The research commercialisation agenda: a concerning development for public health research

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Health and medical researchers are increasingly encouraged to focus on commercialisation of their research. Commercialisation is not only stated as a priority objective in the Medical Research Future Fund (MRFF), but also influences the entire MRFF strategic agenda. Commercialisation is listed as one of the six MRFF strategic platforms; it is presented (with translation) as one of the primary endpoints of the pipeline for research funding, and knowledge of commercialisation is one of the requirements for appointment to the MRFF Advisory Board.1 Announcements of successful grants now emphasise “fuelling jobs and growth in new firms and industries through research” as much as contribution to health outcomes.2 In 2014, the Departments of Industry and Education published a joint report calling for “boosting the commercial returns from research.”3 While such calls for increased commercialisation are not new, the government’s growing push for broader university funding to be based on measures of engagement and ‘impact’ in commercialisation and partnership with the private sector – rather than measures such as publication or research outputs – now embeds research commercialisation into the core business of public universities and research organisations.4

However, the commercialisation agenda suppresses the notion of public good research. While academic research communities have often been subject to pressures (such as funding or infrastructure constraints and societal expectations) that have the potential to affect the nature and direction of research, the current emphasis on commercialisation is qualitatively different, representing a clear shift away from public interest models of funding. Such a shift, supported by views that universities should play a central role in the growth of economies, is gaining cross-party political support at all levels of public policy making.5 It also potentially conflicts with the role of the university as a critic of public policy.

Funding of health research on the basis of prospects for commercialisation will always disadvantage public good research fields, including public health, which are less likely to produce outputs of a commercial nature, but significantly improve health and wellbeing.6 Public health research has led to societal benefits such as immunisation, tobacco control, injury reduction, strategies to improve social inclusion and evidence on health impact from a wide range of sectors. Every dollar spent on health and medical research is already estimated to return an average health benefit of $2.17, with additional productivity and societal gains generated by a society where good health is expected and experienced.7 However, many public health benefits – particularly societal cost savings or health gains – do not (and perhaps should not) lend themselves to commercialisation.

Commercial outputs are not better, or more important, than health outputs

Commercialisation is often used as a proxy for measuring ‘output’, promoted by contemporary views that the primary aim of research is to power commerce, rather than advance knowledge.8 For example, in its submission to the Strategic Review of Health and Medical Research (the McKeon Review), Research Australia observed that Australia was responsible for 3% of the OECD’s health and medical research publications, but only 1.7% of the OECD’s health and medical patents, claiming this as evidence that Australia’s health and medical research community was underperforming in innovation and impact.8 Such statements assume without question that commercialisation is an essential pathway to research innovation, and that this commercialised form of health and medical research will lead to better health outcomes. However, research suggests the opposite may be true – patents can stifle innovation by preventing researchers from accessing materials they need and can impede health and medical care by imposing additional costs on essential services and medicines.9 Commercialisation of new biomedical interventions may contribute to increased public healthcare costs, while doing little to prevent disease and promote population health, particularly as the value of such interventions is almost always judged by their impact on individuals rather than overall population health. Economists are united that – when adjusted for demographic factors – new technologies are a key driver for increasing healthcare costs.10 Even when technologies make health and medical services more efficient, costs savings may not be passed on – the failure of the Australian Government’s attempts to reduce rebates to more accurately reflect the sharply reduced time it took to undertake cataract surgery and coronary angiography due to advances in technology serving as an example.11 Evidence also suggests associations between research commercialisation and data withholding, erosion of collaborative research relationships, reluctance to be involved in open science initiatives, overstated research results, premature implementation and use of health and medical services, erosion of public trust in research, skewed health policy, and even damage to the long-term economic contribution of university research.12 Population health gains and commercial returns from biomedical research are declining, and leading experts have called for a “radical shift of life sciences funding priorities, away from the biomedical bubble and towards the social, behavioural, and environmental determinants of health.”13 These concerns are in addition to broader issues in health and medical research, where the role of public health research is undervalued, and the value of non-interventionist, non-clinical or population

