Similar policies adopted in other countries (including by public biomedical research agencies in the UK and Canada and leading private funders) confirm the research-funder community’s conviction that public access is an opportunity to accelerate research and more fully convert the results into public goods.

**Public Access is not a Threat to Subscription Revenues**

The experience of publishers to date confirms that subscriptions will not be materially threatened by public access:

- Several publishers, including Elsevier (the largest publisher of journals), voluntarily deposit articles in NIH’s PubMed Central on a voluntary basis.
- Active policies provide for a six- to twelve-month embargo on access to articles. A large number of subscription-based journals already permit free access to articles they publish after an embargo of 12 months or less without a negative impact on peer-review, copyright protections or their subscription bases. (Indeed some journals report that such delayed open access increases subscriptions and impact. The American Society for Cell Biology is one example).

**Public Access Will Ensure ALL Stakeholders Have Access to the Research They Need**

Current research dissemination practices do not adequately meet the needs of all stakeholders. While journal publishers do provide valuable services for those who can afford them (for which they can continue to be compensated), millions of physicians and clinicians, small businesses, students and educators, patients and their families, and others are without ready or affordable access. With the Internet comes the opportunity and the imperative to share these results widely so all stakeholders can access, use and build upon these results in new and innovative ways.

For example, The Genetic Alliance, a coalition of patient advocates, has capitalized on publicly available research at the NIH by working in partnership with the agency to create Disease InfoSearch3, a Web site that helps patients, caregivers, and health professionals locate and navigate information on genetic disorders. Disease InfoSearch serves a broad spectrum of users—ranging from those who are just beginning to learn about a disorder to those who understand complex scientific information. The addition of far more NIH research articles to this service would greatly enhance its utility and value to the community.

**LINKS:**
- [Alliance for Taxpayer Access](#)
- [International Public Access Policies](#)
- [The Wellcome Trust’s Position Statement on Open Access](#)
- [The NIH Public Access Policy](#)
- [Nobel Prize Winners support public access](#)