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approaches to health improvement – including action on social determinants – are often ignored; despite the fact that such approaches may address health issues far more cost-effectively and effectively than biomedical approaches. Emphasising commercialisable research can also have an adverse impact on public health policy. For example, framing health issues such as obesity as being associated with genetics (a framing that is more likely when commercialisation is a primary goal) leads to less support for government public health policies such as a tax on food with a high sugar content. While in theory research commercialisation initiatives can generate investment in emerging areas of research, the goals and endpoints of such initiatives are not well articulated, the potential risks and challenges remain largely absent from policy considerations, and there is far more research highlighting risks arising from research commercialisation initiatives than benefits.

Focus on commercialisation may undermine equity

Funding for research leading to commercialisation is most often directed towards development of biomedical treatments for non-communicable disease (NCDs) in high-income countries. Thus, it is often of only limited relevance to the main health and health research needs of low- and middle-income countries. There is also a diminishing return on biomedical investments, as they affect high risk individuals but do nothing to shift the population risk. Research into methods to ensure wide availability of affordable, effective interventions addressing major health issues in low- and middle-income countries and in vulnerable groups in high income countries should be a priority, although this is an area that is difficult to commercialise.

Funding systems that do not prioritise population health and healthcare improvement may result in research gaps. Diseases such as tuberculosis, malaria and diarrhoea account for 21% of the global disease burden but attract only 0.31% of all private and public funds directed at health and medical research. Of 1,556 new medicines approved between 1975 and 2004, only 18 were specifically indicated for tropical diseases and three for tuberculosis – with many of these being by-products of veterinary research or commissioned by the military rather than the health and medical research community. Only 0.5% of studies on new medical technologies evaluate those that work just as well as existing ones but cost less, and the US Government’s General Accounting Office found that most research money is pushed into innovations that can be patented or commercialised, at the expense of other possible treatment options. When commercialisation drives research, this creates incentives to focus on conditions affecting wealthier individuals or countries, and shifts resources away from areas of high disease burden but offering limited commercial return.

Conflicting messages

Health and medical researchers are increasingly being urged to commercialise their research by patenting, licensing and forming close partnerships with industry, a directive based on the assumption that this generates maximum commercial and societal benefit through quicker introduction of socially useful knowledge and products. At the same time, researchers are also being encouraged to share data and disseminate knowledge quickly via an ‘open science’ model, so as to foster scientific progress, meet humanitarian goals, and (again) maximise research impact. While not wholly irreconcilable, the inherent contradiction between these goals often goes unrecognised by research funders and governments (a recent example is Coca-Cola’s attempts to redirect obesity research towards activity-based interventions rather than reduced sugar consumption). Even when research is publicly funded, vested interests in industry links can halt dissemination of research results – particularly when they are not favourable from a commercial perspective (for example, a clinical trial showing no benefit from a new drug).

Conclusion

The role of public health is primarily to promote the public good and improve population health, and typically gives no or very little scope for commercialisation. The need for research – and researchers – to be judged on the potential impact of their research on the overall health of the population and on their engagement with the broader community is undeniably an idea worthy of support. While most funding for health and medical research continues to support research based on contribution to knowledge and public good, there is an increased focus on commercialisation as an intended goal of health and medical research funding, both from funding agencies (such as MRF) and from government. However, promotion of commercialisation as a primary measure of research value potentially undermines the public value of health and medical research, and of public health research in particular. The fundamental priority of health and medical research funding should always be to promote public and individual health and to reduce inequities, rather than to support perceived potential for commercialisation. Economic arguments are important – particularly as they relate to savings in health expenditure and improved productivity enabled via health gain – but there must be a clear distinction between commercial wealth and jobs creation and broader economic benefits. If the commercialisation ethos is allowed to proceed as the driving motive behind the Australian Government’s research agenda, it could prove far more damaging than any of the imperfect models it is meant to replace.

References


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